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PACIFIC RURAL PRESS

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Santa Cruz and Vicinity.

Just at this season the heart of mankind longs for the seaside. Wherever the sunshine falls upon the heated interior regions, the inhabitants who have means and leisure betake themselves to the cool breezes and refreshing waters of the ocean beaches. California has this recourse in common with most other parts of the world, but California has a decided advantage over most other regions in that both summer and winter the vicinity of the ocean is delightful, at least upon the southern half of our shore line, and our charming seaside resorts are good for all the year, though, of course, most sought for while the interior is too hot for comfort.

Santa Cruz has long been known as one of our best all-the-year resorts, but at present seems to be commanding more and more attention, not only as a place of delightful residence, but as the center of a rich, productive region of country. For this reason, we give our first page this week to engravings which contain at least suggestions of the beauties and developments of the district.



GENERAL VIEW OF SANTA CRUZ AND THE BEACH AT SURFSIDE.

Santa Cruz is located at the northern extremity of the Bay of Monterey, a great indentation on the coast of California, about eighty miles south of San Francisco. The features of the locality that appeal to the eye are the beautiful sheet of water mentioned, stretching inland toward the fertile Pajaro valley, sweeping around past where the vision loses itself in the dreamy horizon of the Salinas, and finding its further extremity in the historic Point of Pines at Monterey, thirty miles to the south, as one looks out from Santa Cruz beach along the line where the waters of the bay and the great Pacific Ocean mingle; the shining band of curving beach projecting from under the sheer precipices that bound the cliff drive, and reaching along by the southern slopes of Beach Hill, around to the point where the San Lorenzo river empties its waters into the breakers—as fair a zone of sand as ever tempted the bather to tread its gentle declivity, or held the day-dreamer in the spell of its inrolling waves; the city itself, with the homes and churches, and business and public buildings, of seven thousand people, sitting in an amphitheatre formed by the slopes of the foothills, and traversed by the threading current of the San Lorenzo; and the charming scope of mountain scenery rising back to the summits of the Santa Cruz range in successive plateaus, from the very beach, marked with smooth rounded spurs, beaches as level as the horizon, canyons deep and timbered, and crests and peaks standing aloft thousands of feet under the blue heaven.

Santa Cruz, however, does not lay claim to fame solely upon its climatic conditions and beautiful scenery. Large areas of the surrounding country are devoted to the growth of hay, grain, vegetables and live-stock, and the dairying interests of the county are large and important. The forests of the adjacent Santa Cruz mountains have for many years supplied a wide market with their products. The fame of Santa Cruz mountain fruit and wine is well known. The greatest lime-producing region in the State is within a few miles of Santa Cruz. Bituminous rock is a product of this locality and a source of large revenue. Near the city, in Powder Mill canyon, are the extensive works of one of the oldest and richest powder companies in the country. Tanning leather has been from an early day one of the industries of Santa Cruz. There are two banking houses in the place; two street railways in operation and one projected; ten or twelve hotels; two water supplies, one the property of the city; gas works; two electric-light plants; two daily and two weekly newspapers; a fine system of public schools, led by a first-class high-school department; and churches of all denominations.

HORTICULTURE.

Cherry Culture.

[An essay by W. H. PEPPER of Petaluma, read at the June meeting of the State Horticultural Society

To make cherry-growing successful in my section, it is necessary to comply with certain conditions. Some, which I consider the most important, I will notice:

First—Selection of Suitable Trees.

Cherry trees are now generally propagated on Mazzard seedlings grown in France. They drill the seeds in rows, and at the end of the first season's growth take them up and assort into three or four sizes, viz.: Extras, No. 1, No. 2 and No. 3. They vary all the way in size from that of a small straw to one-half inch at collar. They use the extras at home and export the other grades. If we take the No. 1 grade (about one-fourth inch in diameter at the collar) and plant in a good loamy soil, in the coast and bay counties, and grow without foroing by irrigation, and bud the first summer or graft the first winter, at the end of the second year we have what we call a one-year-old tree; and we should have at least two-thirds of a planting running from three to five feet in hight. We call such a production first-class trees, and not being stimulated by irrigation, they form the terminal bud in the latter part of the summer and early fall and have the balance of the growing season to ripen and harden the wood. This class trees I call suitable to start with in planting a cherry orchard.

On the other hand, if we take the third-class stock mentioned above, plant it in the interior of the State, where the spring growth commences early and the summers are clear and warm, irrigate it thoroughly—by September we will have stock large enough to bud; in all probability larger than the first-class stock grown without irrigation, and if we follow with a plentiful supply of water the second season, we can produce trees two-thirds of them or over ranging from four to six feet in hight, straight stalks and smooth bark, and to the inexperienced eye better looking trees than the [illegible]. But this class of trees would be an unsuitable one to select in planting [illegible]. The round-[illegible] in [illegible] with the wood [illegible] and winter, [illegible] will not bear [illegible] as well as prune we [illegible] designated suitable. They will go back on the [illegible] in their future growth compared with the suitable trees.

The above [illegible] will apply to all of our stone fruits [illegible] peach and peach. Peach [illegible] stocks are propagated by planting the seed in a nursery (where they are to stand until the trees are ready for sale), and budding the first season those which grow large enough. The smaller ones are pulled out and thrown away (or should be); but suppose we take the small ones, about the size of a straw, transplant and force them up to a budding size the second season, force them the third, and we may grow a fine-looking tree in this way, but it would be one that I could not be induced to plant under any consideration. Yet this is precisely what has been done to a large extent in this State with the apricot on Myrobolan plum stock.

In discussing the growing of the cherry, as well as other fruits, I cannot lay too much stress on the quality of the stocks used. I have no objection to irrigated trees from the simple fact of irrigation, for no trees will grow without moisture in the soil; but too much water is generally used, and too late in the season to produce well-ripened wood, suitable for transplanting. If the nurserymen who irrigate will use none but first-class stocks and less water, so as not to produce overgrown trees, they will confer a lasting benefit on their customers.

And now to the fruit-grower let me say: Buy your trees direct from the grower and demand a guarantee that they are grown on first-class stocks; for there is more difference in the growing of a successful and lasting orchard, between trees started on first-class stocks and those on third, than the average fruit-grower is aware of.

Second—Soil and Situation.

The cherry does best in a sandy loam, but it should be of good depth and well drained. In my district, but a small portion of our lands is suitable for cherry-growing. The character of the soil is all right—a sandy loam, good potato soil; but the depth and drainage are not sufficient. I have been growing the cherry for 30 years with varying results. A portion of my first planting proved a success, while other portions were a failure, and in places the trees are all gone.

There is something about our land that I do not fully understand. It seems to be spotted. We may plant say five acres in a body to cherry trees, apparently all of the same quality of land. In the course of two or three years they will commence to die out, and at the end of 12 or 15 years perhaps two-thirds of them will be gone and the balance will be standing in groups here and there over the five acres. To the superficial observer there would appear to be no difference, no reason why the trees should not do as well on one part of the tract as on another.

In digging ditches, I find a difference in the depth and appearance of the soil below. Those spots where the trees die out the most is generally the shallowest, and below of a more grayish cast. I do not believe that it is the shallow soil alone that kills the trees, because I have one spot of near one-half acre at the top of a ridge, sloping to the north (the most favorable position for the cherry) where none of the stone fruits will last for any length of time. I have planted the plum, apricot, peach and cherry. The soil is about as deep as any in the orchard. I do not know for a certainty, but I suspect that alkali has something to do in causing our spotted orchards.

In selecting suitable land in my district for planting the cherry, I would select land sloping north to northeast and on the highest land to be found. I would dig prospect holes in various parts of the tract, and if it proved to be of a less average depth than three feet I would reject it as unsuitable for the cherry.

The Cassidy orchard is located at the top of the high land on the northwest of Petaluma, sloping to the north and east, and the best paying portion of my cherry orchard is located near the top of my highest land, with quite a steep descent to the north; the highest part 150 feet above the lower parts of the place.

Third—The Care of Cherry Trees

After planting is as simple as that of any other deciduous fruit tree. They should be headed low, trained in the vase form and pruned regularly the same as other fruit trees, but do the pruning early; the month of November is the best time to do the work on trees in orchards not irrigated.

I have made a success in the past three years in reheading some old cherry trees. I did the grafting in the month of November, commencing about the first of the month, and cutting away half of the top the first season and the remaining half the second season. This fact satisfies me that the pruning should be done early in the season.

The cherry is well adapted to the cool, moist climate of our coast counties, but the need of thorough drainage is the greatest drawback to cherry-growing in the coast counties.

The cherry can also be grown successfully in the interior of the State, under favorable conditions. Marysville is one among the hottest places in the State. The old G. G. Briggs cherry [illegible] on the Yuba river above that place was [illegible] of the most successful cherry orchards ever planted in the State until the river filled [illegible] debris from the mines and even [illegible] [illegible] to low-water mark, no hardpan [illegible] to prevent the free passage of water up or down, and when the trees were dormant the water in the river would generally be below the level of the roots. The river would rise from the melting snows in the mountains and bring the water to a higher level in midsummer, supplying the trees all the moisture needed, and then recede in August, which would give the ground a chance to dry out somewhat, and allow the trees to ripen and harden the new growth.

Experience of a Veteran Fruit-Grower.

EDITORS PRESS:—The following points were gained from G. W. Thissell of far-famed Pleasant Valley, who showed the writer an orchard of apricot trees on peach root of his own planting 37 years old, now bearing a crop of fruit that would average 400 pounds to the tree. Not by any means have all of his trees done as well. An orchard of several thousand of a variety of apricot named after the owner himself has failed to bear for several years and has just been grafted to Clyman plum and Tragedy prunes. Mr. Thissell thinks the reason so many trees have failed to bear lately is because of a mysterious mildew or fungus, and that the lime, salt and sulphur wash is a cure. He has great hopes that such can be restored after all by using this wash, but he has still more hopes that the large and productive early plums that are now ready for Eastern shipment will pay. He has also great faith in the Tragedy as a shipping prune and a good drier if any are to spare.

Mr. Thissell claims that a bluestone wash of one pound to ten gallons of water is a certain remedy for curl-leaf of the peach.

Mr. Thissell has made a great study of the habits of the codlin moth. He says they began to hatch out April 15th this year, and are likely to continue hatching out every day until October 15th. They have three principal broods, to be sure, but stragglers keep coming along every day. Three moths can increase to a *million* in one season under favorable circumstance. Before laying eggs the moths emerge with their new wings from their hiding-places. To pass the larval state they crawl into some place where they will be in the dark and out of the way of birds. This they find under the bark of the tree and in places where the tree has been injured or knots or holes are to be found. Mr. Thissell's trap provides a nice hiding-place. He nails a band of burlap around the tree. This he protects with a cage made from a strip of wire gauze securely tacked above and below. When the little fellow is only five-eighths of an inch long and has no wings he passes through easily. When he has grown to seven eighths of an inch and has nice large wings he escapes not at all. The plan is so simple and easy that people feel much as Naaman did when ordered to bathe in the Jordan as a cure for leprosy. They want something more elaborate and expensive. It is not enough that it cleans the orchard at an expense of 3 to 5 cents per tree. There is too little scientific mystery about it, and no cost in proportion to the nature of the evil.

In drying as well as in canning or shipping fruit it is necessary to have it of uniform size. It is hard to do this accurately by hand, and still harder to find the time when you are hurrying off several carloads of fruit daily. To meet this point, Mr. Thissell has experimented for several years until at last he has a cushioned hopper that feeds over a series of gradually diverging rods sloping just enough to have fruit roll freely. A little below is a cushioned platform. This grades accurately and avoids bruising. But the main feature is a series of rods that are so driven by cams as to slowly revolve in half-circles between the rods of the main platform and keep the fruit from lodging between the main rods. Three men work this machine, and have graded as high as three 50-pound boxes of peaches or apricots per minute. This would run up to five or six carloads per day if you could ever get that much fruit at any one place to grade. It is intended to make still further improvements before putting the machine on the market.

Mr. Thissell represents the Japs employed in the orchards as obliging, neat, pleasant and one-third more efficient than the same number of Chinese. Besides this they leave half their wages in the town near where they work, for food and clothing.

F. S. C.

THE IRRIGATOR.

Government Artesian Well Work.

WASHINGTON, June 24.—The Senate Committee on Irrigation and Reclamation of Arid Lands held a session this morning to hear the chief engineer and the agent in charge of the artesian wells investigation. The acting Secretary of Agriculture, Mr. Willets, was present, and also President McLouth of the South Dakota [illegible] College. Senators Stewart, [illegible] and Sanders of the [illegible] ice.

Col. F. S. Nett[illegible] chief engineer, whose field of investigation has required 12,000 miles of traveling the past 12 weeks, read a brief report covering the work performed. The Dakota artesian basin is known to be the largest in the world, so far as at present developed. The northern limit extends westwardly, geologically speaking, as far as Fort Benton and Great Falls, in Eastern Montana. The formation is cretaceous. The water-bearing sandstone lies between two impermeable rocks, but nowhere has the sandstone been penetrated. Geologists unite in declaring that the James valley is not necessarily a controlling center for the basin. Water may, and doubtless will, be found over an area east of it at least 500 miles, and north and south through both the Dakotas.

The central region, which includes Western Kansas and Nebraska, Eastern Colorado and New Mexico, shows several important local artesian basins and a vast area of large springs and of seepage waters obtained from the drainage of foothills and frontal Rockies and of the great river valleys that cross the central plains.

The eastern part of New Mexico is remarkable for a great number of living springs, some of which are of great power and size, which extend into Texas, along the western portion of the Panhandle region and across the Pecos and Colorado river valleys, south by east. The Dakotas and Western Texas hold the large well basins.

Col. Littleton declared that the small appropriation of $20,000 was wisely expended and had already produced good results. Acting Secretary Willets urged a conservative policy in the matter of further appropriations, so as to enable the Department of Agriculture to properly handle the important work.

Special Agent R. J. Hinton, in general charge of the investigation, gave a brief summary of the work and its results. In South Dakota, he said, 148 artesian wells have been recorded, and 16 in North Dakota. As many more minor wells are reported as flowing to the surface in a smaller drift basin. Several hundred such wells are recorded in the northeastern part of North Dakota—that is, in the Red river basin.

In Kansas and Nebraska 84 artesian wells are reported and 280 bored wells that flow to the surface or very near it, several hundred other wells and a large number of springs and a great area of undersheet water supplies.

Colorado reports over 200 bored wells. Inside the limits of Denver of those formerly flowing about 20 still flow. Outside of the city in the basin there are 231 flowing wells. At Colorado Springs and Pueblo there are 20 of an artesian character; elsewhere as many more, while west of the foothills in the St. Louis valley from 3000 to 5000 wells are reported. About 200 farmers are using their waters to irrigate at least 10,000 acres.

The use of artesian water for irrigation is extending. In Texas between the 97th degree and 100th degree of west longitude at least 650 artesian wells are reported. Between 100 degrees and the 103d degree there are 300 wells reported, and west of the 103 d degree as many more. The other bored wells in the territory named that are reported upon by Field Agent Roessler number several thousand.

Moody was instructed by the committee to report an amendment to the Sundry Civil Appropriation bill providing for an appropriation of $200,000 for an irrigation survey and $250,000 for an artesian wells investigation, including the boring of experimental wells, all to be expended under the direction of the Secretary of Agriculture.

THE VINEYARD.

Professor Dowlen's Report on the Vine Disease.

Prof. Ethelbert Dowlen, an expert vigneron, appointed by J. de Barth Shorb, one of the viticultural commissioners, to investigate the history and causes of the vine disease in California, has submitted his report to the commissioners. The professor among other things says:

Last September I sent out 500 circulars in the name of the commissioners, asking for information in regard to the disease in the various districts affected. To these I received 101 answers from 36 localities, and referring to 46 varieties of grapes.

The disease first became prominent at Anaheim in 1884, and spread from there to Los Angeles, and then north and east during 1885, 1886 and 1887. In 1889 it took a jump and appeared around San Diego. In 1887 and 1889 it appeared as far north as Napa, but did no damage.

The first varieties to suffer were the Mission and Muscat, next the Burger, Mataro and Trousseau. The Gariguan and Grenade suffered slightly, the Bruc Alba scarcely at all, while the Lenoir, Gamay, Tunturia and Folle Blanche entirely escaped.

Neither irrigation, time, pruning or climate seemed to make any difference to the disease, but that is now disproved by the experience of the winter just past, which, wet as it was, leaves the vines in excellent condition.

The disease first manifests itself in the leaves. Yellow spots appear and spread until the entire leaf becomes yellow and dead. In the second year the fruit dries up and the leaves shrivel as from heavy frost. In the third year the growth is much reduced and the vine dies. Some vines live as long as five years, but three is usually the limit. Some Mataro vines have been known to die in numbers within six months from being first attacked.

What causes the disease has not yet been discovered. Bacteria and fungi have been found, but it cannot be told whether they are a cause or an effect. No insects that could have caused the disease have been found. It is a fortunate thing for Fresno county that the disease has not reached there.

A disease much like this has been known in Sicily and Italy for 20 years, and is there known as the Mal Nero. But some of the symptoms observed here are so different from this that the diseases are not the same, or that we have more than one kind of disease here in California. Most of the symptoms that do not correspond to those of Mal Nero, might come under the head of Folletage, another Italian disease. But nothing is certain as yet in this respect.

Last spring we planted a large number of diseased cuttings in hothouses owned by the commission of Los Angeles. Half of them we treated with different preparations of Ongerth's powder, and the other half we let alone. In the fall the untreated ones were dead, while nearly all the others were healthy. Later we experimented in a vineyard of 1000 acres, making three applications of the powder. Each application checked the disease, but in the fall it returned again.

Present prospects are very good. The growth was late in starting, but has been excellent and the crop will probably be large. The hot weather of the next two months may alter this, however, by bringing the disease out in full force again.

A Decision on Grape Buying Contracts.

The Napa *Journal* gives the following concerning a court decision affecting contracts for sale of fruit which will interest our readers:

In 1880, G. Groezinger agreed to buy from T. B. Hopper and Hopper agreed to sell to Groezinger all the grapes to be grown by Hopper upon his farm near Yountville for ten years. It was agreed that the grapes should contain 22 per cent sugar and the price was to be $25 per ton. For five years the parties kept the contract and then Hopper sold his farm to H. M. La Rue, at the same time assigning his rights under the contract.

In 1886, La Rue raised upon the place about 600 tons of grapes. Groezinger refused to take any part of them. La Rue then boxed and shipped the grapes to the city, and sold them at a price which, after deducting the boxing and freight, was $2473.20 less than Groezinger was bound to pay for them.

On the crops of 1887 the damage to La Rue

was $5512.48. La Rue brought two suits. Both were tried before Judge Crouch and judgment entered against Groezinger for the amounts named. An appeal was taken to the Supreme Court, where on Friday the first case was decided in favor of La Rue. Commissioner Hayne writing the opinion. The point upon which Groezinger relied was that Hopper had no right to assign the contract. Judge Crouch decided that he had and the Supreme Court sustained his decision. In the judgment in the first case the jury gave La Rue the amount of freight paid for his whole crop.

But as Groezinger was only obliged to take grapes of 22 per cent sugar, and this reduced the judgment in the first case $217 87, but it was affirmed in all other respects.

The one case practically decides all the cases and Groezinger will be out on the four crops, 1886, 1887, 1888 and 1889, between $15,000 and $20 000.

Dennis Spencer and A. C. Catlin were La Rue's attorneys, F. E. Johnson and Judge E W. McKinstry representing Groezinger.

THE PUBLIC LANDS.

The Arid-Land Muddle.

EDITORS PRESS:—In a recent editorial on the effect which the Arid Land Act is having on the settlement of the arid regions, you invite contributions from those who have a better knowledge of the subject than you possess. As I was the first person who interested people in this portion of the State in taking up land in one of the desert sections of this coast, with a view to growing early fruit in a locality which my early geography portrayed as a country uninhabitable by other than Indians, and as I have been practically ruled out of the fruit-growers' ranks by the passage of said Act, I respond to your request for further light.

Mohawk valley, in Yuma county, Arizona, contains about 30,000 acres of sediment land, and was thrown open to settlement about 1885, after its forfeiture as a land grant. A ditch company was organized without capital, with 100,000 shares of stock of the par value of $1 each. Fifty thousand shares of this stock were placed on the market for working capital under a proposition that for every two and a half shares purchased water rights would be given for an acre of land in the ratio of one-third of an inch to the acre.

This was a pretty liberal proposition in a country where the average rainfall was only two inches a year. Four hundred dollars of stock brought with it a water-right for 160 acres of land where the Muscat grape ripens four weeks ahead of California, and from a knowledge of these facts it wasn't long before every acre of this valley was taken up, mostly by people who intended planting orchards and vineyards, or growing alfalfa. But all who made entries did not buy water-rights, fearing that the original company would not succeed, and owing principally to that fact and some errors in management when the three years limit of the Desert-land Act came around there was no water to prove up with. The original entryman had no alternative but to relinquish his filing, those who had water-rights selling out in some instances as high as $10 an acre, the purchaser trusting to a completion of the ditch a year or so hence.

The purchasers filed their entries at the Tucson Land Office, and many of them commenced improving their land, clearing it of brush and constructing ditches, so as to have everything ready to put out trees and vines the moment the water was available. This was only a few weeks subsequent to the passage of the Arid Land bill, and in total ignorance of any feature of it which would vitiate entries on land which had been filed on three years previously under the Desert Act. It was known that desert lands were withdrawn from entry where reservoir sites were to be selected, but even a survey had not been made here, and no one imagined that the object of the Act was to rob people of land which had already been improved to some extent, and over $50,000 expended in securing an irrigation supply which would render a tract 20 miles long independent of a reservoir. The district land office continued to receive filings on this land, and this encouraged residents of this city and other places to go on and improve. Those whose holdings were near the head-gate could get water, and sent in horses, wagons and all necessary farm implements under a heavy railway tariff. They sowed barley, wheat and alfalfa, and put out quite an area of fruit trees. Some of these have proved up on their lands, paid the Government price and hold their final receipts. Now the Attorney General of the United States says a patent cannot be issued, owing to a clause in the Arid Land bill, which reserves from settlement all desert lands.

The Mohawk canal is now completed, and hundreds of acres of land lie under it with the clearing all done and lateral ditches ready to distribute the water. Some of it is fenced and leveled. The owners have paid $2 50 an acre to the canal company and several more to original entry men for water-rights, which under the by-laws must be applied to some specified tract within one year from canal completion, or become forfeit. Through a fake in the wording of the reservation clause, the Interior department refuses to allow these water rights to be attached, although both land and water are paid for; over $25,000 have been paid out by residents of Sacramento alone for these water-rights, which is now being jeopardized by the dilatoriness of Congress in rectifying what all recognize as simply a mistake in the wording of a bill. The object of the Arid Land bill was to withdraw from settlement desert lands which had *not* been filed on, pending the selection of reservoir sites; not land which had previously been entered and diligent efforts made to reclaim, but which had not fully succeeded as early as desired, owing to financial difficulties alone. Fortunately some of our R presentatives are above taking snap judgment on energetic settlers of our desert lands for purposes which are not difficult to fathom, and there is a fair prospect of the passage of an amendment which will establish an equitable adjustment of the matter.

S. S SOUTHWORTH.

Sacramento, June 24 90.

Relief from the Arid Land Law.

EDITORS PRESS:—In answer to your request for communications on the subject of how to provide relief from the objectionable parts of the Arid Land law of October, 1888, I will say that the law practically reserves all desert land from entry or settlement except such as are so peculiarly situated that they can never be reclaimed through the agency of reservoirs. It does not actually reserve such lands; it renders filing on them of such doubtful validity as to be very undesirable, and, to say the least, risky.

As the law reads now, it would not be safe to file on any desert land unless one first explored all the surrounding elevations and water supplies to be sure there was no possibility of its being subject to benefit from a future reservoir.

The land offices are to this day receiving filings on desert land, and many are making filings with the idea of reclaiming their lands independently of any reservoirs, and it would seem that they should be assured that it will not be within the power of Major Powell or his successor to say hereafter that this land lies within a district liable to be benefited by possible (no matter how improbable) reservoirs.

Unmistakably the intention of the Act of October, 1888 was to prevent land reclaimable only by the agency of reservoirs from being gobbled up by speculators who would depend on the Government showing such land to be so reclaimable. An exact construction of the Act does not say that only such lands as are reclaimable in no other way than by reservoirs shall be reserved, but might as easily be construed as embracing all lands, no matter how otherwise reclaimed, provided the Chief of the Survey reports them capable of being irrigated through the agency of reservoirs. *The true relief, then, would seem to be to make the law read so that any land which could be proven to the satisfaction of the Land Department of the Government to have been reclaimed independently of any reservoir would not be subject to the reserve clause of the Arid Land law of October, 1888.*

I have assumed as the basis of my suggestions that the Desert Land Act is a wise law. Many seem to think that the Arid Land bill will prevent speculators from taking up land inasmuch as it reserves the land entirely and provides that if it is ever thrown on the market it shall be in 80-acre tracts to actual settlers. If the Desert Land, Homestead, Pre-emption and Timber Culture Acts are not wise the proper mode of procedure would be to amend or repeal these acts. This would eliminate any discussion from this standpoint. The Desert Land Act allows any citizen to file on 640 acres of unproductive, desert land, and after he has proven to the satisfaction of the Government that he has conducted water on it in sufficient quantity and of permanent supply so as to make it habitable and productive it allows him to purchase it of the Government at a low price. The Homestead, Pre-emption and Timber Culture Acts allow a citizen to take up 160 acres under each Act. The Arid Land law does not abolish these various Acts but restricts their application so that one may take up but 80 acres by actual settlement on desert land. It does not restrict him to 80 acres of fertile land in a rainy region. Surely here is an inconsistency. We are restricted to 80 acres where we have to build our own reservoirs, canals, etc., and are allowed 160 acres if we go where reservoirs are not needed and nature has reclaimed the land. Eighty acres in Arizona with water to be provided at the expense of the settler may be better than 160 acres of our California soil, with rain provided free, but it would be hard to convince the average Californian of the fact. DOUGLAS A. LINDLEY

Sacramento.

A BILL TO RESTORE IRRIGABLE LANDS.—It was telegraphed from Washington, June 22d, that Senator Paddock to-day reported from the Committee on Public Lands favorably a substitute for the bill to restore the irrigable lands of the United States to settlement. The substitute repeals so much of the Act of October 12, 1888, as reserves from entry, settlement, or occupancy of public lands, except sites for reservoirs and rights of way for canals and ditches.

COMPOUND LOCOMOTIVES, burning petroleum, are now being introduced upon Russian railroads.

THE DAIRY.

Feeding for Milk in Southern California.

A Los Angeles county dairyman, signing himself G. E. P., writes to the *Country Gentleman* as follows:

Please give ration for 60 cows, Holstein, Jersey, Shorthorn, and grade, all ages and stages of freshness; in prime condition. A large flow of good milk (at lowest cost) desired. Have on hand 32 tons wild oat ensilage; 50 tons No. 1 wild oat hay, $6; 20 tons old alfalfa hay, fair quality, $5; 30 tons new alfalfa, mixed with wild oats, $4; light or heavy bran (wheat) $17; wheat shorts, $20; cornmeal, $25; linseed meal, $45; No. 1 malt sprouts, $5. Have contract for brewers' grains at $2.50 per load of 2750 pounds; must take full load every or every other day. Brewery brews three times a week. They store the grains in iron tank, which keeps it fairly well, but it frequently turns slightly sour soon after hauling. Wish to make ensilage last 60 days, will then have 10 acres of sugar-cane in condition to feed. Can cut part of hay. Can buy No. 1 alfalfa at $10 per ton, No. 1 barley hay at $8, whole barley at $22, second quality wheat at $25. Can grind it coarse myself or have it ground fine at $2 per ton. I now feed 50 pounds grains, 3 pounds sprouts, 6 pounds light bran, three-fourths pound O. P. linseed meal, 10 pounds alfalfa and oat hay uncut; mix sprouts and bran together dry, soak and mix with brewers' grains. Feed oil cake by measure. Cows have three hours in pasture on alfileria and bur clover (dry). Cows are averaging three gallons per day, but the percentage of cream is not as large as I wish.

Prof. E. W. Stewart, who is an acknowledged authority on animal feeding, makes the following reply to the above propositions:

G. E P. enumerates a profusion of foods for his 60 cows. His malt sprouts, if No. 1, are very low at $5; his brewers' grains are also very low in price. It would be well for him, if he can, to get his brewers' grains fresh before being put into the tank. In using brewers' grains and malt sprouts, he does not need any linseed meal to balance his ration. The best hay raised in California is alfalfa, but it should be cut early in first blossom, and nicely cured. It is then one of the very best foundations of a milk ration. It is worth 50 per cent more than any other hay he mentions.

2. The ration which he feeds is a very strong one. The following would be a good combination: 18 pounds wild oat ensilage, 10 pounds old alfalfa, or new alfalfa and oat hay; 40 pounds brewers' grains, 4 pounds malt sprouts, 6 pounds heavy bran. In analytical formula, this shows the following digestible nutrients, in pounds:

	Albuminoids.	Carbohydrates.	Fat.
18 lbs. wild oat ensilage	0.21	2.16	0.07
10 lbs. old alfalfa hay	0.60	3.80	0.17
40 lbs. brewers' grains	1.62	3.80	0.56
4 lbs. malt sprouts	0.75	2.11	0.04
6 lbs. heavy bran	0.60	2.79	0.16
Total	3.78	14.86	0.98

Nutritive ratio, 1 to 4.4. This is a strong and cheap ration. It is presumed that the wild oat ensilage was cut into the silo. This alfalfa hay should also be cut and mixed with the ensilage. The malt sprouts and the wheat bran should be mixed with the brewers' grains and then this mixed with the ensilage and cut hay. This ration should be fed one-half morning and evening, and with the pasturage should produce rich milk; but the real richness of the milk cannot be tested accurately by percentage of cream. Let a portion of average milk be weighed, set, the cream raised, and then churned to butter and weighed. This will give the amount of milk required for a pound of butter, which is the only accurate test of the richness of milk.

3. When his sugar-cane is in proper condition to feed green, let it be run through the cutter, and then a ration may be made up as follows: 30 pounds cut sugar-cane, 6 pounds of best alfalfa hay, 40 pounds brewers' grains, 4 pounds malt sprouts, 4 pounds heavy bran, 2 pounds cornmeal; all mixed together as before directed. This will be a slight improvement on the other ration and cost about the same.

If P. examines carefully the analyzed formula, he will find that malt sprouts, according to the nutriment contained, is the cheapest food in the list, and brewers' grains next, but these are both unbalanced foods, and cannot properly be used in much larger proportion than given in these rations. P. is so fortunately situated that with these two strongly nitrogenous and very cheap foods he can easily balance any kind of fodder, however poor in albuminoids, and make a productive milk ration. The rations here considered, at his prices, can cost only about 15 cents per day, and must leave a fine net profit.

ORIGIN OF FLAVOR IN BUTTER.—Several Danish chemists and analysts have been endeavoring to find out the origin of flavor in butter, which, according to some, is held to be caused by bacteria—whether the flavor be that of turnips, oily, fishy, bitter or tallowy. Prof. Storch has found large numbers of bacteria of a particular variety in oily butters, though he was not able to produce oily butters by the introduction of these bacteria into cream. In other cases he found bacteria which did not differ materially from the normal acid-producing bacteria, which when present in large quantities in cream, produced butter of a tallowy flavor. Similar results were obtained by Prof. Jensen; while Prof. Fjard found that butter from a farm where turnips were not used for the cows had a turnipy flavor, and it is believed by the investigators that this flavor is derived from the presence of a certain kind of bacteria.

SHEEP AND WOOL.

An East Oregon Sheep Ranch.

A correspondent of the *Oregonian*, in a letter from Vale, describes a recent visit to a sheep ranch in Malheur county. After an exhilarating stage-drive of 35 miles from Vale to the Alder creek flat, the account proceeds:

From the postoffice at Westfall I found it necessary to walk six miles to the sheep ranch on Clover creek. Clover creek is so called because there is no clover within a day's ride of it. The walk was due to the fact that the country is a horse heaven and at the cross-roads store there was, of course, no horse that could be hired for love or money by the wayfarer. The road led me through an abandoned *coulee* over to Clover creek, descending to which and then ascending it, I found myself at the sheep ranch.

Here the shearing of sheep was in full blast. The crest of the western hills threw a long shadow in the valley that curiously enough fell nearly parallel with an irrigating ditch on that side of the ranch. The heat of the day was over and the men in the pens were making the shears clip with a home stretch energy. They get seven cents a fleece, and work from daylight until dark. No cry for eight hours among them. In fact one of them from Gascony divulged the secret that in his youth he worked for a sculptor, clipping Naiads and Graces out of marble, and was so enamored of the work of making the pulseless marble come to the breathing state that he had to quit. The trouble with those who do work that they delight in is to jar loose from it.

I looked around among the shearing pens for Alessandro, but of course Ally wasn't there, but Ramona was at the table when supper was announced by the cook, a strapping big trapper (only a cook *pro hac vice*). The cook was quite as interesting as Ramona. To butcher a sheep, he held the wether between his knees, drew a knife about his neck and twisting the head off he flung it on the ground, disemboweled the sheep and threw it in a bucket of ice-cold water to keep the meat from tasting like mutton. (To suggest to him that a better plan would be to go off and kill a pig if he really wished the flesh to taste unlike mutton, would have probed a stratum of ignorant prejudice inherited from ancestors of ages long ago betid, so I declined.)

His pastry the shearers all praised—and well they did, for it was sweetened sour dough bread (the leaven mentioned in the Bible) and infused with a handful of canary-bird or hemp seeds, or some other kind of seeds for sale by bird fanciers.

Ramona, after supper and when the young moon had arisen, and we were all sitting on the front porch listening to the foothill mocking-bird, stole into the parlor and began playing on a piano, and after a start which seemed to split the notes into a complicated jangle of musical sounds, she sang. The mocking-bird stopped and the babbling of Clover creek.

Next morning we went afield to see how the grass grew. The hills were waving with bunchgrass and the flowers that grow between loaded the air with perfume.

Mr. Coyote disturbed our pastoral musings by tripping across an alfalfa field with a spring chicken in his mouth. Flying back to the house I seized a rifle, Winchester repeating, 45-70, set trigger and Lyman sights, and hastened back. He had gone into the sagebrush outside the field, and stopped once or twice to look back. I thought he was too far away, and waited until he ran up on a sloping rock and sat down, when L. cried: "Hold that sight on the wretch and shoot!" He was at least 400 yards away, but when the rifle cracked, the ball hit between his front legs, which rather surprised him; and then it split off a portion of the soft rock and threw it up against his belly with such force that he went crazy and came running back into the field, where the dogs chewed him to pieces. The chicken came out alive, and will make a good pullet yet.

On the hills the shepherd watched his grazing flock. The lambs, not old enough to graze, had sought the shadow of a sagebrush, and the dogs were equally incautious of the future.

A rancho, which costs little or nothing, which will produce 100 tons of hay and an unlimited range presented gratis by Uncle Sam, which will keep sheep fat throughout the year, with an exception falling about once in five years, ought to enable a flock-master here to compete in raising wool with any country under the sun.

He has, besides, good water, plenty of wood, a lovely and health-giving climate, a house covered with trailing roses, brook trout, mountain sheep or venison, and cheap books. * * * The greater portion of all the land in Malheur county is pastoral, but the people accustomed to hard lines—where one's father's position or family influence or the fortuitous concourse of events keep modest merit from attaining its place on the neck of the unworthy—have not yet been able, despite their arduous efforts, to assimilate themselves to the ideal conditions of their environment. It takes time.

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

State Grange Excursion Rates.

TO PATRONS OF HUSBANDRY :—The Southern Pacific Company has agreed to give reduced rates to all who attend the State Grange at Watsonville (commencing Tuesday, October 7th), from all parts of California, over all their lines, according to the following terms and regulations :

Patrons will purchase first-class [unlimited] tickets from their local stations on the railroad lines, being particular to *take a receipt from the station agent*, giving date, name of station and amount paid for the ticket to Watsonville,

Upon application to the Secretary at the State Grange, a certificate will be furnished, stating that the member of the Order has attended the State Grange and is entitled to purchase a return ticket from the Watsonville station agent at one-third unlimited first-class fare. The surrender to the agent of this certificate and the receipt above named will enable the holder to secure a home-bound ticket at one-third price, making the cost of the round trip two-thirds the regular rate.

A. T. DEWEY, Sec'y S. G. of Cal.

San Francisco, June 28, '90.

Our Country's Day.

Patrons, let the boys and girls have a jubilee on the Fourth. Take a good slice for yourselves. The Husbandmen and Matrons of America are noted for working too hard and allowing themselves too little recreation. We are glad to see that Patrons in different places are going to make a merry time of the Fourth.

The Grange should be an instrument for raising higher the standard of American patriotism. Let the spirit of liberty root deeper and branch wider in the next generation than in the past.

Parents, revive the memory and tell the children of your happy experiences on the Fourth in your younger days and some of the old stories that brightened and inspired your own minds and hearts in the long ago.

Let every man, woman and child in this broad free land be gloriously happy and rejoice in the rich heritage secured for us by our grand old Revolutionary sires. Let us try to be worthy of the hardships and sacrifices undergone for us by those never-to-be-forgotten heroes.

In sincere love of country and with heartfelt prayers for her true advancement, and pure aspirations for a higher Americanism, let us go forward, never backward.

Floral and Children's Days.

Stockton Grange, No. 70, is alive, up and doing. We had a large and enthusiastic open meeting on our Floral Day, June 7th. The hall was very prettily decorated with flowers. We had visitors from Lodi, Woodbridge and Waterloo Granges. Our Flora presided with her usual ability. The entertainment consisted of music, vocal and instrumental, readings and recitations, which passed off very pleasantly and were apparently enjoyed by all present.

Next Saturday, July 5th, is set for Children's Day. We will have an open meeting, and a good program—to give a surprise to the young folks—is being prepared by the committee.

Our sister Granges and their friends are cordially invited to meet with us on the occasion. The meeting will be called to order at 1:30 P. M. Fraternally. H. T. ROOT, Sec'y.

Stockton, June 29, '90.

Prepare for Watsonville.

The next session of the State Grange at Watsonville, we expect will be one of the largest and most delightful of the grand gatherings of the P. of H. of California. We expect it will also prove the most useful and important of any. The social, literary and musical inducements for every Patron to be present will certainly be great. Some of these, with others, will be named in our future issues.

THE N. Y. *Commercial Advertiser* points out one indirect effect of the agitation for ballot reform which is very suggestive. The political organizations in the State of New York, headed by Tammany Hall, are holding meetings almost nightly for the purpose of instructing their followers in the workings of the law, and the same thing is happening in other States, notably in Massachusetts, Rhode Island and Indiana. The illiterate voter has public attention called to his illiteracy by being compelled to summon one of the officers of election to his aid, and this is already acting as a powerful spur to acquiring at least the art of being able to read and sign one's name.

Touching Elbows with P. of H.

The purposes of the Farmers' and Laborers' Union of America—now so active in Missouri—are stated by the St. Louis *Journal of Agriculture* in what reads like a good Grange document. To the question "What are we organized for?" the *Journal* makes answer:

It was in order that we might benefit ourselves socially, morally and financially.

How do we benefit ourselves socially? Why, by coming together weekly, semi-monthly, or monthly, as the case may be, exchanging ideas, planning what is best for the members and the country at large, discussing matters for our mutual good, and teaching the farmer and laborer to think more for himself and depend less upon the doctors, lawyers, colonels, captains, and more especially the politicians, to think for him. If we have not as much talent we certainly have as much brains and honesty among the farmers and laborers of this country as in any other class or profession.

How are we to benefit ourselves morally? We don't want any selfish, grasping, vicious characters in our order. If we have such we should try to convince them of their wrong, teach them that man must not live for himself alone, though it is proper to look out for number one. We must not expect all men to think as we do in every particular and condemn them because they do not, for we may be wrong instead of they.

And now as to the point of financial benefit, I will tell what we have done and what we expect to do in that line. We have started a co-operative store at this place, not with the intention of breaking down any other merchant, but expecting to benefit ourselves. My motto is to do ourselves all the good and everybody else as little harm as possible. While we are helping ourselves we are also helping everybody else within trading distance of us, whether they trade with us or somebody else. Merchants in the vicinity are coming down in the price of their goods to a price at which they said they could not, and would not sell before we started. Some say the store is a benefit to the rich and not the poor. I claim the reverse to be the case, as unfortunately for the poor man he must have the cash or he cannot get the goods and if he must have the cash why the cheaper he gets the goods the farther his money will go.

It was predicted by some of the overwise that wholesale merchants would not sell to us. What upon earth are the goods manufactured for but to sell, and what better customer on the globe than the cash purchaser? That did not scare us at all.

What we expect to do is to formulate a plan by which our County Union will be enabled to make arrangements whereby we can get farm supplies of all kinds, such as machinery, plows, drills, wagons, etc., at living prices. A certain machine agent said to me that neither manufacturers nor their agents would sell to us. Pray tell me whom they will sell to if not to the farmers? I suppose he thought to the town people, and what can they do with a binder, mower, or plow?

BALLOT REFORM.—The rapidity with which the Australian ballot system is spreading is very significant; it is a conflagration started simultaneously at a thousand points. In Louisiana, where reform has crept along with crippled wing—crippled by the debauchery of the lottery gamble—the Knights of Labor are clamoring for it; the same in Illinois, where hitherto there has been no organized effort on its behalf. In Pennsylvania a convention of miners heads a long declaration of grievances with a demand for its adoption. High-water mark is reached in the mass meeting called at Cooper Union by the County Democracy of New York, the most prominently advertised feature of which was an exhibition of the methods of voting under the new ballot law. All this is very significant as showing that there is a *spontaneous* eagerness to seek in the ballot-box the eradication of evils universally admitted. For just so far as this eagerness is *spontaneous*, having its rise in the anxiety of an awakened people to shake off the yoke of a plutocracy that is grinding it to powder is the movement full of hope.—*L. A. Weekly Nationalist.*

A RURAL FOURTH.—A delightful "Independence Day" is anticipated at Oak Grove on the Fourth, by Temescal Grange, which invites the Patrons of Husbandry, Farmers, Pioneers, Horticulturists and Florists of Alameda, Contra Costa and neighboring counties (including Oakland and San Francisco), and their families and friends, to join in a patriotic picnic at Oak Grove, on the California & Nevada R. R., 15 miles from Oakland. The Temescal brass band of ten or more pieces has been engaged. The train leaves the depot, near Emery's, on the cable-street car line, San Pablo Ave., Oakland, at 9:45 A. M. Round-trip tickets 75 cents; children 25 cents.

BRO. J. V. WEBSTER has promised to address Carpinteria Grange on the 17th inst., and we have the best reasons for expecting to secure most of his remarks for publication. Give him a good turnout.

'A Footprint" Erased.

Bro. Webster, Master of Creston Grange, emphatically remarks as follows concerning the article headed "Tenderfoot Interrogates Creston," published in our last issue and signed "A Footprint·"

The manifest purpose of its writing is not to gain information on the subjects mentioned, but to satisfy a scurrilous, carping disposition apparent in every line. Why "A Footprint" uses a *nom de plume* instead of subscribing his real name is easily discerned. In light literature and in "airy nothings" fictitious names frequently appear, but when great absorbing questions are discussed and individuals or associations are spitefully held up for ridicule, no one but a light-minded, cowardly nonentity ever signs any other than his own name. Sometimes the name of the writer is unnecessary to measure the man, and "Footprint's" communication is one of that order. If language means anything, he is evidently opposed to many reforms demanded by the people. If he be a member of our Order in good standing, manifestly that good standing is maintained chiefly for the purpose of obtaining the information desired by the spy and informer, for the intent and purport of the article clearly indicates antagonism to several of the leading questions of the times to which the Grange is irrevocably committed.

Had the writer confined his interrogations to the resolutions of Creston Grange, they might have been answered without reservation; but I do not feel called upon, in this connection, to consider carping questions in no wise related to the subjects treated in said Grange resolutions. I shall therefore confine my remarks to the questions which seem to me pertinent to the inquiry.

"Footprint" starts out with the inquiry :

How many voters of the United States do you believe know what are the duties of a senator?

The inference from this question is clear. Manifestly the writer does not believe that the citizens of the United States are sufficiently informed to trust the election of United States Senators to a direct vote of the people, but rather to the corrupt methods now in vogue by legislature manipulators.

This same contempt for popular intelligence crops out again in the following:

How many voters are such judges of character that they would be able to judge from a man's record whether he would be likely to perform the duties of a senator wisely and efficiently?

From these extracts it is apparent that, if "Footprint" is an American citizen and a Granger, his room in the Republic would be of more value than his personal presence.

Are you willing to have *your* lands "condemned and appropriated," and the Government production instituted? If not, will you explain why you think it just to condemn and appropriate the Union and Central Pacific Railroads and have Government distribution instituted?

As "Footprint" very well knows, under the law of eminent domain the Government has the undisputed right to condemn and appropriate any private or corporate property which may be deemed necessary to promote the public welfare. If Congress considers my lands necessary for a public use, it has the undoubted right to condemn and appropriate them for such use, on paying a fair consideration for the property so taken. Under the same rule of law, the Government has the right to condemn and appropriate any or all railroads and telegraph lines; and especially is this the case with the Union and Central Pacific roads, because they have forfeited every right possessed under the laws of their creation.

In support of this position, I beg leave to copy some sentences used in the report of the Railroad Commission, appointed by President Cleveland, as provided under an Act of Congress, approved March 3, 1887, entitled "An Act authorizing an investigation of the books and accounts and methods of railroads which have received aid from the United States and other purposes." Commissioner Pattison said that the actual cost of the construction of said lines and their branches was, in round numbers, $96,000,000, and the same roads were aided by the Government in lands, stocks and bonds to the enormous extent of $447,729,470.54—an amount nearly five times as great as the whole cost of their construction. After reciting these facts, the report of Commissioner Pattison continues:

The original purpose of Congress, as set forth in the Act of July 1, 1862, in granting subsidies for the construction of the Union and Central Pacific railroads and their branches was "to promote the public interest," and the companies were made trustees for that purpose, but the public interest has been subordinated by these companies to the stockholder's interest. Nearly every obligation which these companies assumed under the laws of the United States, or as common carriers, has been violated. Their management has been a national disgrace since the date of their inception; they have been conducted upon a purely speculative basis. Their permanent prosperity has been lost sight of, while their managers greedily strove for temporary advantage. They squandered millions of their money to protect their territorial claims, while expending other millions to foment encroachments upon the territory claimed by other companies. They constituted themselves the arbitrators of trade. They charged all the traffic would bear, and appropriated a share of the profits of every industry by charging the greater part of the difference between the actual cost of production and the piece of the article in the market. They discriminated between individuals and companies, between localities and between articles. They destroyed possible competitors and they built up particular localities to the injury of other localities, until matters reached such a pass that no man dared engage in any business in which transportation largely entered without first soliciting and obtaining the permission of a railroad manager. They exerted a terrorism over merchants and over communities. They participated in election contests. In their relations to the Government, they resorted to every device their ingenuity could invent in their efforts to evade the plain requirements of the law.

These are some of the reasons given by the Commissioner why the roads should be condemned and appropriated by the Government. They have certainly forfeited their rights under their charters. But waiving the rights of the people, certainly acquired because of the failure of these companies to keep faith with the Government, the urgency of the case is such that no extension of time as proposed by Congress for the payment of the $120,000,000, due the Government from these companies, should be made. In five years' time the bonds will mature, and if not paid the roads will inevitably fall to the Government, upon its paying the first mortgage bonds, amounting to $27,000,000, voted and allowed the companies by a corrupt and venal Congress.

The chief and vital reason why said roads should be condemned and appropriated by the Government is that such action will open the way for the *only* apparent solution of the transportation question. In addition to these roads, the Government must own and operate a continuance of the line through to Boston, via Chicago and New York. With this line, and one starting at Richmond, Va., and running through the Gulf States via the "Sunset Route" to San Francisco or San Diego, the Government will regulate and control the carrying trade of the United States; for all other roads will have either to adopt the Government rates or become feeders of the Government roads.

Two or three telegraph lines across the continent will likewise have to be controlled and operated by the Government for like reasons.

Are you in favor of paying extra taxes to buy the telegraph plants and franchises, or would you have the Government ruin the owners of the present system by competing lines?

In answer to this inquiry, I have to say that the Government should, if possible at a fair rate, acquire control of two or three prominent lines across the continent, already constructed. If not obtainable at fair rates, the Government should construct its own lines, for this necessary regulation and control of railroads and telegraphs will inevitably come sooner or later, "Footprint" to the contrary notwithstanding.

As to "ruining the owners of the present system by competing lines," it does not necessarily follow, for the Government would assuredly establish a fair rate for the service rendered, both by telegraph and railroad, and fair rates ruin no one. The purpose in Government ownership is simply to *protect its citizens from extortion.* There is no disposition to ruin even Jay Gould, who runs and controls the telegraph system to the ruin of everybody who dares dispute his right to regulate and control.

How many tons of unused silver already coined do you think there are in the United States Treasury vaults, and in the vaults of the various banks; and how many millions of dollars of unused silver certificates are there in the aforesaid vaults and stowed away in private unused tea-kettles, old socks and such private receptacles?

The coined silver in circulation in the United States is about $100,000,000. That in public and private repositories is estimated at $300,000,000, nearly all of which is represented by silver certificates which pass as currently as gold everywhere; and if there are any of them stowed away in "unused tea-kettles and old socks," it is because the owner thereof is aware of the fact that they have a fixed and secure value.

If "Footprint" had an inch of breadth between his eyes, he would be able to discover the fact that nine-tenths of the people of the United States are either in favor of the free coinage of silver, or at least the *maximum* coinage of $4,000,000 monthly, as provided for under the Bland-Allison Act. The House of Representatives has conceded more than this in a bill recently passed by that body, and the U. S Senate two weeks since passed a Free-Coinage Act.

In the face of all these facts, manifest to every intelligent mind, the conviction must be irresistible that "Footprint" (of "Tenderfoot Grange") is of an age too tender, or mentally so unfortunate, as to be unable to grasp the plainest and most evident of propositions.

If two men may buy as low as they can, and sell as high as they can, one wagon-load of the produce of the chief industries of the nation, why may not two other men buy and sell, on similar terms, a million wagon-loads? How many million wagon-loads can they buy and sell without constituting themselves a trust?

In answer to this question I will simply say that the amount of any product bought and sold does not necessarily constitute a "trust." The more of any product bought and sold in *the open market in competition with others in the same line of business,* the less the current price on such product. In this manner two men could buy and sell as many million loads of produce as they wished, and have no connection with a trust. But if two men, or any any other number, should buy a million loads

In digging ditches, I find a difference in the | wings he passes through easily. When he has

Wheat Prices in Liverpool and Ocean Freight Rates from San Francisco; also Bag Prices in S. F. from 1875 to 1890.

[Compiled by A. MONTPELLIER, Cashier and Manager Grangers' Bank of California.]

MONTHS.		1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82	1882-83	1883-84	1884-85	1885-86	1886 87 Spot.	1887-88 Spot.	1888 89 Spot.	1889-90 Spot.
JULY	Highest	$2 15	$1 52½	$2 37½	$1 70	$1 77½	$1 57½	$1 42½	$1 75	$1 62½	$1 42½	$1 42½	$1 2 ½	$1 97½	$1 37½	$1 36½
	Lowest	1 72½	1 45	2 15	1 62½	1 57½	1 42½	1 30	1 65	1 55	1 35	1 40	1 22½	1 82½	1 32½	1 27½
	Average	1 93¾	1 48¾	2 26¼	1 66¼	1 67½	1 50	1 36¼	1 70¾	1 58¾	1 38¾	1 41½	1 25	1 88¼	1 35	1 31⅞
	Freight	£2 4s 6d	£3 4s 4½d	£2 3s 9d	£2 11s 3d	£2 6s 3d	£2 17s 4d	£3 13s 0d	£2 13s 9d	£2 11s 0d	£1 15s 3d	£1 11s 3d	£1 13s 0d	£1 4s 6d	£1 0s 0d	£1 10s 0d
	Bags	*10½ cts*	*12¼ cts*	*11⅛ cts*	*11⅛ cts*	*9⅜ cts*	*10¼ cts*	*9¼ cts*	*9½ cts*	*7¼ cts*	*7½ cts*	*5 cts*	*8 cts*	*7⅜ cts*	*7⅜ cts*	*7⅜ cts*
AUGUST	Highest	$2 32½	$1 52½	$2 30	$1 75	$1 75	$1 55	$1 70	$1 72½	$1 72½	$1 37½	$1 40	$1 35	$2 12½	$1 57½	$1 35
	Lowest	2 15	1 45	2 15	1 65	1 60	1 35	1 37½	1 63	1 62½	1 25	1 37½	1 25	Wheat	1 40	1 28¾
	Average	2 23¾	1 48¾	2 22½	1 70	1 67½	1 45	1 53⅜	1 68	1 67½	1 31¼	1 38¾	1 30	collapse.	1 48¼	1 31⅝
	Freight	£2 5s 6d	£2 17s 6d	£2 6s 3d	£2 11s 12d	£2 9s 3d	£2 18s 6d	£3 17s 6d	£2 14s 0d	£2 12s 6d	£1 16s 0d	£1 11s 6d	£1 12s 6d	£1 7s 6d	£1 3s 6d	£1 13s 3d
	Bags	*9⅞ cts*	*12⅜ cts*	*12 cts*	*13¼ cts*	*9⅜ cts*	*10½ cts*	*8½ cts*	*9 cts*	*7½ cts*	*7 cts*	*5 cts*	*7 cts*	*7½ cts*	*8 cts*	*6¾ cts*
SEPTEMBER	Highest	$2 15	1 55	$2 37½	$1 77½	$1 87½	$1 40	$1 70	$1 70	$1 70	$1 25	$1 46¼	$1 37½	$1 27½	$1 55	$1 32½
	Lowest	2 00	1 50	2 25	1 67½	1 62½	1 27½	1 62½	1 60	1 70	1 15	1 37½	1 30	1 22½	1 47½	1 25
	Average	2 07½	1 52½	2 31½	1 72½	1 75	1 33⅓	1 66¼	1 65	1 70⅜	1 20	1 41⅝	1 33⅓	1 25	1 51½	1 28⅜
	Freight	£2 10s 0d	£3 2s 6d	£2 0s 6d	£2 3s 9d	£2 7s 6d	£3 4s 6d	£4 2s 6d	£2 5s 0d	£2 7s 6d	£1 16s 0d	£1 12s 6d	£1 12s 9d	£1 8s 9d	£1 8s 0d	£1 12s 9d
	Bags	*9⅜ cts*	*12¼ cts*	*11¼ cts*	*14 cts*	*10 cts*	*9½ cts*	*8½ cts*	*8¼ cts*	*7 cts*	*6⅜ cts*	*4¾ cts*	*5⅜ cts*	*7⅜ cts*	*7⅜ cts*	*6½ cts*
OCTOBER	Highest	$2 05	$1 70	$2 40	$1 75	$2 10	$1 50	$1 72½	$1 70	$1 70	$1 27½	$1 50	$1 40	$1 30	$1 62½	$1 33⅞
	Lowest	2 00	1 57½	2 25	1 67½	1 82½	1 40	1 62½	1 60	1 67½	1 22½	1 45	1 30	1 25	1 57½	1 27½
	Average	2 02½	1 63¾	2 32½	1 71¼	1 96¼	1 45	1 67½	1 64¾	1 68¾	1 25	1 47½	1 35	1 27½	1 60	1 30⅝
	Freight	£2 11s 6d	£3 0s 0d	£1 18s 9d	£2 3s 9d	£3 5s 10d	£3 8s 6d	£4 2s 6d	£2 1s 6d	£2 2s 3d	£1 15s 0d	£1 9s 6d	£1 12s 6d	£1 8s 9d	£1 12s 6d	£1 13s 3d
	Bags	*9¼ cts*	*11¾ cts*	*10⅜ cts*	*14½ cts*	*11¼ cts*	*8⅞ cts*	*8¾ cts*	*8¼ cts*	*6¾ cts*	*5¾ cts*	*4¾ cts*	*5⅜ cts*	*8¼ cts*	*7½ cts*	*6½ cts*
NOVEMBER	Highest	$2 00	$2 00	$2 37½	$1 75	$2 15	$1 57½	$1 75	$1 72½	$1 87½	$1 26¼	$1 43¾	$1 42½	$1 37½	$1 63¾	$1 31½
	Lowest	1 87½	1 75	2 22½	1 65	1 92½	1 45	1 67½	1 60	1 75	1 22½	1 37½	1 35	1 27½	1 52½	1 28¾
	Average	1 93¾	1 87½	2 30	1 70	2 03⅜	1 51¼	1 71¼	1 66¼	1 81¼	1 24⅜	1 40⅝	1 38⅜	1 32½	1 58⅜	1 30
	Freight	£2 13s 6d	£2 17s 6d	£2 1s 0d	£2 5s 7½d	£3 5s 0d	£3 10s 4d	£3 12s 6d	£2 2s 6d	£2 5s 6d	£1 14s 0d	£1 8s 6d	£1 6s 3d	£1 7s 6d	£1 14s 0d	£1 13s 3d
	Bags	*9½ cts*	*10⅞ cts*	*9⅜ cts*	*9⅜ cts*	*11 cts*	*8⅜ cts*	*8⅜ cts*	*8¼ cts*	*7 cts*	*6 cts*	*4¼ cts*	*5½ cts*	*8⅜ cts*	*7⅜ cts*	*6⅜ cts*
DECEMBER	Highest	$1 97½	$2 25	$2 42½	$1 75	$2 10	$1 50	$1 70	$1 76½	$1 87½	$1 28¾	$1 40	$1 52½	$1 40	$1 50	$1 30
	Lowest	1 90	2 02½	2 30	1 65	1 95½	1 40	1 60	1 68	1 80	1 23¼	1 35	1 42½	1 35	1 40	1 27½
	Average	1 93¾	2 13¾	2 36¼	1 70	2 02½	1 45	1 65	1 69	1 83¾	1 26¼	1 37½	1 47½	1 37½	1 45	1 28¾
	Freight	£2 11s 6d	£2 16s 3d	£2 1s 3d	£1 15s 0d	£3 1s 6d	£3 11s 0d	£3 11s 3d	£1 17s 6d	£1 10s 9d	£1 10s 0d	£1 7s 9d	£1 7s 6d	£1 6s 3d	£1 16s 3d	£1 13s 6d
	Bags	*9½ cts*	*10¼ cts*	*9¼ cts*	*9 cts*	*10½ cts*	*9⅛ cts*	*8¾ cts*	*8¼ cts*	*7¼ cts*	*5½ cts*	*4¼ cts*	*5⅜ cts*	*7¼ cts*	*7¼ cts*	*6⅜ cts*
JANUARY	Highest	$1 97½	$2 25	$2 35	$1 72½	$2 05	$1 47½	$1 70	$1 85	$1 80	$1 33⅞	$1 36¼	$1 60	$1 38¾	$1 45	$1 30
	Lowest	1 90	2 10	2 10	1 65	1 85	1 25	1 60	1 74	1 70	1 27½	1 32½	1 52½	1 33⅜	1 36½	1 27½
	Average	1 93¾	2 17½	2 22½	1 68¾	1 95	1 36¼	1 65	1 79½	1 75	1 30⅜	1 34⅜	1 56¼	1 36¼	1 40⅝	1 28⅜
	Freight	£2 5s 0d	£2 11s 7d	£2 3s 0d	£1 13s 9d	£3 0s 6d	£3 13s 6d	£3 7s 6d	£1 16s 9d	£1 4s 6d	£1 9s 6d	£1 6s 6d	£1 7s 6d	£1 4s 0d	£1 15s 9d	£1 13s 3d
	Bags	*10½ cts*	*9¼ cts*	*9⅜ cts*	*8⅞ cts*	*10⅜ cts*	*9⅛ cts*	*8⅞ cts*	*8¼ cts*	*7¼ cts*	*5⅜ cts*	*5 cts*	*5¼ cts*	*7¼ cts*	*7¼ cts*	*6⅜ cts*
FEBRUARY	Highest	$1 95	$2 10	$2 12½	$1 72½	$2 00	$1 35	$1 70	$2 00	$1 65	$1 31¼	$1 30	$1 55	$1 35	$1 45	$1 27½
	Lowest	1 85	1 97½	1 95	1 62½	1 82½	1 27½	1 57½	1 78	1 57½	1 25	1 25	1 45	1 30	1 38¼	1 25
	Average	1 90	2 03¾	2 03¾	1 67½	1 91¼	1 31¼	1 63¾	1 90⅜	1 61¼	1 28⅛	1 27½	1 50	1 32½	1 41⅜	1 26¼
	Freight	£2 2s 6d	£2 4s 5d	£2 9s 6d	£1 17s 6d	£2 10s 6d	£3 15s 0d	£3 5s 0d	£1 18s 6d	£1 6s 9d	£1 16s 0d	£1 6s 3d	£1 7s 6d	£1 2s 6d	£1 16s 3d	£1 12s 9d
	Bags	*10¼ cts*	*9¼ cts*	*10½ cts*	*9¼ cts*	*10⅝ cts*	*9 cts*	*8⅜ cts*	*8¼ cts*	*7¼ cts*	*5⅝ cts*	*5⅛ cts*	*5¾ cts*	*7⅜ cts*	*7⅜ cts*	*6⅜ cts*
MARCH	Highest	$1 97½	$2 15	$2 00	$1 70	$1 97½	$1 40	$1 67½	$2 05	$1 60	$1 30	$1 32½	$1 65	$1 33¼	$1 40	$1 28¼
	Lowest	1 87½	2 05	1 90	1 60	1 87½	1 25	1 57½	1 83¼	1 57½	1 25	1 28⅜	1 47½	1 30	1 37½	1 26¼
	Average	1 92½	2 10	1 95	1 65	1 92½	1 32½	1 62½	1 94	1 58¾	1 27½	1 30⅝	1 56¼	1 31⅜	1 38¾	1 27½
	Freight	£2 5s 0d	£2 1s 3d	£2 5s 0d	£2 6s 3d	£2 0s 4d	£3 17s 6d	£3 0s 0d	£1 19s 3d	£1 9s 3d	£2 0s 0d	£1 6s 9d	£1 7s 6d	£1 1s 6d	£1 13s 9d	£1 14s 3d
	Bags	*11⅞ cts*	*9¼ cts*	*10⅞ cts*	*9⅝ cts*	*10¼ cts*	*8⅞ cts*	*9⅛ cts*	*8 cts*	*7⅜ cts*	*5⅜ cts*	*6⅛ cts*	*6⅛ cts*	*7¼ cts*	*7½ cts*	*6⅞ cts*
APRIL	Highest	$1 92½	$2 50	$2 05	$1 65	$1 87½	$1 42½	$1 65	$1 85	$1 60	$1 50	$1 36¼	$1 75	$1 34¾	$1 42½	$1 31¼
	Lowest	1 82½	2 15	1 90	1 57½	1 52½	1 30	1 57½	1 70	1 47½	1 30	1 32½	1 67½	1 27½	1 32½	1 26½
	Average	1 87½	2 32½	1 97½	1 61¼	1 70	1 36¼	1 61¼	1 76	1 53¾	1 40	1 34¼	1 71½	1 31⅛	1 37⅜	1 28¾
	Freight	£2 10s 0d	£2 2s 6d	£2 10s 0d	£2 4s 3d	£2 0s 2d	£3 18s 2d	£2 17s 6d	£2 1s 3d	£1 8s 6d	£1 11s 3d	£1 9s 0d	£1 5s 0d	£1 1s 6d	£1 10s 9d	£1 13s 9d
	Bags	*12¼ cts*	*8⅞ cts*	*11⅛ cts*	*9⅜ cts*	*10⅜ cts*	*8½ cts*	*9⅜ cts*	*8½ cts*	*7½ cts*	*5¼ cts*	*6⅜ cts*	*5¾ cts*	*7½ cts*	*7½ cts*	*6¾ cts*
MAY	Highest	$1 77½	$3 00	$2 00	$1 67½	$1 65	$1 42½	$1 70	$1 82½	$1 57½	$1 45	$1 33¾	$1 82½	$1 45	$1 33¾	$1 35
	Lowest	1 67½	2 45	1 82½	1 57½	1 50	1 32½	1 62½	1 62	1 45	1 40	1 30¼	1 75	1 35	1 30	1 27½
	Average	1 72½	2 72½	1 91¼	1 62½	1 57½	1 37½	1 66¼	1 75	1 51¼	1 42½	1 32	1 78¾	1 40	1 31⅜	1 31¼
	Freight	£2 15s 6d	£2 4s 0d	£2 7s 6d	£2 5s 9d	£2 10s 6d	£3 17s 6d	£2 12s 6d	£2 2s 6d	£1 12s 3d	£1 12s 6d	£1 10s 0d	£1 3s 9d	£1 2s 0d	£1 8s 6d	£1 13s 9d
	Bags	*13 cts*	*8⅞ cts*	*11½ cts*	*9½ cts*	*11⅜ cts*	*8⅜ cts*	*8¼ cts*	*8¼ cts*	*7⅜ cts*	*5½ cts*	*6⅞ cts*	*6¼ cts*	*7⅜ cts*	*7½ cts*	*6⅜ cts*
JUNE	Highest	$1 65	$2 45	$1 75	$1 72½	$1 62½	$1 42½	$1 70	$1 67½	$1 47½	$1 42½	$1 30	$2 10	$1 32½	$1 31½	$1 27½
	Lowest	1 52½	2 12½	1 62½	1 55	1 45	1 35	1 64	1 60	1 42½	1 37½	1 25	1 85	1 30	1 26½	So far.
	Average	1 58⅜	2 28¼	1 68¾	1 64¼	1 53¾	1 38¾	1 67¼	1 63¼	1 45	1 40	1 27½	1 97½	1 31¼	1 28¾	
	Freight	£3 6s 0d	£2 9s 9d	£2 8s 9d	£2 5s 0d	£2 14s 6d	£3 10s 0d	£2 7s 6d	£2 9s 6d	£1 15s 0d	£1 11s 6d	£1 13s 9d	£1 2s 6d	£1 1s 0d	£1 10s 0d	£1 16s 0d
	Bags	*13½ cts*	*9¾ cts*	*11¼ cts*	*8¾ cts*	*10 cts*	*9¼ cts*	*9 cts*	*8¼ cts*	*7½ cts*	*5¼ cts*	*10 cts*	*6¾ cts*	*7⅜ cts*	*8 cts*	*6¾ cts*

of flour, and that million loads should constitute all the flour in the United States, and after getting control of the supply these men should demand $20 a barrel for the flour, that kind of an operation would be deemed and treated as a trust—such a one, in fact, as would justify hanging the trustees and the division of their supply pro rata among the starving millions made desperate by such a soulless combine.

J. V WEBSTER.

THE GRANGE PRESS.—Bro. J. J. Woodman, after a long experience in Grange work, having occupied every position from high private to National Master says: "I am satisfied that more good can be accomplished through the influence of the Grange press, and at less expense than by any other means." This is the unanimous verdict, but what troubles the Grange press is to know why it is not acted upon.—*Grange Bulletin.*

Seriously, we too!—PACIFIC RURAL PRESS.

OREGON.

Surprise Grange.

EDITORS PRESS:—The meeting of June 19th was one of much interest.

The W. Master being absent, Bro. I. M. Wagner was called to the chair.

Applications for membership were received from two of our noble farmers; first and second degrees were conferred on two, and third and fourth degrees on a class of six.

During the quarter ending June 30th Surprise has increased its membership 24. Many of that number are excellent singers, and as we have just received a dozen "National Grange Choir" song-books, our hall now rings with melody.

Matters of a business character were discussed with great interest by all present, and finally a plan was decided upon. In all, we think it one of the best day's work of the year.

C. T. M., Sec'y.

Past S. G. L., Simpson Scores Two!

Though our "old warhorse" John Simpson has changed from Lecturer to Deputy, his labors are by no means finished. Less than one week after the close of the late session of the O. S. G., Bro. Simpson and Deputy White organized a new Grange in Polk county, and now comes the cheering news that the Grange at Coburg, Lane county, is reorganized with 25 members.

Over 400 Granges are already added to the roll-call for 1890, Pennsylvania being still in the lead. With two such workers as Simpson and Holder in the field, Oregon ought to stand only second. Then there is S. M., Hayes always at the front strong and ready to help.

May the good work go on, and may this year's Deputies and Lecturer double and quadruple the work of 1889.

Sherman Grange.

EDITORS PRESS:—Sherman Grange held a called meeting Saturday, June 21st.

The Committee on Good of the Order submitted a fine program for the next meeting.

Worthy State Lecturer Holder being called upon, made a very good speech on co-operation and Grange principles.

Bro. F. Pike of Wheat Grange spoke on the fire-insurance question.

Bro. Holder is now on his way through Wasco county and will not reach home for some time yet, as he will make a thorough canvass of that county. He is a zealous Granger and a fine talker and Lecturer. Eastern Oregon is fortunate in his election. PATRON.

Moro, Oregon, June 23, 1890.

GOOD NEWS FROM UMATILLA. — Union Grange, No. 244, comes to the front with a membership of 42. Now will not Sec'y Turner send us a line occasionally from this new and promising Grange?

SURPRISE GRANGE is thinking of trying to work up a Business Council for Marion county. If conducted on the same business principles and with like zeal as the L C. C, no better step for the advance of the Grange of Marion county could be taken; but *it takes work* to make the council "go," and business must be the principal factor. I. L. H.

JORDAN VALLEY GRANGE has a membership of 86. Its meetings are well attended, interesting and instructive. Let us hear again, Bro. Huber.

WASHINGTON.

Rambles Among the Granges.

EDITORS PRESS:—It is a long time since I reported from Washington. I hope you will excuse my shortcomings, as there are more able correspondents writing to your valuable journal.

The State Grange of Washington had a very profitable session—one calculated, I think, to build up the Order in this State. I became acquainted with your noble California treasurer on wings, Bro. Cressey, who was the life of the S. G. Brother Simpson and Sister Hilleary also did good work for the RURAL PRESS.

On Friday, I attended a picnic at Fourth Plain, and heard that veteran Patron, Brother Hare of Hillsborough, right nobly instruct the farmers in the duty they owe to their family, their country and themselves; also good words from Brother Russell, W. M. S. G. I only wished Brother Cressey was there, and can assure him, from the appearance of the dinner-table that his vest would not have been too loose for him on his way home and there would be no need for him to educate his daugher to fill him up on French recipes as we had something more substantial than paper. The Patrons of Clarke Co. are determined to make the Grange a success. God bless them!

On Saturday, I attended a business meeting of the mercantile association at Washougal, which elected a board of directors and adjourned to meet at the call of the chairman, Brother Russell.

June 14th, I visited Cape Horn Grange by invitation of the W. L. and found them in good working order with a class of two for the third and fourth degrees, one for first degree and one application. This Grange is alive and well up in Grange work, with all the field work practised. They are to celebrate our National Independence Day, the proceeds going to build them a hall and when they say they want a hall, that means they are going to have one. This is due to the sisters; they hold the handle of the broom and right nobly do they use it. I see but one thing wanting in this Grange—they do not write for the PRESS and let us know what they are doing! Cape Horn has doubled its membership in one year and is not going to stop until every boy and girl over 14 years old is in the Grange.

Now what is the matter with Bro. Nevin? This is his own Grange and no one writing for the RURAL PRESS! Come, brother! Wake up and do some work in your own Grange, and have some of your members correspond for the RURAL. Brothers and sisters of Cape Horn! Do not keep your good work hidden under the bushel; let it shine, so that others will profit by your example.

As you say, Mr. Editor, build solid as you go. Yes, this is the counsel of our noble Master. The State Lecturer, also, told me he thought it was lost time and money to organize 20 Granges and let ten die. We must hold all we organize, and if the brothers and sisters visit neighboring Granges more, such fraternal meetings will have a good effect, and revive drooping members.

I want to visit some more Granges and write you more anon. Fraternally yours, in F. H. and C. with F. A WANDERING JEW.

June 25, 1890.

[We thank the Wanderer for this interesting letter, and hope he will write again; also, that others will be moved by his good counsel and example to "go and do likewise." In order to make a good paper for Patrons, we must needs have the help of Patrons' pens. Let us hear from *your* Grange, too.—EDS.]



Not Transferable.

[Written by the PRESS by A. T. DAVIDSON.]

A pretty little maiden was dusting with brush and broom,
Looking here and there, exploring, in her auntie's room,
Being very, very busy, as such little ladies are;
She chanced on something curious as she removed a chair,
And she placed it underneath her uncle's picture in comparable—
It was an old, old ticket, and read thus: "Not transferable."

Little maiden, in your glee, you have given a good motto,
Which we may well adopt and place in every niche and grotto;
There above the fire-place hang it as a chart,
And then enshrine it deeper in recesses of the heart.
So if a friend should ask us to do something we ought not to,
We'll in a firm but kindly way just point them to our motto.

When the pearly gates shall open to that blessed land above,
For us to enter in where all is happiness and love,
The King of Outer Darkness there his last, last plea will make
For us to come and dwell beside his fiery brimstone lake—
Will ask for us most spitefully in angry tone and terrible—
Please God we then be suffered to make answer: "Not transferable."

Fitting Herself In.

"Well, there's one thing certain," said Alice Barnes, "I'm not likely to get much unless I get it for myself; and there's another thing very uncertain, and that is how I'm to do it. I've thought and thought about it, and the more I think, I don't see my way. All the wise folks nowadays are writing and talking about girls doing for themselves. They say, Find out what you can do best, and then do it. But I can't do anything best—that is, any of the things that people can make a living at. I can't teach, and I can't write stories, nor do astonishing fancy-work. I can only do the common, every-day things; and father wouldn't let me go away from home to do those, even if I wanted to, which I don't."

Alice was situated exactly as a great many young girls find themselves. The oldest girl in a large family with a slender income, she had picked up a moderate amount of schooling and had done plenty of work. She could play a little, paint a little, and sew and cook a great deal. The younger children, for whom she had given willing service, were now growing old enough to assume their own shares of the household burdens; and Alice began to find time to think of things which she wanted, and things which she would like to do if only she knew how.

"I want more books, and I want more clothes; and father has enough to do without my looking to him. O dear! I wish I had been brought up to something regular to do; but how *could* I be?"

With a tender thought of the toilworn mother whose right hand she had been all through these years of struggle, she took up a monthly magazine which had strayed into her way.

"'Around the Fireside.' This is just the kind of a thing I'd like to take. It's full of good talk about girls helping themselves, and ten to one, before the year was out I might get some suggestion that would show me a way; but I couldn't afford it any more than I could fly."

In turning over the advertising pages, her eye fell upon the terms for subscription.

"'And one to the getter-up of the club.' There, now, I might try that. I could do any amount of walking about and talking. Five subscriptions and then I should have it. It's no harm trying, any way."

To think and to act meant one with Alice, and it was not long before she was entering the house of one of her neighbors in the little rambling country town.

"May I come in?" she asked, pausing at the door.

"Oh, dear, yes, of course you can, Miss Alice, if you'll only excuse the mess I'm in. I set aside all my other work to-day to see if I couldn't fix over the children's last summer hats—millinery costs so much, you know, when there's four of 'em, and myself, too, though everybody knows I don't spend much on myself. But the girls is gettin' a little fussy since they've grown so big, and it's hard to suit 'em any more; and the same way with their dresses. They want more fixings about 'em, ain't satisfied no more with Jane Ann Perry's work—that just does plain sewing—but thinks they ought to have a reg'lar dressmaker. At a dollar a day! Now look here at this."

With all her sympathy for Mrs. Drake's perplexities, Alice could not help smiling at her wooden arrangement of ribbons and flowers.

"Let me see if I could twist that into any better shape," she said, taking the hat out of Mrs. Drake's hands.

"Oh, you're so good, Miss Alice. There now—if you haven't the real milliner touch. Some folks can do anything they sets their hands to. I ain't a bit of knack myself."

"Oh, I've had to have a knack," said Alice, laughing. "I have a tribe at home to do for. Mother never has time for such work, like you. But don't you think some book like this would help you on such things, Mrs. Drake? It gives a lot of information about doing things at home."

"Bless your heart, Miss Alice, I never have a moment for reading, even if I could afford the money, and I can't. But I do hope you'll have good luck. My! ain't you made that hat look just like a new one!"

"Yes, that looks something like," said a half-grown girl just then entering the room with a look of great discontent on her pretty face. "I ain't going to wear this dress to school any more, mother."

"Why not?" asked Mrs. Drake.

"The girls laugh at it. They say that looping up in the back looks like a plowed field."

"Dear me! I worked and fussed half a day over that," said Mrs. Drake, looking ruefully at the expanse of snarled-up puffs. "I couldn't make head or tail of how that bought pattern meant 'em to go."

"Rip them out, Katie," said Alice, "and I can drape it for you in a few moments, if you'll let me."

"Now, did you ever!" exclaimed Mrs. Drake, as under Alice's deft fingers a few graceful loopings took the place of the puffs. Then, with directions for a little pressing, she said good-by, amid a shower of admiring thanks from mother and daughter.

Alice took her way to the house of young Mrs. Garde, who was one of her good friends.

"Yes, Alice, I'll take the book 'Around the Fireside.' I'd take a dozen books if they would show me any way to make things a little smoother around my fireside. My hands are so tied with these two children that I have no time to see to things in the kitchen; and, if I had, I don't believe things would be much better. We're living the forlornest kind of a life. Frank is half-sick most of the time, and I'm beginning to think it's the wretched cooking. How can a man live on poor bread all the time and be well? It's sour one week and heavy the next, and that's about all the variety we have."

"Too bad," said Alice. "I wish with all my heart I could get you a good girl."

"You can't. I've searched the entire country. Mother has sent two or three out from the city, but they always get homesick and go back. I see nothing but to resign ourselves to the prospect of being hopeless dyspeptics. It makes me feel so good for-nothing, too. You will never make such a failure when you come to the real duties of life."

"Don't talk so," said Alice, shaking her head. "Why, I was just making up my mind that I am good for nothing. I can do plenty of things, but they're not the kind that I can make my living by, unless I go regularly and hire out, and I don't want to do that so long as I have a good home."

"Of course not. It seems a pity," said Mrs. Garde with a sigh, "that just such abilities as yours couldn't be fitted in somehow to places where they are needed."

"Oh, don't put a book at me," said the mistress of the next house at which Alice called.

"Why, Mrs. Warner, what is the matter?" asked Alice in concern, as that lady, after placing a chair for her, sat down and burst into tears.

"Oh, it's my eyes troubling me again. Your book would do me no good unless you came and read it to me. And books are not the worst part of it, although it's hard enough not to be able to read. But look at that mending-basket, piled up with two weeks' mending. I try to do a little bit at a time, but it hurts my eyes so I can't go on, and the doctor says they will never get well unless I give them perfect rest. Why," she said, half laughing, "I had to pin the children's clothes on this morning where the buttons were off."

"Never mind the pins, but do take care of your eyes," said Alice. "It is real trouble, and I am so sorry for you. Let me read you one of these stories. Or perhaps you would rather I did some of this mending. Do let me help you a little. It wouldn't take me very long to do that whole pile."

"Of course it wouldn't, you are so quick and handy. How fortunate you are, Alice—eyes and strength, and so bright and smart. You can do anything you want to do. Yes, you may do it if—if you'll let me pay you for it. And you don't know what blessed help it will be. No; you shan't touch them unless you'll agree to it."

"It is just the kind of work you can't get anybody to do," continued Mrs. Warner. Alice laughingly consented, and settled herself at work. "I sent for Sarah Crandall, the other day, to come and do up odds and ends for me—that's what I must get somebody to do for a while now. And she sent word that she'd come in three weeks. She's always engaged ahead. What is the reason, I wonder, that you can't find folks to do the little useful things just when you need them most?"

Alice walked home with some new ideas in her brain.

"I haven't made up my book club, but I wonder if I haven't done better than that. I believe it's just as they say, there's enough to do of what I can do if it only could be fitted in. I'm going to try if I can't fit myself in somehow."

A week later she said:

"Mother, I'm going to work."

"I suppose so. You're always at work."

"But I mean I'm going to earn my own living."

"Not away from home?"

"Well, partly."

"Alice, you can't. Haven't I often said you shouldn't go away as long as there is a home for you?"

"Don't be frightened, mother," said Alice, laughing. "My goings won't be serious. I'm going two days in the week to Mrs. Garde's to bake and to wind up her housekeeping so that it will run smoothly between whiles. I'm going one day every week to Mrs. Warner's to mend her up, and half a day to Mrs. Drake's whenever she wants me to be hat-trimmer, dress-draper and toucher-up in general. Do you think that what I can do at home the rest of the time will pay for my board and lodging?"

"I think it will."

"What I earn outside will clothe me and a good deal more. So I am self-supporting; for, when any of these are done with me, there will surely be others to whom I can fit in my work."—*S. Layre in Chr. Register.*

America's National Bird.

A Plea for the Hen.

"I could never understand," remarked Uncle Abner, when the conversation turned on National emblems, "why the eagle was selected as the ornithological representative of the United States."

"Why, is it not the king of birds?" asked Nephew James.

"A king it may be," assented Abner, "if by a king we mean something that lives on the labor of others and doesn't earn its salt, but we haven't much use for such monarchs in this country. The eagle soars toward the sun, the orators tell us, and looks the orb of day in the eye. There they leave him. They do not watch him as he comes back, wondering if some humble subject has prepared breakfast for him. He sees a patient and enterprising fish-hawk hovering near the surface of the lake, and he waits until the hawk has secured a nice, fat fish, when Mr. Eagle swoops down, taps Mr. Fish-hawk on the shoulder, and says: 'Beg pardon, but that's the very fish I had selected for my breakfast.' The hawk drops it and the eagle breaks his fast. That is the kind of a bird he is, and he makes me tired."

"What bird would you prefer as the American emblem?" asked two or three at once.

"The hen is my choice—the patient, uncomplaining North American hen of commerce. The energetic way in which she scratches for a living is exactly typical of the people of this country, and when she has, by diligent perseverance, accumulated a store of eggs for the purpose of running opposition to the patent incubator, and that is broken up by boys or by housewives, she goes to work at another just as patiently as an American goes into business again before he is well through with his first failure. And then her persistence! Boys, did you ever try to set a hen when her mind was made up not to set, or endeavor to dissuade her from setting when her conscience told her that spring chickens were needed? If you have ever done either, you will understand something of the hen's claims to represent this active, restless, progressive country. She is energy and clear grit all through, and she is, on account of these characteristics, entitled to supplant the eagle in the armorial bearing of this country. Besides the appropriateness of this on account of her industrious habits, the adoption of the hen as the national bird would help to keep in the minds of the American people two incidents related of men intimately connected with the discovery of this continent and with the formation of this great nation."

"What are they, uncle?"

"Columbus' egg and Washington's little hatch-it."—*Jury*

IS PURELY SCIENTIFIC TRAINING DESIRABLE? Men of purely scientific training are of less assistance in practical affairs than their education would suggest. The man of science has little faith in new methods or new inventions. He is seldom an originator. His knowledge is that of tradition. He frequently scouts at new ideas as impracticable, because they are not recognized in the books. The inventor seldom travels in the same road with the scientist. The inventor needs to leave the beaten path and press on to the unexplored forest of possibilities. He is often handicapped if he endeavors to conform to rules already laid down by pure science. Few college-bred men have proved inventors. Original thought, bold action, patient persistence, knowledge of nature's laws, are prime factors in the successful career of the inventor.

A correspondent who has been reading Stanley's letters asks how to pronounce "Mpwapwa." Take a mouthful of hot coffee, and try to say "papa" without swallowing it.—*Quincy (Ill.) Whig.*

A Chat with Girls.

[Written for the RURAL PRESS by MAUDE S. PRABLEE.]

Nothing appeals to me more strongly than girlhood; and just because of the things I missed knowing in my own girlhood, I extend a hand of friendship to you all.

Some of you have busy, weary mothers who have never learned the blessedness of living *with* you instead of *for* you; some of you have none, and to you all my heart goes out in warmest affection and sympathy. Not for what you are now, for that I may not know, but for what you may be, for the possibilities you hold in your hands.

I hope you will understand me if I speak to you first of your personal appearance.

I know "the spirit is more than the raiment," and yet as in a difficult and intricate problem the first self-evident facts are used as the foundation, so must we give due deference to the "outward and visible sign."

I would not have you overnice or fastidious, but I *would* wish you to be dainty. Why? Because it is elevating, refining and ennobling; because it will cultivate your ideas to a liking of beautiful things—things that we may have in this world if we will.

Because, too, of the benefits others will receive, even if unconsciously, from seeing often before them a bright, tidy, dainty little woman, who is desirous of making the most of what she has.

Scrupulously perform each duty of the toilet necessary to make you absolutely cleanly, you will soon grow to enjoy the incomparable comfort of knowing you are clean throughout, from dainty ears to feet, and from undergarments to pocket handkerchief.

Do not fancy that one bath a week with change of clothing at that time is sufficient to keep your body "God's temple," pure and sweet. It matters not how varied your duties are, or how busy you must be with household cares, you may, by rising five minutes earlier in the morning, *make* time to enable you to take a quick sponge bath in cold water. If you begin it in the summer weather and rub quickly and well after this hasty bath, you may safely continue it in all but the coldest weather. This with the hot bath at least once a week will be enough to keep your body sweet and clean.

Be neat, too, about your own private room. Take pride in knowing that closets and bureau drawers will at any time bear close inspection.

In buying new clothing make a strong effort to get the best, even if you have to darn and mend the old a little longer to wait for more money. You will find it the best economy in the end.

A strong point is to select pretty and becoming colors. So much depends on a girl's taste in dress that it is really worth while to attach a little importance to it.

No one denies that personal beauty appeals very strongly to most natures; and it is only natural and right that girls should desire to look as well as may be.

God made the world beautiful; let us follow in His footsteps by showing a proper amount of interest, untinged with vanity, in our personal appearance.

If the dress is but calico, it may be durable, and of fast and becoming colors. Then, if daintily and becomingly made, the effect is all that need be desired. The same degree is necessary in working with better and richer materials. Be sure to have them becoming, well made and of durable material.

Next to your own neat personal appearance, I would place the adornment of your home, that your surroundings may be a fitting setting to your own sunny, unselfish disposition—the disposition you must strive for and carefully cultivate.

However plain your furniture, you may at least have each article scrupulously clean and arranged so as to appear to the best advantage.

Let the warm sunshine stream in through shining glass, and if possible linger lovingly on pots and hanging baskets of growing flowers. They can be coaxed to grow from tiny slips, which even if you have to buy, will be worth far more to you than their cost.

Often you get some to start with from an obliging friend, and can afterward add to your stock by exchanging with friends who have different varieties. All such things lend an air of artistic refinement to even the plainest and poorest room.

Arrange your pictures to the best advantage, and drape your curtains in the prettiest way you have seen. Many tidies, picture scarfs and table covers are cheap and durable. Have the best you can afford, and if necessary, limit the number to one of a kind; do not make the mistake of filling the room with cheap, unserviceable finery.

Take pains, too, to have the colors harmonize. Just as in the matter of dress, you should choose things this winter that will blend or contrast well with what you have left to wear of last winter's wardrobe, so when you buy anything new for the house, have it of a color and texture that will compare favorably with what is already within the rooms.

Do not be discouraged or dissatisfied with your surroundings. Make the best you can of them, and over all, let fall the sunshiny grace of a happy, contented spirit.

A Hungry Census Man.

After a ride of about forty miles one day last week, Census-taker M. drove up to a farmhouse near this city, hitched his horse, went in and proceeded to take the census of the family. He questioned the lady of the house as follows:

What is your name and where were you born?
Are you married or an old maid forlorn?
What do you think you'll get for your corn?
Are you the head of your "household" or no?
Have you a daughter? Has she a beau?
Do you expect to reap what you sow?
How many pigs? And four-wheeled rigs?
And pounds of figs? And cattle (meat)?
Bushels of wheat? And meat to eat?
Does your farm produce any apple juice?
How many sheep have you got in pens?
How many pullets, roosters and hens?
How many eggs do the whole of them lay?
What do you call a ton of hay?
What is the length of your working day?
How many loads has your wagon hauled?
How many times has a book-agent called?
Is your grandmother living? if she isn't, why not?
What do you owe on the ten-acre lot?
What is the cost of your fence and rails?
How many times have you been in jail?

"Is that all?" inquired the lady.

"Oh, no," said M.; "I overlooked one question. How many pies have you?"

"Six," replied the lady.

"Well, give me one," said M. as he grabbed his book and hat and ran out of the door in time to miss the stick of stovewood which was hurled at him.—*Woodland Mail*

Chaff

A WAR ARTIST ought to be able to draw a pension.—*Texas Siftings.*

WHEN SIMSON went at the Philistines with the jawbone of an ass, it was the novelty of the thing that made it win. Had he made his charge with a sword in his hand, he would never have lived to have his hair cut.—*Ram's-Horn.*

FASTIDIOUS.—Lady of the House—Bridget, didn't I tell you that I couldn't have you receive male callers in the kitchen? and yet last night you had no less than three men there. Bridget—It was no fault of mine, mem. Shure I axed them into the parlor, but they said they didn't care to mix up wid you and the rest of the family, mem.

HE: I have never yet met the woman I thought I could marry. She: No, they are very hard to please as a rule.—*Life.*

THE mortgagee generally has a fat thing in his lien.—*Binghamton Leader.*

MARCH OF CIVILIZATION. — Interpreter: Chief Wango wants no more beads and brass wire; he says you can't cross his country unless you agree to pay his price. African Explorer: What does he want? Interpreter: Two-thirds of the royalties on your next book. —*Puck.*

A GIRL likes to have a handsome young man for her chaperone, especially if she considers the chap her own.

JUDGE: You are convicted of stealing stone. I shall give you a year's imprisonment. What have you to offer? Prisoner: Begobs, it's too much, yer anner. The sthone I took was freestone.—*Lowell Citizen.*

IT is said that dragon flies in a room will destroy mosquitoes. We are now waiting to hear that tarantulas in a room will capture the dragon-flies, and that rattlesnakes will drive out tarantulas. The occupants of the house can then desert their beds and sleep on the roof.—*Norristown Herald.*

HICKS—Are you going to Mt. Highflier this year? Wicks—No; what's the use? Was there last year and nobody'd recognize me, Hicks—H'm! I see. Think you can't hope for the same good luck two years running.

THE devil loves a stingy man. God loves a cheerful giver.

BEFORE THE VENUS OF MILO.—Smithers (reading sign)—Hands off. The poor idiots! Do they think any one could look at that statue and not know the hands were off?—*Harper's Bazar.*

A YOUNG WOMAN began a song, "Ten Thousand Leaves are Falling." She pitched it too high, screeched, and stopped. "Start her at five thousand," cried an auctioneer. —*British American*

FALSE PHILANTHROPHY.—One of the strange inconsistencies of human nature is that men prefer to do good through the medium of benevolence rather than through that of justice. It is not uncommon to find the seller exciting every energy to get more than a fair price for his goods, and the buyer putting forth equal efforts to obtain them for less than their true value, and yet both subsequently uniting to found some charitable institution, to uphold a church to promote a reform, to relieve distress. There are men who will grind the faces of the poor in the morning in their business and in the afternoon subscribe a good round sum to provide them with food and shelter. There are woman both wealthy and of moderate means, who will drive a sharp and hard bargain and will give only the smallest possible sum to those whom they employ to work for them, yet who will willingly give far more than they thus save when a tale of distress arouses their sympathies and excites their pity. Schemes of philanthrony cannot atone for acts of injustice.—*N. Y. Ledger.*

YOUNG FOLKS' COLUMN.

The Dove and the Magpie

EDITORS PRESS:—"Chris," a German orchardist, who is employed by one of our neighbors, told our little ones a legend of the mourning dove which I had never heard before, and which I am sure would be enjoyed by some of the RURAL'S young folks. Chris is full of quaint legends and weird stories which he has brought from the old country, and which are the common property of the children in that land so celebrated for its folk-lore, and whose literature is so rich in story and ballad. Who has not read the delightful stories of Hans Christian Andersen—about the Marsh King's Daughter, the Goblin and the Huckster, and all the others? The children of that country are the possessors of many fine stories which have never been printed in English, and I shall probably, some time, give some more of Chris's versions, if the young folks like the story of the Dove and the Magpie.

The dove could never build a comfortable nest, and had long wished for one like the well-constructed and softly padded thing which her neighbor, the magpie, enjoyed. Though naturally timid, she at last summoned up courage to ask the magpie how she did it. So the magpie bargained with the dove to show her how to build a nest, if the dove would give her in return a fine, fat cow. Although the dove was very much attached to her cow, which was her only possession, she at last consented to give her up in consideration for a fine, warm nest. The magpie, which is known the world over for its craftiness, began a nest for the dove, and when it had made a foundation of a few sticks, demanded possession of the cow as an evidence of good faith on the part of the dove. But as soon as the cow was delivered up the magpie drove her away and left the dove without a cow and with a very poor apology for a nest. The poor dove has ever since been mourning for her "fine, fat coo-oo-coo-oo."

The magpie also has the reputation of being a great tattler, and of meddling with other people's affairs. She may enjoy the fat cow if she can, but she must endure the knowledge that she is universally despised, while the gentle dove is loved by everybody.

Creston. LADY INEZ.

The Advantages of a Country Boy.

I have always found it an advantage to me that part of my boyhood was spent on a farm, or rather on several farms. There are so many little domestic arts that a farmer boy learns and to which the town-bred lad is a stranger. One day, when there happened to be nobody else left on the place who could milk the cow, and the prospect was that my grandchildren would not have a cup of milk for supper, I was glad to show the skill in that line I had acquired on an Indiana farm. My neighbor, Mrs. Murphy, passing by, exclaimed: "Och, now, Mr. Eggleston, and it isn't ivery jintleman from the city that could lind a hand and milk a cow that way!"

I remember to have read of two great poets, Wordsworth and Southey, who once went on an excursion with their publisher, Mr. Cave. All three of them tried in vain to pull the collar off of their horse, but it seemed to them impossible to get it off without taking the horse's head along with it. They finally concluded that the horse's head had swelled after the collar was put on. But a milkmaid came up and turned the collar round, and so pulled it off to the surprise of the great men, who had not thought of that plan.

There is no reason why farm life should not be favorable to education. That which makes an educated man is the habit of thinking about what he sees, hears or reads. Reading alone will not do it. There were many men working in the stone-quarry with Hugh Miller; but Hugh was the only one of them that thought about anything beyond his wages and his dinner. He studied to find out about the fossil animals which he saw in the rocks under his hand. By the time he had worked in the quarry 16 years, he had become a great geologist, and the world delighted to read the books which he wrote.

There was once living in Pennsylvania, before the revolution, a Quaker farmer by the name of John Bartram. One day in plowing he plucked a violet and pulled it apart. "Here," he said, "are the various parts of this flower, the names of which I do not know, nor their uses. It seems a shame that I have walked over violets and other flowers all my life without knowing anything about them." He then made up his mind that he would study botany. But as all the books on botany at that time were in Latin he had to begin by studying Latin grammar. Nevertheless, he became a very famous botanist before he died, and he remained to his death a very good farmer, and did much to improve the methods of farming in his time.—*E. Eggleston, in American Agriculturist.*

MR. OLDS: Will you be my wife? Miss Youngs: No, but I—— Mr. Olds: Don't say you will be a sister to me. Miss Youngs: I wasn't going to. I was just going to say that I wouldn't mind being a widow to you.—*Puck.*

GOOD HEALTH.

The Liver.

The liver is the largest gland of the body. It carries on several separate and distinct lines of work. We are best acquainted with its work of making bile, which is largely, if not entirely, made up of waste elements taken from the blood. Bile is a golden-yellowish fluid, but when vomited from the stomach it is green, and many people suppose that this is its natural color. The change is due to the action of the gastric juice.

It is an excretory and digestive fluid, converting fats which are not acted upon in the stomach, but in the small intestine, into an emulsion. Bile also acts upon the mucous surfaces, stimulating the absorption of food after it is digested.

The digestive fluid of the stomach is acid, the bile is alkaline, and the two being poured into the small intestine simultaneously with the food, prevent an irritating action of the gastric juice. Pure gastric juice is so strong an acid that it will irritate the hand if it is placed upon it. Were not the stomach protected in a peculiar manner, it would itself be digested with the food, as often happens in cases of sudden death after a person has just eaten a hearty meal.

Bile stimulates peristaltic action, by which means the food is moved along through the entire length of the intestines. It is an antiseptic, and preserves the food from fermentation and decay in its slow progress through the 25 feet of alimentary canal. This is one of its most important uses. With the food is always taken a quantity of germs, and they would surely induce fermentation but for this preventive agent. About 14 hours are required for the complete process of digestion from the time food enters the stomach until it is entirely absorbed. If a single one of these several offices be absent or interfered with, it seriously affects the health of the individual.

The liver itself is a digestive agent. All the digested food, with the exception of a small portion of the fat, is absorbed and carried by the portal vein to the liver. The heart pumps blood direct into the general circulation, but all of it which goes to the stomach, spleen and other abdominal viscera is carried to the liver before it is allowed to go into the general circulation. Thus the liver acts as a filter for the blood received through the portal circulation and completes the work of digestion. The stomach is only the ante-chamber where the process of digestion is commenced.

There are 25 feet of intestines, and the work of these upon the food is vastly more important than that of the stomach. When the stomach and intestines have done all that they can do to the food, its nourishment is expended and it is carried off as waste matter by the kidneys. The liver acts upon all its elements, which no other organ does. Starch constitutes one-half to two-thirds of all our food. When we take it into the mouth, the saliva begins to change it into sugar. It furnishes heat for the body and muscular and brain force, hence we need a large amount of it.

In the process of digestion, a large amount of sugar is manufactured. If all this were poured at once into the circulation, it would thicken the blood and render it so sluggish that the blood corpuscles would all be destroyed, and it would have to be hurried out of the system to save the person's life; so the liver goes immediately to work to change the sugar back into liver starch, and stores it up in its tissues. Then it begins slowly to change the starch back into sugar again, and doles it out for use as needed for force, heat, etc.

The liver is also a sort of rendering establishment. It takes what would otherwise be offensive and dangerous elements and utilizes them, just as the rendering establishments of large cities take the dead animals and offensive garbage and make them of value. The liver takes all the broken down tissues, the millions of dead blood corpuscles, works them over and changes them into material of which corpuscles can be made. The coloring matter found in these corpuscles is worked over into material which furnishes coloring matter for the eyes and hair, as well as furnishing color to the bile. Nature shows wonderful economy in thus taking old, worn-out material and converting it into such a variety of new uses.

The bile containing waste alkaline substances, also makes a little soap out of the fat that aids in preparing the rest of the fatty material for absorption.—*Hall's Journal of Health.*

THEISM, THE NEW NERVOUS DISEASE.—Attention has recently been drawn to a new nervous disorder said to be especially prevalent in England and America. It is called "theism," or tea-drinker's disease, and is said to exist in three stages—the acute, subacute and chronic. At first the symptoms are congestion of the cephalic vessels, cerebral excitement, and animation of the face. These physiological effects being constantly provoked, give rise, after awhile, to reaction marked by mental and bodily depression. The tea-drinker becomes impressionable and nervous, pale, subject to cardiac troubles, and seeks relief from these symptoms in a further indulgence in the favorite beverage, which for a time restores to a sense of well-being. These symptoms characterize the first two stages. In chronic cases, theism is characterized by a grave alteration of the functions of the heart, and of the vaso-motors, and by a disturbance of nutrition. The patient becomes subject to hallucinations, "nightmares" and nervous trembling. With those who take plenty of exercise, an habitual consumption often may be indulged in with impunity, but with women and young people who follow sedentary occupations this is not the case. The best treatment for theism is said to be indulgence in free exercise, such as walking and open-air life.—*Journal of the American Medical Association.*

DOMESTIC ECONOMY.

Tapioca.

Upon your pantry shelves a good supply
Of tapioca keep unfailingly;
For many dainties, wholesome, rich or rare,
You from this starchy product may prepare.
First, then, Ambrosia, food meet for the Gods—
They ne'er partook of it, but "what's the odds?"
One cup of tapioca soak o'er night;
Then when you're stirring with the morning light,
Place it where it will slowly cook till clear—
A double kettle is of value here.

And now one cup of sugar; and meantime
Have one nice pineapple chopped very fine,
On this the boiling tapioca pour,
And stir together; 'twill need nothing more.
Pour into molds, which shall the shape preserve;
When cold and firm, with cream and sugar serve.
This delicate and always welcome dish
You may prepare with peaches if you wish;
Or other fruit, soft, ripe, or even canned,
Such as at any season may command.

If apples you would use, best, pare and core
Enough to fill your baking dish—no more.
The space of cores with sugar fill, and spice;
A dash of lemon juice is very nice!
Bake till the apples tender grow; then pour
The cup of warm, soaked tapioca o'er,
And bake till clear. Most surely you will deem
This "about right," served warm with sweetened cream.
A little salt the tapioca'll need,
As almost every pudding does indeed.

For tapioca cream, in water swell
Four tablespoonfuls; only cover well;
Then with a quart of milk you'll set it on,
And gently cook till sure it is well done.
Four eggs; the yolks with sugar you will beat—
A cupful will not make the cream too sweet—
Stir in with care and add a little salt;
Vanilla flavor will not prove a fault;
Lastly, the whites well beaten. Serve when cold,
And how acceptably need not be told.

Or, these two recipes you may combine
In apple pudding, if you so incline.
Apples to fill your dish you'll peel and core,
Filling with sugar, then bake as before.
The tapioca you will soak and swell;
Three tablespoons, or four, will do quite well.
Mix with a custard made of milk, one quart,
Three eggs; vanilla flavor (or some sort);
A cup of sugar. O'er the apple pour;
Bake till the custard is well set, no more.

A custard pudding baked is very nice
With tapioca, or with this and rice,
The first—proportions as for "cream" will do;
Cocoanut added may be something new;
Three tablespoonfuls with your yolks you'll beat,
And sugar; 'twill look "good enough to eat!"
The tapioca soaked, and as before
In the milk scalded, you to this will pour;
Lastly the whites, that all may be well done,
For frosting beat, and in the oven brown.

For invalids a jelly may be made,
Quite palatable, too, so it is said.
The tapioca you will cook till clear.
As for Ambrosia, no fruit needed here
Except a lemon; juice and grated rind
A simple nourishment you'll surely find.

—*Good Housekeeping.*

QUICK BISCUIT.—Two cups flour, one tablespoonful mixed lard and butter, one cup milk, one heaping teaspoonful baking powder, pinch salt. Handle little, roll out and cut quickly, and bake in a steady oven.

CHOCOLATE ICING.—Allow one pound of icing sugar to every two ounces of chocolate; grate the latter into a sauce-pan, and mix with it eight tablespoonfuls of water; stir well and let it cook gently for ten minutes, then add the sugar, and use while warm.

POTATO SOUP.—Three pints of rich milk, one pint of mashed potato, two tablespoonfuls of butter, salt and pepper to taste. Boil the milk, add the potato and boil again, stirring frequently, that the potato may become thoroughly dissolved, and season just before serving. Serve very hot.

PUREE OF CELERY.—Boil two heads of celery in plenty of salted water with an onion, a blade of mace and some whole pepper. When done, drain them and pass them through a hair sieve. Melt a piece of butter in a sauce-pan, mix a little flour with it, then the celery pulp, and work it well on the fire, adding a little cream or milk and some of the gravy of the ducks.

BAKED RICE WITH CHEESE.—One pint of boiled rice, half a cupful of grated cheese, placed in alternate layers in a buttered earthen dish. Spread powdered cracker over the top with bits of butter, and over the whole pour one egg, well beaten, one cupful of milk, one saltspoonful of dry mustard, half a teaspoonful of salt and a shake of cayenne pepper, thoroughly beaten together. Bake 20 minutes in quick oven, and serve very hot.

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SAN FRANCISCO:
Saturday, July 5, 1890.

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Dividend Notice—German Savings and Loan Society.
Windmills—Horton & Kennedy, Livermore.
Imported Stallions—Hobbert & Conger, Los Angeles.
French Cooking Ranges, Etc.—John G. Ils & Co.
Oakland Classical and Military Academy, Oakland.
Jersey Bull for Sale—Dellwood Poultry Yards, Napa.
Books—Henry Carey Baird & Co., Philadelphia.

See Advertising Columns.

The Week.

We are right in the middle of Fourth of July week, and as anticipated in our last issue, events are being largely shaped with reference to the break in the current of business and industry which the National holiday causes. The patriotic spirit easily assumes a statistical expression this year of the census and finds satisfaction in the statement that the population of the United States now exceeds 64,000,000 instead of a little over 50,000,000 of ten years ago. In California there has been a notable increase, but the enumeration is hardly complete. Some cities are grievously disappointed, and claim serious omissions by the enumerators. Such have undoubtedly been made and it is to be hoped that corrections will be feasible.

Another patriotic theme is the birth of more States into the national family. Idaho and Wyoming are the latest arrivals—twins of 1890 following the quartet of 1889. It is expected that President Harrison will sign the bills for the admission of these two States on the National holiday.

Wheat Product and Prices.

The wheat-grower will find in this issue of the RURAL much of significance. We give on page 5 of this issue a valuable table prepared by Mr. Montpellier, cashier and manager of the Grangers' Bank, showing the course of wheat prices, ocean freight rates and bag prices for a long term of years. This table is useful for reference and should be preserved. The most notable feature of the last year's record is the exceedingly small fluctuation in values throughout the 12 months. There was only a variation of seven to eight cents in the market price of shipping wheat during the whole period. Low monotony was characteristic of the year, not only in wheat but in bags and freight rates. Such has never occurred before in the wheat history of California. We believe it was but the quiet which precedes the storm and that this is so is already apparent in the character of the market at present—during the first week of July at the very beginning of the new crop year. Our market review this week presents much data which foreshadows an advance in wheat values and to all appearances a notable one. Conditions in other supply countries have been very unfavorable to the product, and this with indications of only moderate output on this coast naturally hardens values. It is true, of course, that the present spurt may be the result of gambling rather than the influence of actual demand, but it seems to us that all indications point to a considerable improvement in values. It is natural, then, that there should be no general disposition to sell at present. While the figure is distressingly low, the chances always are for an improvement and this chance is strengthened by the conditions affecting the year's product, to which we have alluded.

We have claimed for a number of weeks that the California surplus would show a considerable reduction this year. It is true that individual and local experience is in some cases in the other direction. For example, there will be a yield of a few sacks per acre from arid regions, which only occasionally yield anything; but this is more than offset by the vast tracts which almost always yield generously, but this year will not turn out half a crop. It is easy to be misled by narrow views, and wheat buyers are naturally not slow to enforce such views when it is to their interest to do so.

The disappointing results which many are experiencing from the thrashing calls attention again to the importance of the spring rains on the wheat crop which we set forth last year from data furnished by Mr. Montpellier. This close student of influences affecting our staple crops has just issued his rainfall table showing the precipitation at various points in the State. This shows that the rainfall began the *first week of October* and ended *late in March*, making five full months of almost continuous rain. It was especially heavy in December, January and February, but very light in April. This will show that it is *not* the enormous rainfall of December, January and February, but the *spring rain* that produces yield of crops in California. Thus, with all our heavy winter, which this year put the farmer at his wits' end to get his land plowed and sown, we do not realize large returns even from lands sown, because the winter rains were not supplemented by spring rains, which maintain late growth and enable the plant to fill out its head. For this reason so many are disappointed in results, even from fields which bore a fair look at cutting. It is these observations, coupled with telegraphic tidings from abroad, which make our wheat-growers indisposed to sell. Dealers also seem to have much confidence in the situation, and, between themselves at least, admit the likelihood of a considerable advance in wheat values.

THE DAIRY AT THE WORLD'S FAIR.—The Illinois State Dairymen's Association has called a National Dairymen's meeting, to be held in Chicago, at the Sherman house, on the third Wednesday in July, 1890, at 10 A. M.; the meeting to be composed of three or more delegates, appointed by each of the several State Dairy Associations and Breeders' Associations representing dairy cattle. The object of the meeting is to consider and take action on the best means of representing the allied interests of the dairy industry of the country in connection with the World's Columbian Exposition of 1893, and to take definite action with reference thereto. We trust there may be representation from the Pacific Coast, and any dairy proprietor who may be in Chicago at the time should apply for admission to the meeting.

Winter Dairying.

An Oregon reader sends us an expression of opinion in the form of a resolution as follows:

Resolved, That more butter should be made during the winter season, and less in the summer season.

If farmers would only heed this resolution, their wives would fare better and the pocket book be the plumper.

The RURAL advocated such a proposition at least 15 years ago, and no doubt within certain limits it is sound doctrine. The fact is that there has been a gradual change in this direction in California, for more butter is now produced during the winter season than when we began to advocate the practice. The same thing is true in the dairy regions of the Eastern States and the winter product is profitable, providing extra precautions are observed and extra arrangements provided.

Winter dairying requires greater foresight in the providing of winter food and forage. This involves the securing of abundant *well made* hay, and where the climate favors, it should include succulent field crops, which on moist land may be planted late and held for feeding while the natural grasses are slow in starting, as is often the case during the dry, cool weather of the early winter months. In this provision of food ensilage presents itself as a boon to the dairyman. It is also possible to secure artificial pastures by sowing grasses which start earlier and grow well at a lower temperature than our natural forage plants, or than alfalfa, the winter growth of which is usually very unsatisfactory.

Although our winter climate on this coast is so much milder than east of the Rocky mountains, it is still necessary that one who intends to practice winter dairying, shall provide better buildings both for cattle shelter and for dairy manufacturing, than are required for summer dairying. California dairymen have learned this lesson pretty well during the last few years. Milking in corrals, where the mud is so deep that pans have to be used instead of pails, so as to slide the receptacle under the cow's teats, and cheese and butter making in open sheds, floorless and filthy, these are old practices, which have now been superseded by spacious dairy barns and by neat dairy houses, where cleanliness and warmth can be secured. There has also been great progress secured in improved dairy appliances. In fact, dairying on the Pacific Coast is assuming features of excellence in practice, appliances, buildings and cow-power, which were almost unknown even a decade ago.

We are prompted to these few general remarks upon our correspondent's resolution merely to show that the change to winter dairying is not in a resolution alone, but that wisdom and wise investment are necessary to carry it out. It may be said that the same improvements are desirable even in summer dairying, and this is strictly true; but at the same time a slip-shod system of dairying in summer may be moderately successful, which in winter work would not yield any success at all. The whole subject is one of much interest and importance and we would like to have it discussed, not alone on general principles but in detail, and in this way our dairy readers may mutually aid and advance each other.

GERMAN DAIRYMEN COMING.—Secretary Boyd, of the Oregon Board of Information, is in receipt of a letter from a dairy society in Germany who are desirous of branching out on the Pacific coast. The dairy business in Germany is not paying as well as it has in years past, and as they have more people in their association than they can handle to advantage, or support satisfactorily, they are thinking of sending about half their number to the Pacific coast to try the experiment here. They have heard of Oregon as the most favorable State for locating such a colony, and if they can get 20,000 acres of land in one piece they will doubtless give the web-foot State preference. A committee of five will be sent out some time this summer and upon their report the society will act.

Crop Notes.

Heading and thrashing are now in full blast, but as yet any attempt at a close estimate of the wheat crop of this coast is little more than guesswork. Although, as stated elsewhere, there will be, on the whole, considerable reduction in the wheat output there are some places where farmers have been agreeably surprised by the large yield of their grain when thrashed, but this is an exceptional experience, or enjoyed only in limited areas.

That the fruit prospects of California are unusually good this year is now certain. The yield, on the whole, will not be as large as last year, but the shortage in the Eastern crop will so raise prices that the money value will be much greater. Eastern capitalists are making efforts to secure the crop and Eastern canneries and drying establishments are moving their plants out to this coast for the season. For instance, Lester & Co., of Chicago, have moved their plant to Monrovia, in Los Angeles county, and have contracted for all the fruit in that locality they could secure. Local canneries throughout the State are buying and are being worked to their full capacity.

Vine-growers are jubilant, for not only do the grapes look well, but the pests which generally do so much damage in the vineyards at this time of the year have failed to put in an appearance.

With the exception of a few local disturbances such as grass-hoppers at Anderson, Shasta county, and Cayucos, San Luis Obispo county, and a hailstorm which visited the vicinity of Colusa on the 24th ult., doing much damage, everything has been favorable both for harvesters and fruit-growers. More detailed information about crops in this and adjoining States will be found in our Agricultural Notes.

The Fairs of 1890.

We give here below our usual list of the fairs of the year which we have compiled from all available sources and regard as reasonably complete. It is likely, however, that some exhibitions have been omitted, and we will welcome corrections or additions to the list from those interested. These changes will be embodied in a later publication:

Ione (26th Dist.), Aug. 5-9.
Los Angeles (6th Dist.), Aug. 4-9.
San Jose (5th Dist.), Aug. 11-16.
Willows, Aug. 12-16.
Napa (25th Dist.), Aug. 18-23.
Red Bluff, Aug. 19-23.
Nevada City (17th Dist.), Aug. 19-23.
Petaluma (4th Dist.), Aug. 25-30.
Chico (3d Dist.) Aug. 26-30.
Placerville (8th Dist.), Aug. 26-30.
Oakland (1st Dist.), Sept. 1-6
Marysville (13th Dist.), Sept. 2-6
S. L. Obispo (16th Dist.), Sept. 2-6.
Auburn (20th Dist.) Sept. 2-6.
California State Fair, Sacramento, Sept. 8-20.
Oregon State Fair, Salem, Sept. 15-20.
S. F. Mechanics Institute, Sept. 18-Oct. 25.
Nevada State Fair, Reno, Sept. 22-27.
Stockton (2d Dist.), Sept. 23-Oct. 4.
Rohnerville (9th Dist.), Sept. 22-26.
Quincy (11th Dist.), Sept. 22 ——.
Lakeport (12th Dist.), Sept. 23-27.
Independence (18th Dist.), Sept. 23-26.
No. Pac. Industrial, Portland, Sept. 25-Oct. 25.
Bishop (Eastern Slope), Sept. 23-26.
Fresno (21st Dist.), Sept. 28-Oct. 4.
Watsonville (24th Dist.), Oct. 1-4.
Walla Walla, Oct. 6-11.
Visalia (15th Dist.), Oct. 7-11.
Escondido (22d Dist.), Oct. 14-17.
Santa Barbara (19th Dist.), Oct. 21-25.
Salinas (7th Dist.), Oct. 30-Nov. 4.

A New Herd Premium at the State Fair.

We are pleased to announce that the State Board of Agriculture, at a meeting on Monday of this week, decided to add a young herd premium of $30 for cattle under two years old, the herd to consist of one male and four females in each class.

For the purpose of making a more intelligent announcement for the additional herd premium given, it might be well to give the conditions under which the premium for both herds are offered for each class as follows:

Best herd over two years old, to consist of one male and four females owned by one person, silver pitcher or $60.

Best young herd under two years, to consist of one male and four females owned by one person, silver pitcher or cash $30.

Heretofore the Durhams were the only class in which was offered two herd premiums—one for old herd and one for young herd. This change gives all classes these premiums the same as Durhams.

Water on the Pacific Coast.

(Concluded from last issue.)

San Francisco Water Improving.

Nothing is done at the storage reservoirs to improve the quality of the water before entering the conduits. The water first passes the fish-screens and thence through open flumes and aqueduct tunnels, and finally through wrought-iron pipes to the city. At the outlets where they empty into the several service-reservoirs, is located the so-called screen-house, where the water is made to pass through a system of cloth screens before it is allowed to empty into the service-reservoirs. These cloth screens are constructed as shown in Fig. 1, page 435. The sash-frames are six feet long and two feet wide. Brass-wire netting is tacked on, and over that is stretched a good quality of cotton cheese-cloth. In midsummer, when the water is foul with animal and vegetable matter, the screens clog rapidly and have to be removed and clean ones put in their place. The fouled screens are taken to the wash-room, where they are thoroughly cleaned, and the foul wash waters are allowed to escape by a suitable drain-pipe to the bay. Each one of these screen-houses requires the constant employment of double shifts, four men 12 hours each, raising, cleaning and replacing the screens, some 300 being required for each house. Generally the water passes through two screens. When it becomes necessary to make a change, the outer screen, being little fouled, is removed first and a clean one quickly put in its place; the inner, or fouler one, is next removed and a clean one quickly put in its place. This screening apparatus is unquestionably very efficient in its way, but, as will be seen further on, it does not touch the fundamental seat of the chief trouble, which lies in the storage reservoirs. It should be mentioned that these service-reservoirs have a division wall through the center, thus enabling one-half to be emptied and cleaned while the other is in use. In summer this requires careful attention.

The Method at Oakland.

The water supply at this city adopts a different method, in some respects, and it is interesting to know that the results obtained are much less satisfactory. Here the screen-house is placed at the storage reservoir, instead of in the city limits, and distant some 9 5 miles. Two varieties of screens have been in use, both identical in principle. Those introduced in 1879 are best shown in detail by the accompanying drawing (Fig. 2) with descriptive notes thereon. Those used in 1889 differ only in design. The foul water is made to pass through six thicknesses of cheese-cloth wrapped around wire cylinders, and the screening process is necessarily more efficient. This system is shown in detail in Fig. 3, page 435.

The screened water passes into a clean-water basin, capacity about 2,000,000 gallons, which is not covered. The hot summer sun has developed a large amount of vegetable growth in this basin and a second one has thus been built, thus enabling one to be emptied and cleaned when occasion requires it.

The screened water from the basins passes into the 37½-inch supply main, and travels slowly to the city of Oakland and direct to the consumers, there being no service-reservoir.

Results Accomplished.

In the case of San Francisco, the quality of the water delivered to the consumers throughout the year may be characterized as reasonably good, and as a rule complaints are seldom made and can always be traced to some local temporary cause. In the case of Oakland, however, the entire water supply delivered to consumers during winter, summer and fall, is always bad, but is reasonably good in the spring. In the summer and fall of 1889, when the water in the storage reservoir got very low, a large number of citizens ceased to use the water either for potable or culinary purposes. They organized a company and brought spring-water from the hills at considerable expense and inconvenience.

This extraordinary difference in the quality of the water naturally calls for an explanation. After studying over the existing facts, I have come to the following conclusions:

First—Experience at San Francisco shows that the quality of the water is greatly improved by flowing through open flumes and aqueduct tunnels before it reaches the city. On arriving at the service-reservoirs, the water is further improved by passing through cloth screens, and thence passes into the distributing reservoir, and *soon reaches the consumers before secondary deterioration in the pipes has had time to develop.*

Second—It is clear that the Oakland Water Company made a mistake in placing their screening apparatus at the storage reservoir. I sampled the surface water in the latter and found it to be reasonably good; then I sampled the screened water near by and found it to be much better. This screened water entered the supply main, and thence travels a distance of 9 5 miles to Oakland consumers. Experience shows that the *quality of the water delivered is always worse than the water in the storage reservoir.* This secondary deterioration is unquestionably due to the putrefactive fermentation in the pipe system. The water company now proposes to build a 150,000,000 gallon settling-reservoir within the city limits, and then transfer the screening apparatus to the same site. I have no doubt but that these new works will improve the quality of the water considerably.

These systems of cloth screens, when properly managed, have certainly proved to be quite effective, as far as they go, but they do not, in my opinion, strike at the fundamental seat of all the worst troubles. This conclusion is based on the results of a long series of observations, which have been under way for four years, and are still going on. They show conclusively that the main trouble from contamination in midsummer is primarily due to the fermentation and subsequent putrefaction of the immense deposit of oozy mud in the bottom of the reservoirs. Hence the experience on the Pacific Coast goes to show, that generally speaking, *the older the storage reservoir the worse the troubles become.*

The immense deposits of mud in the bottom have been subjected to certain examinations. Its composition is found to be a mixture of vegetable and animal matter in all stages of decomposition interstratified with clayey sediment and vegetable mold brought in by tributary streams in the rainy season. The depth of this deposit averages ten feet and in places as much as 20 feet in the older reservoirs.

It is impossible to conceive how these storage-waters can be maintained in a healthy condition as long as this source of contamination is allowed to exist. It must be removed, and the question is, how? In India this is done regularly by emptying the reservoirs, and cl[illegible] them on the first of the monsoons, and then by closing the under-sluices they catch all the subsequent drainage. Of course this is not always practicable. I hereby submit a suggestion, which has developed itself during these examinations.

Samples of mud from the bottom were easily obtained in any desired quantity by means of an ordinary hand-pump and 100 feet of stout rubber hose. The same apparatus was useful in getting the temperature and samples of water at different depths. Now the facility with which this oozy mud could be pumped up, without disturbing the purity of the water in the slightest degree, at once suggested the idea of extending this system, and adopting it as a ready means of getting rid of this objectionable deposit at a comparatively small expense, and without emptying the storage reservoir. Also, I think it proper to state that a Gwynn centrifugal pump with a runner, 5 feet diameter, having a suction pipe 17 inches diameter and discharge pipe 15 inches diameter, was used under my inspection, to remove a large quantity of black oozy dock mud. The lower end of the suction pipe was simply allowed to sink down into the oozy mass. The engines were started up, and it was soon ascertained that this kind of material could be removed at the rate of 1370 cubic yards per hour, and this rate was maintained for 9 5 hours, or a daily capacity of 13,000 cubic yards, and without changing the position of the machine. I merely mention this fact in order to show what has been done in this line.

The next question naturally arises, how will the material be disposed of? In some cases it could be discharged into the creek bed below the dam, and be carried off by storm-waters, or preferably, if there be any shallow flowage or lowland near by, heavy embankments of sand faced with gravel could be built, and material pumped behind them, thus making new high land, which would be greatly enhanced in value thereby.

Recapitulation and Conclusions.

After carefully studying all the facts and circumstances obtainable so far, I am led to draw the following conclusions:

First—That the great deposit of putrid mud in the bottom of storage reservoirs is the primary cause which gives rise to the deterioration in quality of the water. That it should not be allowed to accumulate from year to year, as is generally the case, but should be removed from time to time, and the bottom kept reasonably free from annual deposits capable of undergoing putrefaction. That it is practicable to remove this mud at an expense not much in excess of that incurred in pumping water under like circumstances. That if this is properly attended to, the conditions which give rise to excessive vegetable growth will be practically removed, and as a result vegetable life will become so small in amount as to be a matter of little consideration. That as a final result the construction and maintenance of a system of filter-beds would become entirely practicable.

Second—That the trouble with the quality of the water delivered to consumers is largely independent of the contamination in the storage reservoirs, and can be traced to two separate sources, namely, turbidity during the stormy months, giving rise to deposits in the pipe system, which subsequently, when the water gets warm, takes on putrefactive fermentation and gives rise to offensive odors during the summer and autumn. That neither of these can be properly removed except by means of subsidence followed by sand filtration.

Finally, if the above fundamental sources of contamination be eradicated as far as possible, I am of the opinion that the greatest of all reasonable objections to storage-waters will be practically removed.

FLORIDA LETTER.—An old editorial friend writes in another column some truths about farmers raising their own supplies, which should be taken as a good lesson by many on this coast. We have no doubt some New England husbandmen are doing as they consider well, annually, on a profit from their farms of no more than could be saved in the expenses of living and running many a farm here on the Pacific Slope.

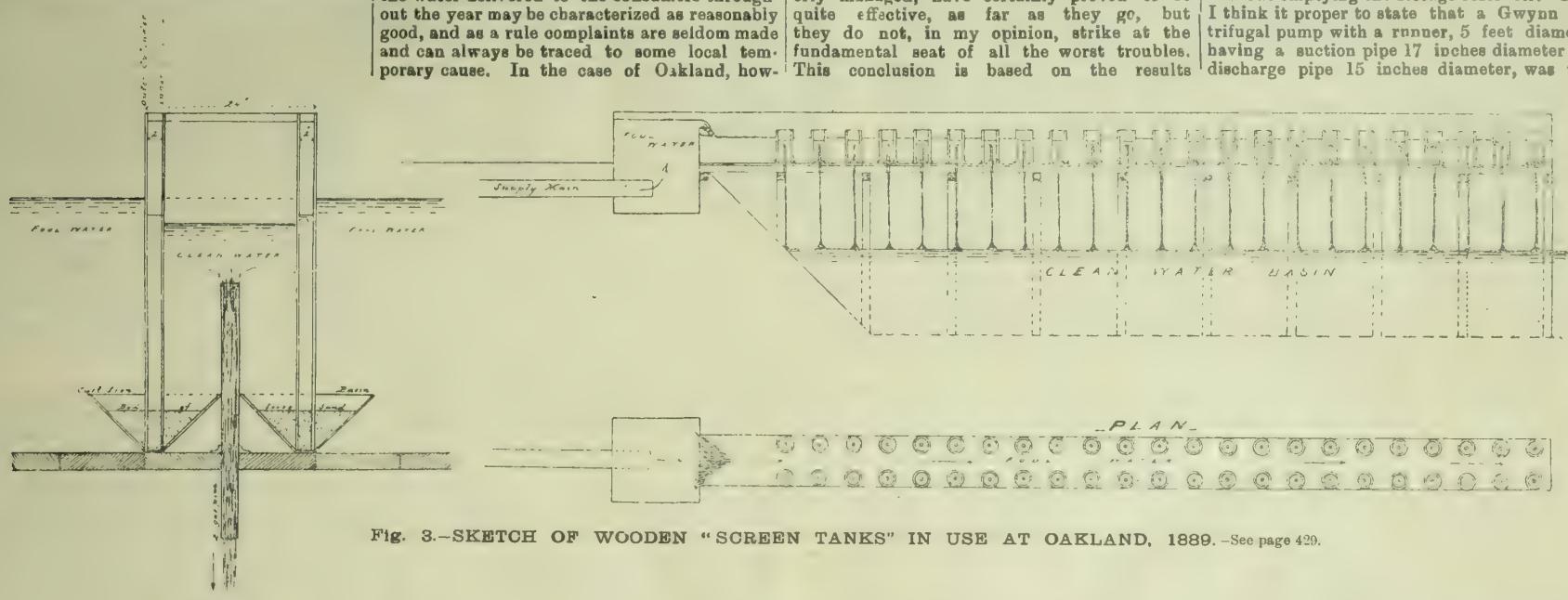


Fig. 3.—SKETCH OF WOODEN "SCREEN TANKS" IN USE AT OAKLAND, 1889. —See page 429.

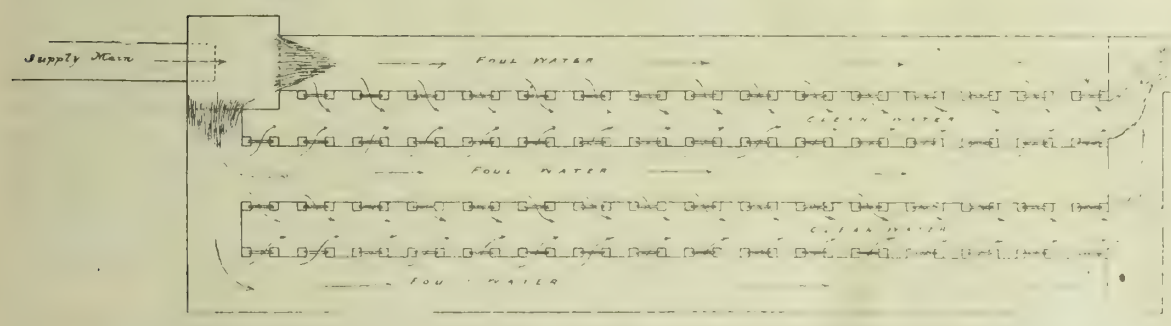


Fig. 1.—SKETCH OF WOODEN "SCREEN TANKS" IN USE AT SAN FRANCISCO.

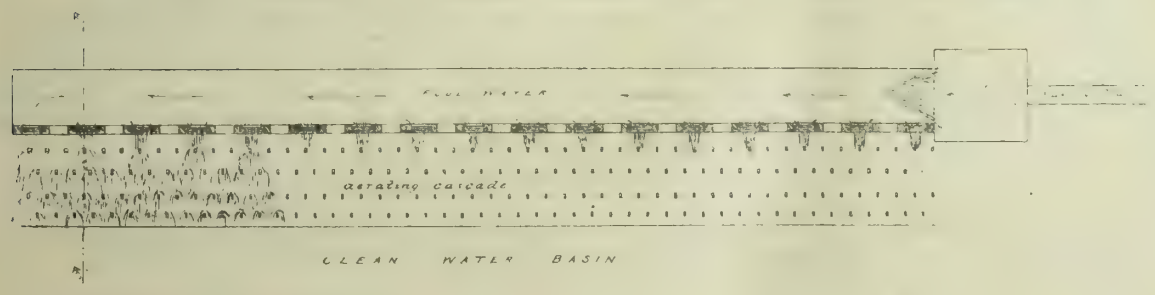




Fig. 2.—PLAN OF WOODEN "SCREEN TANKS" IN USE AT OAKLAND PRIOR TO 1889.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

TO PREVENT CONTAGION.—Oakland, June 30: A petition was presented to the Board of Supervisors to-day by the Pacific Coast Stockmen's Mutual Protective Association requesting the passage of an ordinance requiring veterinary surgeons and others to report all cases of glanders, farcy and other contagious diseases among horses and other stock.

Butte.

OROVILLE ORANGES.—*Bulletin*, June 21: As to the reported dropping of young oranges around Oroville, Senator A. F. Jones says that these fallen oranges are always noticed under trees which blossom so heavily as do those on the Sierra foothills. It means only that the blossoms provided for more fruit than the trees can nourish and mature. The orange crop will be large.

PLANTING AND WATERING.—Thousands of fruit trees have been planted this spring on the slope between Rio Bonita and Oroville, and evidently it is only a matter of time when this section will be one vast orchard. There are several irrigating schemes projected, all to take water from the Feather. One, in which Robt. Williamson, Fleming Bros. and Jack Wright of Sacramento are interested, will take water from below Thermalito and carry it in a natural creek-bed southwesterly toward Biggs and Gridley, in quantity sufficient to irrigate that whole country.

NEW BARLEY.—Chico *Chronicle-Record*, June 30: G. M. Jones brought in on Saturday the first load of new barley, grown on T. M. DeLaney's ranch and cut by the Hicks and DeLaney harvester. It was taken to Croissants to be crushed. The grain was very plump and heavy, weighing 118 pounds to the sack, in old sacks.

Colusa.

DESTRUCTIVE HAILSTORM.—Colusa, June 25: At 2 o'clock Tuesday afternoon the hardest and most prolonged hailstorm ever known in Colusa county struck Colusa, coming from the northwest. Along the sides of the buildings in town the hailstones piled up 1½ feet deep. Some of them were 1½ inches in diameter. The severest part of the storm lasted a few minutes only. Skylights and window-glass were broken all over town. Sash, the youngest son of Walter Calms, a prominent farmer, was struck on the head by hailstones and knocked senseless. Several people were injured by hailstones striking them. The storm originated somewhere west of Sites, in the foothills, and was about three miles in width. Its course seems to have been almost east. It did not reach Norman, nine miles north of Maxwell, nor Colusa Junction, four miles to the south. The fruit crop in its course is practically ruined. Trees were stripped of both fruit and leaves, and in many instances large limbs were broken. Grapevines were almost entirely denuded of foliage and grapes. About one-third of the young prunes were knocked off the trees. Peaches and apricots fared little better. Almonds seem to have stuck to the trees better, but how much they have been bruised the future will determine. The track of the storm covered the best fruit district around Colusa. Watermelons, beans, tomatoes, onions and such vegetables were ruined. Wheat was threshed out and damaged to an enormous extent. At Sites, chickens and turkeys were slaughtered by hundreds. The damage to fruit and vegetables will be in the neighborhood of $25,000; to the grain crop not less than $75,000. J. B DeJarnatt is the heaviest loser of fruit. He places his loss at $5000.

Contra Costa.

SOUTHDOWN WOOL.—*Democrat*, June 28: If any one is skeptical as to Contra Costa being adapted to wool-growing he should step into J. J. Jones' office and examine the specimen from H. P. Hoesley's place, about one mile from Martinez, on the Pacheco road. It is of the finest quality, free from burrs and dirt, and will compare favorably with the higher grades of wool. It was taken from Southdown sheep, and is practical evidence of the value of this breed as wool-producers.

El Dorado.

PEARS AND SOUR SAP.—EDITORS PRESS:—Your correspondent, "F. S. C." says: "Pears will stand the water. They seem to be safe, no matter what the subsoil or how long the water stands around them." Now I have lost 20 out of 700 Bartlett pears with sour sap, besides about the same number looking very sickly, and a neighbor of mine has lost close on 100 from the same cause. My orchard was a perfect quagmire all winter, and in the spring it was wet in patches till the end of May, with water running from wet weather springs; so it is not surprising that some trees died under the circumstances. No fruit tree could be expected to stand it. The trees are on pear roots and were planted over five years ago.—I. P. D., *Diamond Springs, June 28th.*

Fresno.

BERMUDA GRASS ON ALKALI.—Fresno *Republican:* E. Polkinghorn paid $6000 for the 40 acre lot on which he has been living four years. He now values it at $15,000 but will not sell it. "My experience," said he, "warrants me in saying that this 40-acre tract is good for an annual income of $3500. Some acres of my raisins netted me $250 an acre. I have three acres of apricots, peaches and nectarines and they yielded me 30 tons of fruit, for which I got $27 50 per ton. I have 17 acres in bearing vines, and they are good for 30 tons of raisins this year.....That green patch of seven acres that you see fenced in there is impregnated with alkali. I sowed five acres of it in Bermuda grass and two acres in alfalfa, and my experience has demonstrated that there is not one inch of Fresno county land that ought to lie waste because of alkali. My stock has fattened on Bermuda grass. It needs no water, and there is no trouble about cultivation or irrigation if it is planted in May. I have 15 head of cows and horses grazing on it now, and it will support 30 head of stock easily."

Inyo.

WHEAT AND POTATOES.—*Independent*, June 27: Potatoes were planted at Lone Pine Station in April last, and 54 days from the day of planting, new potatoes were gathered. At the same place, wheat was sown and is of such great growth that a few sheaves will be preserved for exhibition at the Fair of the 18th District. The potatoes are excellent. This shows what the land under the East side canal will do, as the tract at Lone Pine Station is below average quality.

Lassen.

SAINFOIN OR ESPARCET.—Susanville *Advocate*, June 26: B. E. Shumway has made an interesting experiment at his ranch with the new German grass called esparcet. It is claimed for this grass that it will grow in arid places, where no trace of moisture can be found, and will soon cover the ground with a thick green sward. Mr. Shumway procured five pounds of the seed last fall, and sowed it high up on a perfectly dry knoll, never expecting to hear from it again; but, much to his surprise, this spring he found it sprouting all over the knoll, and now has quite a patch of rich green grass, with a leaf something like common clover. He is going to save it all for seed, expecting to have about 75 pounds, and will put in a much larger piece this fall. The land where the seed was sown was absolutely barren, no water, except rain, ever having touched it, and the seed was just harrowed into dry dust. It looks as if it might be a bonanza to our stockmen, making good pastures on barren hillsides which are now utterly useless.

Los Angeles.

FRUIT-DRYING WHOLESALE.—Pomona *Progress*, June 26: The busiest place in this valley is the Pomona fruit cannery. Cook & Langley have already expended a large sum of money in preparing for handling all the deciduous fruits of the valley. A force of 50 men has been hard at work there for two weeks. The whole area between the cannery building and the Pomona Pipe Works shops has been filled with racks for the holding of the drying trays. Last year the racks there had a capacity of only 700 trays. Now they have 12 times that capacity. A railroad track has been built from the building, where the fruit will be cut and pitted, to all parts of the area occupied by the racks. Eight large and complete sulphur bleachers have been built to take the place of the one-horse affair that answered that purpose last year, and thousands of new drying trays and boxes have been made. The first and second floors of the building have been made ready for about 200 men, women and children to be employed there in cutting and pitting the apricots, peaches and nectarines. Every available space of ground or floor in or about the cannery will be utilized by the firm, and when it is known that Cook & Langley have contracted to buy over 850 tons of our deciduous fruits during the next 12 weeks, it will be realized that some lively work will be necessary to make good every pound of that quantity.

Orange.

COUNTY FAIR.—Santa Ana, June 28: The constitution and by-laws of the Orange County Fair Association were adopted to-day. The first annual meeting will be held on Saturday, July 12, when arrangements for the first fair will be made.

San Bernardino.

A LARGE APIARY.—Beaumont *Sentinel:* At Wheeler & Hunt's apiary, on the hills south of Brookside, there were about 300 hives last spring; now there are 560. As there were sometimes from 15 to 20 swarms in a day, some escaped, and some, being weak, were doubled up. The hives are arranged in regular rows 12 feet apart, and aisles the other way, giving it the appearance of a diminutive city. As we passed among these at night with genial Mr. Wheeler as guide, the humming, buzzing noise of 2,225,000 busy workers sounded like a moving train or roaring waters. Several tons of honey have already been taken this season from these industrious employes, and before it closes the owners expect to get at least 60 tons, about $7000 worth, or a net profit of not less than $5000.

ORCHARD NOTES.—Ontario, June 27: A canvass just completed shows 600 acres of this season's orange planting in Ontario. The evaporator is now running 50 hands, with over 500 tons of apricots, peaches and prunes engaged.

San Diego.

SAN JACINTO GRAIN.—L. A. Cor. *Chronicle*, June 29: Reports of the cereal yield of the San Jacinto valley have been received by S. B. Haynes, general freight and passenger agent of the Santa Fe R. R. Co., showing that it is the largest ever made, 600,000 sacks of barley and 200,000 sacks of wheat being the result. The barley is of the very finest quality, running 48 pounds to the bushel, while the average is only 46 pounds. Mr. Haynes has sent some samples to large Chicago brewing firms to be tested.

ON PALOMAR MOUNTAIN.—Escondido *Times*, June 26: S. J. Mendenhall and his father came down from Palomar last Monday. They brought a four-horse team and a load of produce, including 100 pounds of prime butter. It is their intention to fence all their lands on the mountain, as they find some of the campers who come up there impose on them by camping in the best portion of their grazing land to the detriment of their stock. The past week there has been frost every night on the mountain, severe enough to nip the potato plant. The pasturage is still good and fruit trees are doing well. They say they are ready at any time to do their part in building a road, but at present there are hardly settlers enough to build an expensive one.

HEADING COMMENCED.—Fred Roberts, with a large force of men and teams, started heading last week. He states that the crop will not be nearly so large as last year, but the price he can sell for out of the field, without storage expense, will be double that of last year. Then 50 cents per hundred for barley was the most that could be realized; this year Mr. Roberts can sell for $1 per hundred. He estimates that he will have about 600 sacks of wheat and 2000 sacks of barley, the quality being good.

San Luis Obispo.

MORE FINE HOLSTEINS.—S. L. O. *Tribune*, June 27: A small herd of five highbred Holstein cattle arrived in town Saturday en route for the ranch of W. H. Taylor from Mr. Polhemus of San Jose. The herd comprised the noted young bull Arthur Field, which is considered about as near perfection in his line as anything which the State can boast, and four young heifers. Our stock men who examined them, spoke in terms of strong admiration. It is a notable addition to the highbred stock of the county.

SIMMLER ITEMS.—Cor. *Tribune:* Everything is flourishing on the Cariesa. We have two headers running now, and they are putting 100 acres of fine grain into the stack every two days. There has been a great amount of good hay put up here this year. The weather has been very pleasant all this month, the hottest day being 91°, and to-day the thermometer marked only 75° at noon. This cool, damp weather is making us bushels of dollars in our fine, plump wheat. There are a number of fine patches of corn growing here, which was a great surprise to a newly-arrived town man who was here last week. It was a hard matter to convince him that we had had no rain for two months, and that we had not in some manner watered the corn.

Santa Barbara.

CROPS—GAS WELL.—EDITORS PRESS:—Crops in Carpinteria are looking as well as I have ever seen them at this time of year; everything is good to extra except hay and grain, which were almost a total failure; weather very fine—could not be better; farmers generally happy, with prospects of good prices for all kinds of farm produce. Lima beans are our principal field crop and we expect three cents per pound, which is about a fair price for labor and interest on capital invested.....A roaring natural gas well was struck one day last week by H. L. Williams of Summerland at a depth of only 30 feet. It shoots up a flame from 10 to 20 feet high and at night lights up the whole town. There is probably 20 times more gas escaping from the two-inch pipe, which is sunk but 25 feet, than is manufactured in Santa Barbara, a city of 10,000 inhabitants. I inspected the well thoroughly yesterday and see no reason why it should not hold out.—P. C. HIGGINS, *Carpinteria, June 24, 1890.*

Sonoma.

MORTALITY AMONG CALVES.—Petaluma, June 30: Some unknown disease has attacked calves and young cattle about Bloomfield and Tomales. They appear as well as usual at night, but next morning are found dead. Several farmers report losses. H. P. McCleaver of Tomales has lost five out of eight animals. Several have been cut open and their intestines examined, but, with the exception of lungs and liver abnormally enlarged and of a darker color than usual, nothing was discovered to be wrong. Most of those that have died were calves a few months old.

Santa Cruz.

SUGAR BEETS.—Watsonville *Pajaronian*, June 26: It was supposed sugar beets could be planted late this year and produce a heavy yield; but it was a hard matter to get the ground into good condition, and then, when the beets began to show above ground, worms made their appearance and rapidly ate away the young plants. Fields were re-seeded, and in several places the worms came again and ate the beets. These difficulties have reduced the acreage that was planted in beets in this valley fully one-fourth; and though the acreage planted was greater than that of last season, it is probable that, through the loss referred to, the yield will not be much greater than it was in 1889. The long wet winter and the beet worms are responsible for this shortage. There are several fine stands of beets in Pajaro valley, and disinterested parties who have examined many of the fields tell us that the crop is looking better than it did a week ago, and may yet come out in fine shape. On the San Andreas there are some fine stands, and Horace Cowles has a field of beets that would be A 1 in a big year. At Moro Cojo considerable re-seeding is being done; a considerable acreage of the ranch shows a strong stand, and the yield therefrom promises to be good. About 100 boys are at work there thinning out the beets. It is safe to say that the beet yield this year will not be as great as was looked for six months ago, but the factory people believe it will be greater than was estimated early this month.

BELLFLOWERS DROPPING.—From the northern part of the county and from the Corralitos district reports reach us that the Bellefleur apples are falling from the trees to such an extent that a very light crop is expected. Charge another loss to the wet winter.

Sutter.

FEATHERED FRUIT-PESTS.—Marysville *Democrat*, June 27: At the meeting of the Sutter County Horticultural Society in Yuba City Wednesday the discussion on "Destructive Birds" was very interesting. R. Davis gave it as his opinion that English sparrows, linnets and California orioles are doing as much damage to trees as the San Jose scale, and he thought prompt action should be taken by the society toward the suppression of these enemies to the fruit-grower by offering a bounty of one-half a cent a head for them. A number of cherry trees that had contained from 300 to 400 pounds of cherries were almost entirely stripped of their fruit by birds. He stated that one-third of his cherry crop has disappeared in this manner. J. W. Mills gave a few practical illustrations of his experience. He knew of an orchard of seven acres that had lost all its fruit through the depredations of linnets. No action was taken on a motion that a committee of three be appointed to wait on the Board of Supervisors and ask them to offer a bounty for destructive birds. The discussion will be continued at the next meeting.

Tulare.

THE GRAIN CROP.—Tulare *Register*, June 27: Grain-buyers who have been out through the county say the wheat crop is turning out fully as well, if not better, than was expected. In the Alila and Tipton countries, it is said, there is a good deal of grain of not first-class quality, about $1.02 being the highest price yet offered; but there is enough of it to put the settlers on their feet. Wm. Swall, out in the Oakdale district, is now harvesting his 900-acre field of wheat. Much of it is turning out ten sacks to the acre, and the entire field will average eight sacks or over. All the grain in that vicinity is yielding abundantly this season, and the farmers are in better spirits than for several years past. S. Witkowski bought 1200 sacks of wheat from J. L. Presely to-day which was raised on J. Sadler's place, four miles north of town, and was one of the best fields out in that direction, the yield being something over ten sacks to the acre. We have seen larger wheat, but none cleaner or better colored. E. W. Kay thrashed his Seneca Chief wheat yesterday, and the yield is slightly above ten sacks to the acre.

BEEVES AND PORKERS.—A great many fat cattle have been shipped from this point within the past two weeks. L. L. Gill drove in 100 head of the finest steers we have seen in a long time. He shipped seven carloads of his own and is now buying from other parties in the foothills.....Wm. Crabtree sold 40 head of hogs to L. D. Whitt at 4½ cents per pound. They were taken to Visalia by wagons for fattening on grain stubble. There is considerable inquiry for stock hogs at present.

FIRST DRIED APRICOTS.—Hanford, June 26: Charles King & Co. of this place shipped a carload of dried apricots to St. Paul, Minn., today, the first shipped out of the State this season. The fruit was of prime quality.

Yolo.

YOLO SPUDS.—Woodland *Mail*, June 28: Yolo county is becoming renowned for its large potatoes, as well as big pumpkins, juicy grapes and handsome girls. An agent of W. H. Wood & Co., the well-known commission merchants of Sacramento, was in this city yesterday, and purchased four carloads of potatoes, two of which he shipped to Butte City, Montana, and two to Portland, Oregon. The potatoes are fine large ones.

A NOTABLE ALMOND ORCHARD.—Among the almond orchard which have been planted in the last few years, the one owned and cultivated by Anderson Bros., three miles south of Davisville, attracts the attention of the passer by more than any other. The trees, which are set out in rows about 20 feet apart, appear to be in healthy condition, and the limbs are one mass of nuts. The land where this orchard now grows was used for farming until three years ago, when the present proprietors purchased the tract, which contains 75 acres, and set it out in almond trees. They agreed to pay $5 an acre rental each year, and at the end of five years could have the land for $100 per acre. They have sold the entire crop this year to W. Treat of the Oak Shade Fruit Co. for 11 cents per pound. Mr. Treat, an experienced orchardist, estimates that, at the rate of 11 cents per pound, the entire crop will bring $4000.

CONVENIENT FOR FRUIT-PICKERS.—We were yesterday shown a fruit-picking machine invented by Mr. Biddall of the West End. The plan is similar to that of a derrick. A person sits upon a platform, and, by means of a rope, draws himself up among the branches of the tree. A pulley is provided by which the bucket of fruit is lowered to the ground. The invention is a valuable one, and will prove a good substitute for a step-ladder during the picking season.

The Mysterious Vine Disease.

A Report from the U. S. Department of Agriculture.

EDITORS PRESS:—The annual report of this department for 1889 has just been issued. Thinking that what is said about the vine disease in the report might interest your readers, I send you a copy herewith.—B. T. GALLOWAY, Chief of Section of Vegetable Pathology, Dept. of Agr., *Washington*.

The Report.

For a number of years the grapevines of Southern California have been dying in a mysterious manner. Hundreds of acres of flourishing vineyards have been swept away, entailing losses impossible to calculate. In 1887, Prof. F. L. Scribner, my predecessor, in company with Prof. P. Viala of Montpellier, France, visited the infected region, the Professor acting under instructions from the Commissioner of Agriculture of this department. Professors Scribner and Viala remained in the field but a short time and did not arrive at any definite conclusions as regards the cause of the malady.

Aside from a general correspondence with various parties in the State, no further effort in the way of investigating the subject was made by the department until early in March of the present year. Soon after assuming charge of the department, the matter was laid before you, and you immediately instructed me to make the necessary arrangements for sending a special agent to the infected region. Mr. Newton B. Pierce of Michigan was selected for the work, and early in May was appointed by you and immediately left for the field of labor. At my request, Mr. Pierce has furnished a brief synopsis of the work to date, a copy of which we give below:

SANTA ANA, CAL., Dec. 6, 1889.

SIR:—The following brief review of work on the California vine disease is submitted in accordance with wishes expressed for such an outline, and is chiefly intended as indicating some of the lines of investigation pursued. To properly establish the special or general conclusions to which my work has thus far lead me would necessitate the analysis and presentation of a mass of observations and notes incompatible with the extent and purpose of this account.

Most of the time since my arrival in California has been devoted to active field work, and the facts accumulated and the observations made are invaluable as a foundation for the laboratory work and experiments which will naturally follow. Through personally field work, covering the greater portion of the worst infected district, we are also enabled to fairly judge of the merits of the various local opinions or of individual observations and views, and to be in a position to draw conclusions not to be arrived at with a more limited view of the field. I believe, however, that this position should be strengthened by a thorough canvass of grape-growing districts of the northern portion of the State. Very respectfully, NEWTON B. PIERCE,

B. T. GALLOWAY, Special Agent.
Chief of the Section of Vegetable Pathology, Department of Agriculture, Washington, D. C.

The disease now destroying the vineyards of Southern California and working to some extent in the northern portions of the State began to attract the attention of the general public in 1885. The older vineyards located in the Santa Ana valley, and particularly those of Anaheim, in what was then Los Angeles county, were the first to show marked signs of the disease in this region. At Anaheim the first request was made for a special investigation into the nature and origin of the trouble, and were forwarded to associations or individuals of the State. Later, as the trouble began to seriously affect the great raisin industry of the valley, correspondence was opened with those in authority at the Department of Agriculture at Washington.

Pursuant to directions from the Secretary of the Department of Agriculture, issued May 16, 1889, I proceeded to Santa Ana, Cal., to prosecute investigations into the nature of this disease under instructions from you. On May 23d I arrived at Santa Ana and at once began the work.

After making the acquaintance of some of the leading grape-growers of the valley, it became my primary object to acquire familiarity with the effects of the disease on the vineyards as a whole, and more particularly the special effects on the vines attacked. To this end a large number of vineyards of the Santa Ana valley received personal attention. In reviewing this matter, I see that at least 100 vineyards of the valley were inspected, in most cases with care, and these vineyards ranged in extent from garden patches to those comprising several hundred acres of vines. At the same time the owners of these vineyards, as well as those gentlemen formerly interested in grape culture but now having their vineyards removed, were visited, and their experience as a whole, or any special observations or experiments which they had made, were carefully recorded.

On working over the field here mentioned, a general study was made of the foliage, body and roots of the diseased vines. The study has been continued throughout the field-work of the season, and has resulted in a thorough diagnosis of the effects of the disease, numerous descriptions in general and special cases being prepared and preserved. The material now in hand illustrative of the characters and effects of the disease is of considerable extent and value. It comprises, besides descriptive matter, a series of photographic plates of the effects of the disease upon the fruit, the vine, and the vineyard as a whole. Besides this, I have procured several excellent water-color plates representing the effects of the disease upon the leaves and canes of the vine, the use of colors being the only means of properly bringing out these characteristic features.

In gathering data relative to the introduction of the disease at various places, it became evident that the trouble had spread in Southern California from a common center. As we passed out from that center, vines similarly located, of like age and of the same variety showed signs of the disease in later and later years. Facts of this character, bearing directly on the contagious nature of the disease, at once showed the importance of procuring as complete records as possible of the dates of the first appearance of the disease in each locality. With this object in view, the vicinity of Anaheim, where the Mission vines first died, was thoroughly canvassed, and various facts and dates brought together sufficient for the construction of a map of that region. These have now been supplemented by like data from other portions of the State, and the material in hand at this time is sufficient for the draughting of a map of approximate accuracy for all the counties included in Southern California, showing the spread of the disease and other facts of importance.

Much attention has been given to the probable origin of this trouble, but from facts already gathered, I incline to the view that this matter must also be investigated in the northern portion of the State before any definite or satisfactory results may be looked for. I have, however, accumulated much material which may tend to throw some light on this branch of the subject.

Different from European Diseases.

It has been advanced by some who have studied this disease here that it is identical with that of Italy and adjoining regions known as *Mal nero*. Viewed from an anatomical and physiological standpoint, there are many features of this disease reminding one of the Italian disease, and this is also true with the external appearance of the canes. On the other hand, I have examined the foliage of five varieties of Italian vines from the diseased district, and find no similarity between the two diseases so far as this material is concerned. Even were the identity of our disease with the Italian *Mal nero* thoroughly established, the benefits to be derived from such a recognition would be next to nothing, for up to this time the European authorities have been wholly unable to agree among themselves as to the nature of their disease, and no satisfactory remedy or preventive has yet been found. Owing to the similarity of these diseases, I have thought it best to work up the literature of the *Mal nero*, which is quite extensive. Translations of the reviews of the various Italian papers published for many years back have been made, numbering some 20 to 25 papers, and many of the original articles and specimens of the Italian diseases have been procured, and more are to follow.

Certain other effects noticed in European vineyards, and spoken of as *Folletage* or *Apoplexie*, have been identified with our disease by certain persons in the State. This view might have justly been held when the disease first made its appearance, but since that time facts have developed which leave no good ground for supposing the trouble to be due to the direct action of the sun, as in the case of sunstroke. Owing to a remarkable connection existing between the temperature of the air and the virulence of the disease, however (as is also true in the case of *Oidium* on vines, or of yellow fever or cholera with man), and the difficulty of determining the true nature of this relation, I have given more than ordinary attention to this feature of the subject. This has brought forth many facts of observation by others and by myself, and resulted in supplying me with what seems to be abundant evidence of the inefficient nature of heat when considered as a lone factor in the causation of this disease. In this connection, the effects of certain warm spells of winter, to the action of which the trouble has been ascribed, have received attention. For instance, vineyards set since these warm spells occurred and from cuttings brought from other portions of the State have taken the disease; but the various reasons for my conclusions respecting the non-causal action of heat can not well be presented short of the space obtainable in a special report.

Most of the non-parasitic agencies for the production of the disease, as their action has been presented by numerous adherents to such views both here and elsewhere, have been carefully considered.

The subject of pruning has received all the attention required. That of irrigation has had special and exhaustive attention. All conditions are noted on irrigated and non irrigated lands, and the evidence is abundantly sufficient to prove that there is no causal relation existing between irrigation and the disease. The subject of soil poverty has been fully considered, as well as the matters of artificial fertilization and alkaline soils. The various drainage problems which have a direct bearing on the effects of some of the well known root fungi have been carefully reviewed during the field work, and if a root fungus be at the bottom of the trouble, it is certainly not working according to the habits ascribed by Europeans to *Dematophora* and *Agaricus*. This fact, however, is not evidence against the presence of root fungi. The bearing of elevation has also been considered, but up to the present time I have had no favorable opportunity to make observations along this line at elevations greater than 2000 feet. The matter of atmospheric humidity has likewise been partially covered. Much statistical information relative to the conditions of climate during the past and present decades, the effects of prevailing winds or those of unusual severity, has been accumulated, and when combined with the results of personal observation will, I believe, show the slight bearing these matters have on the subject in hand. The beneficial or detrimental action of other forms of Phanerogams about vineyards has been sufficiently studied. Under this head the effect of shade on diseased vines has been marked, and, as its bearing on the nature of the disease is important, it has had continuous investigation, at the same time being compared with observations made as to the temperature of the soil at certain depths beneath the surface.

Under the head of degenerated stock, due to long-continued propagation of vines from cuttings, I have been able to make several observations, but for the sake of bringing together a greater amount of material, my attention to this subject will be continued. Yet I may say that up to date there is no good evidence that seedlings will exist longer in the face of this disease than vines long propagated from cuttings.

Lines of Investigation.

When considering the disease as due to parasitic or pathogenic organisms, three lines of investigation have been pursued, viz.: Entomological, mycological and bacteriological—the last as distinct from mycological work mainly in the method of treatment.

The work in these branches of the investigation is in no sense matured. It should be followed by much careful laboratory work, for which my time has thus far been insufficient, and by numerous careful experiments, which are essential and important features in arriving at true results.

Work pursued in the field soon established the fact that phylloxera did not cause the trouble, and although there are numerous insects and worms found upon the vine both above and below the surface of the ground, and which have been more or less studied, yet it seems evident that none of these bear any causal relation to the destruction of the vineyards. I might add that every order of insects is represented upon the vine, and some of these forms are doing sufficient damage to well deserve the expenditures of the time required in making a careful study of them. I have given some time to the *Termitidæ*, which are doing much damage to the older vineyards, and will devote more time to certain *Acarina* and *Nematoda* found infesting the roots.

On the roots of the vine I have found *Vibrissea hypogœa*, but thus far only on varieties from the East. The gonidial stage of another fungus has been observed; also, an extremely fine mycelium, clear, variably septate, branching as it passes *outward* through the cortical parenchyma to the epidermis. Much of this mycelium measures about 2 inches diameter. The study of these forms is now in hand, as well as that of the various effects of the disease observable throughout the tissues of the root.

On the foliage and canes of the vine there are several saprophytic and some parasitic fungi observed; some of which are determined and others have to receive continued study.

Downy mildew, *Perono spora viticola*, has not been found by me in Southern California. The same may be said for this region respecting black-rot, *Læstadia Bidwellii;* neither the *Phoma* of the berry nor the *Phyllosticta* of the leaf having been seen. No fruit affected by anthracnose, *Sphaceloma ampelinum*, has been observed.

Powdery mildew, *Uncinula ampelopsidis* or *Oidium Tuckeri*, which is a very common parasite throughout California, and which has occasioned much loss since its introduction a few years back, has been considered with much care and will continue to be the subject of attentive investigation. The indirect effects of this parasite, as well as those of phylloxera, may easily be confounded with those seen at an early stage of the disease in question. In fact, any parasite whose action is to materially reduce the nutrition of the plant as a whole may produce effects analagous to those which may be termed the general or constitutional effects of the present disease upon the foliage of the vine. Besides these general effects there are those of a special nature, however, which will not be so easily mistaken for those produced by other causes. In the present disease, especially well marked in the Muscat vines, we may usually see in the first stages several small yellow spots within the parenchyma of the leaf farthest from the main veins of the same. These spots are often very well defined in outline, more particularly when the leaf is held between the observer and the light. Often no indications of the effects of higher fungi or of insects can be detected externally or internally in these spots. The peculiar appearance and location of these spots led to a careful study of the same, which resulted in finding bacteria-like bodies (*Micrococci?*) in large numbers within the chlorophyllose cells of the spongy parenchyma immediately surrounding the spiral vessels supplying that region.

Recognition of Bacteria.

After a long series of observations, made on material from various portions of the diseased district, which in no case failed to disclose the diseased vines as swarming with these bodies in all portions where sap had a ready flow, I believe it proper to undertake a series of experiments to determine if these bodies always present, bore any relation to the disease as a whole. I had little doubt that they were micrococcisms and gave to the local spotting of the leaves their characteristically sharp outline. Cultures from various parts of the vine were made in agar-agar and other media. Three sorts of bacteria were found with enough constancy to warrant further study, but I have not so far been able to determine whether any of these are the cause of the disease. Healthy vines were procured, set, and inoculated; but in due time I found both inoculated and control plants showing signs of disease. Owing to our inability, thus demonstrated, to make a fair test of the action of the germs in the infected district, these and analagous experiments—such as grafting, the testing of hardy stocks, etc.—have been inaugurated in Washington, outside infection being carefully guarded against These experiments may demonstrate the non-pathogenic nature of these germs. In view of the observations mentioned, however, and the fact that several Italian students have for years claimed that an Italian disease of similar characteristics is caused by bacteria, it is proper the matter should be decided if possible.

Remedies Employed.

For three or four years vine-growers have been trying to save their vineyards by treating them with Bordeaux mixture applied both as a preventive and as a cure. Most thorough and persistent tests of this fungicide and stimulant have been made. Various proportions of the ingredients have been used, and applications have been made at nearly all seasons and under all conditions. The result has simply been to produce the action of a stimulant on the vines. After an application the vines send forth a new growth. Through this encouragement other and repeated applications have been made. In some vineyards the foliage has been especially treated, while in others, acting upon the theory that the seat of the disease is in the cane or body of the vine, the applications have been made to these parts. Often vines have been carried over by stimulation for a brief period of time. The ultimate result has been, however, that not one vine is saved by this treatment, and yet thousands of dollars have been expended by vine-growers in an effort to save their property. A powder recommended by individuals of the State who have been conducting experiments, and which it was claimed would master the trouble has been extensively made and sold upon the market here in the infected district, and has been thoroughly tested both as a preventive and cure. It was a part of my labor to collect records respecting the results obtained by those who have carefully applied this powder, and up to date I have not found a person who has saved a vine by its use.

Many experiments have been conducted by vine-growers who have studied the workings of this disease, and in all cases their efforts have been seconded by me to the best of my ability, many tests having been made with more or less favorable results. Several series of experiments have been conducted with bi-chloride of mercury, one of the best of germicides; but although for a time a stimulated and approximately healthy growth was obtained, this soon showed signs of disease and the vines ultimately went back as with the use of the Bordeaux mixture. I have records of a number of tests made with other substances, but the whole may be summed up in the plain statement that a preventive or remedy for this disease is not yet known.

Observations of value have been made relating to resistant stocks, and this feature of the work will be continued. Yet from what is known it is probable that Vinifera tops cannot be maintained on native roots in this region in the face of the present virulence of the trouble. The variation in the hardiness of varieties is evident and many notes are in hand on the subject. The effects of grafting on stocks of perhaps 20 different varieties have been recorded. I have noted the effects upon the raisin when considered from a market standpoint, the loss in productiveness of vines, etc.

The financial losses caused by this disease in Southern California are very grave. From the disease being first confined to a small section of Los Angeles county, I have now seen it well developed in Santa Barbara, Ventura, Los Angeles, San Bernardino, Orange and San Diego countries. I have also received typical specimens from several sections in Northern California, but will know its distribution more thoroughly after having worked over that portion of the State.

Although the grape industry where the disease is doing its work has been and is receiving a heavy blow, and the interests involved are extensive, still I cannot but feel that the check in production will be of comparatively short duration, as has been the case in Europe with Oidium, Anthracnose and Peronospora. Further than this the investigations are being pushed as rapidly as time and careful work will permit, and I see no good reason for supposing that they will not result in a thorough understanding of the causes of the disease in question. This, like all other work of its class, requires time, but with the conquering of the vantage ground of a complete understanding of the trouble we may hopefully look forward to the mastering of the matters of prevention and cure.

CAMPHOR, which lately doubled in price, owing to the demand for it to make smokeless powder, has now receded to near its normal value in consequence of the fact that the European governments have abandoned its use.

THE FIELD.

The Advantages of Baled Hay.

Though young in agriculture, California is teaching practical lessons to the older regions in many points of agricultural practice. The benefit of hay-baling is one of these, and any one who has labored under the disadvantage of handling loose hay, or in drawing the same to the eastern village or city markets in imminent danger of cutting his throat on the telegraph wires which cross the streets, will appreciate the following essay which J. W. Clark of Placer county writes for the *Country Gentleman*:

Grass and hay, contrary to anticipation, are more abundant than for many springs. Live stock have done well on wild oats, which grow as a volunteer crop all over this country, and are abundant this season, on even naturally dry and thin soils. The hay harvest now in progress will be plentiful, including alfalfa, wheat and oats, with less areas of barley. Our hay grasses are nearly all baled in the field here, as soon as lightly cured, and then set up in blocks of bales, three or four tiers high, ready for drawing at any time before Oct. 1st—rain enough to damage the hay rarely falling before that date. As a safe precaution, sail or tent-cloth covering, or even green grass, is put over the piles of bales, and various kinds of other cheap covering may be used according to convenience.

I would again express surprise that baling hay in the field is not general in all North American countries. In the Mississippi valley and in most of the States east of the Rocky mountains, very little hay is baled in the field though some is baled from the stack, when intended to ship to distant places in considerable quantities—nine-tenths of the hay crop being moved to barns, or stacked in the meadow, or on the prairie where grown. In stacking, more labor is required than in baling from heaps drawn together by horse-raking. When this stacked hay is drawn to the farm for stock feed, there is a second stacking or moving of the same hay, and when stacked hay is hauled to market—3 to 10 or 12 miles distant, as in Northwestern Iowa, where I have many times seen hay drawn in large racks, with vertical sides four feet high to prevent the high winds blowing the hay off the wagon, many of the racks weighing 800 pounds, or more, and being very difficult to put on and off the wagon gear. The large size of such racks prevents the load being driven into any barn or under cover in case of rain. Hence the loads of loose hay in such racks are pitched through some end door, or stacked again, convenient to the winter feeding yard. But when baled where it is made, as much weight can be loaded in an ordinary wagon box as in a loose state fills a rack that is 16 feet long, 8 feet wide and 4 to 6 feet deep! In California the weight of bales ranges from 200 to 300 pounds—200 pound bales being very convenient to handle, and 10 bales, or a ton, is a small load in a common-sized wagon-box.

If baling were practiced in the hay-field instead of stacking the hay loose, neither hay-loading nor hay-stacking machinery would be necessary, as two men with bale-hooks could set up 20 tons in a block of bales five or six tiers high—the bales now in my stable loft are 3½ feet long, 2 feet wide and 16 to 18 inches thick—taking the bales from the ground in less time than five tons could be stacked from a wagon or by the use of any horse-worked machinery. In fact the loss of time and waste of labor in handling hay loose, in comparison with saving of labor, time and expense, by baling, is so great as to make the practice of handling hay in a loose, bulky condition appear as absurd. Why, even in the field, a portable stack-cover, which can be put on in five minutes and will last ten years, will safely secure five times as much baled hay against rain as the same cover would secure of unbaled hay. Again, less than a quarter as much barn room is required for 40 to 100 tons, or any other quantity, of baled hay, than the same quantity will fill when not baled. It is also true that hay can be safely baled with less curing than is required for hay in large stacks, and even if damp, hay will keep better in bales than in stacks. It is also an advantage that if any of the bales are not as good hay as others, as may happen from inferior grass or catching weather, all such bales can be used without opening others. As to hauling baled hay, four bales fit easily on a one-horse spring wagon behind the seat. On fair roads, a horse will trot five or six miles an hour with two bales, and I frequently see two tons loaded in a common wagon-box pass near my residence. In fact, hay-racks are so few in California that we see none in passing a dozen hay-fields. Then how easy it is to take a four or five-inch layer of hay from the end of a pressed bale by hand without loosening the remainder of the bale. If a livery barn or hotel runs short of hay, a horse with a light spring wagon can speedily bring in two, four or half a dozen bales, without injurious delay, and the fact that one man or stout boy alone can load and unload baled hay readily is worth considering, hooks of course being used in handling the bales. Having worked at haying in detail in several States and on both sides of the Atlantic, I believe I have not overestimated the advantages of baling.

Corn for Grinding and Ensilage.

As there is a growing interest in this State in growing corn for grinding "cob and all," and for putting down in silos, the following conclusions, drawn from experiments at the Pennsylvania Agricultural Experiment Station, may be of interest:

Of the ensilage varieties, when cut for putting in the silo, the Burrell & Whitman Ensilage corn gave the largest yield of green material per acre, but the White Southern the most dry matter. Breck's Boston Market Ensilage yielded nearly as much dry matter as the Burrell & Whitman, but not as much green material, yet was the earliest or most advanced of the five varieties grown. When field-cured, Breck's Boston Market Ensilage and the White Southern varieties exceeded the Burrell & Whitman in yield of dry matter per acre in order named. Salzer's Ensilage and Blount's Prolific made the lowest yields except in the field-cured material, when the former had the largest yield of ears and stood second in yield of green material, but the yield of dry matter was low.

Farmers can safely be guided in the purchase of seed corn by results of germination tests. The lower results that will be obtained in the field are explained by the fact that many seeds will sprout but have not strength to vegetate.

The four varieties of Flint corn ripened at nearly the same time and a few days before the Dents, but had lower yields. The Self-Husking was the earliest but had the lowest yield.

The Queen of the North, Wisconsin Earliest White Dent, Minnesota King, Leaming, Queen of the Prarie and Cleaver corns matured, the Queen of the Prairie giving the largest yield and the Queen of the North and Minnesota King being in best condition. Golden Beauty, Golden Dent, Hickory King, Champion White Pearl and Pissa Queen did not mature, but proved earlier than the Chester County Mammoth, Mammoth White Surprise and White Giant Normandy.

Those varieties grown and sold for ensilage and fodder crops are preferable when a large yield of forage is desired.

Fully one-half of the dry matter (food material) was found in the ears and one-fifth of this in the cob. One-fourth to one-third of the total amount in the plant is found in the leaves and husks. Of the remaining one-fourth there are four or five times as much in the butts as in the tops. It will readily be seen that on account of the great amount of dry matter in the butts there will be considerable lost when the stalks are fed whole. Much of this might be saved were they cut before feeding or preserved in silos.

The results show that fully 20 per cent of dry matter is gained by allowing the crop to mature.

Harvesting Peanuts.

Whatever you do, it is best to do it well, especially as in some cases the doing of it well makes all the difference as to whether or not it is worth while to do it at all. This will be particularly the case with the growing of peanuts this year in Southern California. The quantity will so far exceed the previous yields that the price will go nearly down to half what it has been within a few months, and the most economical methods of harvesting will have to be resorted to to keep the cost of production within the market value of the nuts. Not only is this economical question involved, but also one of *quality*, on which also depends so large a percentage of the value of the nuts as to come very near determining whether or not it is worth while to grow them. When we state that the difference in value may amount to a cent a pound and their wholesale price may not be over six cents, it will be seen how largely their profit depends on the care taken of them. The following instruction is from Mr. A. F. Reynolds, 204 West First St., Los Angeles, whose intelligent direction of this young industry we have previously had occasion to refer to:

There are so many peanuts growing this year and the price will be so low that it will require some method in harvesting the crop, or it will be a dead loss to the farmer. I said in a former article which was extensively copied by the public press throughout the State, that they should be left on the ground after being pulled, *with the nuts underneath the tops*, to protect them from dampness and the hot sun, thereby preserving their bright color, and at the same time leaving them to hang down as much as possible, so they may be easily knocked off. One other important point, let them get *thoroughly dry*, or they will get moldy and spoil in the sack. Put under cover as soon as dry.

Now many have planted this year who have had no experience in the business, and they will turn them over so the sun can dry them quickly—that's what the sun is for, of course. Well, they *will* dry quick that way, *and be black*, and hang down among the vines so they will have to be picked out one at a time, which will cost more than they are worth in the market.

Some farmers fasten an old knife-blade to the end of a stick and cut the main root (which is hard to pull) near the surface of the ground, and on which there are no nuts; then they are easily pulled, and the long tap-root will not be in the way of machine picking or knocking them off by hand.

A very effective picking machine, if properly made, is fashioned after the windlass we used to make in the mines for hoisting dirt. Make the drum somewhat larger and drive into it big nails in rows, near enough together and projecting enough to catch hold of the nuts; fasten a bar or rest to the frame, parallel with the drum, just near enough to let the heads of the spikes pass; bevel the rest or bar to a thin edge; hold the bunch of vines on the rest with the nuts against the drum, turn the crank, and it will snatch them off in a hurry.

Now let all the papers that copied the other article copy this one also and save to their patrons many times the price of their paper.—*Pacific Monthly for June.*

From Florida.

A Welcome Paper—Drouths and Wet Seasons—Diversified Products—Encouragement for the Future.

EDITORS PRESS:—Though the width of the continent separates us, the RURAL spans the distance every week as regular as clock-work, with a miss very rarely indeed; and a very welcome and entertaining visitor it is. I should feel lost without it. In fact, an important part of my weekly mental pabulum would be lacking and the loss would be sorely felt. I have thought for years that the RURAL PRESS was as good as it could be, but somehow you keep improving it year by year. Surely, you keep in the forefront of the progress of the times and cannot but be the means of great good throughout the wide area in which it circulates.

In Florida we are in the midst of our regular summer rainy season, which commenced this year the first part of May, instead of the middle of June, as usually expected. The past two years the weather has been very peculiar. The unusually wet winter of 1888-9 was followed by a very severe spring drouth; this was broken by the late beginning of the rainy season, which lasted through July, August and September, 1889. Then the drouth took hold again and held on till the last of April, seven months. Even the usual heavy dews were conspicuous by their absence. To cap the climax, we had two severe freezes in March. These experiences were altogether unique in the history of the State.

The individual losses have been great in some sections; certain localities, for some unknown reason, feeling the effects much more severely than others. The outcome of the whole matter will be decidedly beneficial to the State at large, as it will cause a much more general adoption of irrigation, which will result in the adoption of a more intensive system of cultivation with greater certainty and amount of production.

Another gratifying feature is found in the fact that there is a more general attempt to produce the necessary supplies of provisions at home, in place of excessive imports from other States. People are rapidly learning the folly of buying abroad that which can be produced at home. They are learning that to be prosperous they must diversify their industries, their productions; must give more attention to growing the staple crops, feed for their cattle, vegetables and fruits of many kinds for home use. The golden text being deeply impressed upon their minds is: "Buy nothing whose equivalent you cannot produce at home."

Altogether the prospect was never so encouraging for Florida as now. The immense discoveries of phosphate and other minerals are giving a greater stimulus to development. New railroads are being built and projected. Phosphate and fertilizer works are locating in various parts of the State. A feeling of great confidence is everywhere manifested, and Florida is triumphantly marching on

SHERMAN ADAMS.

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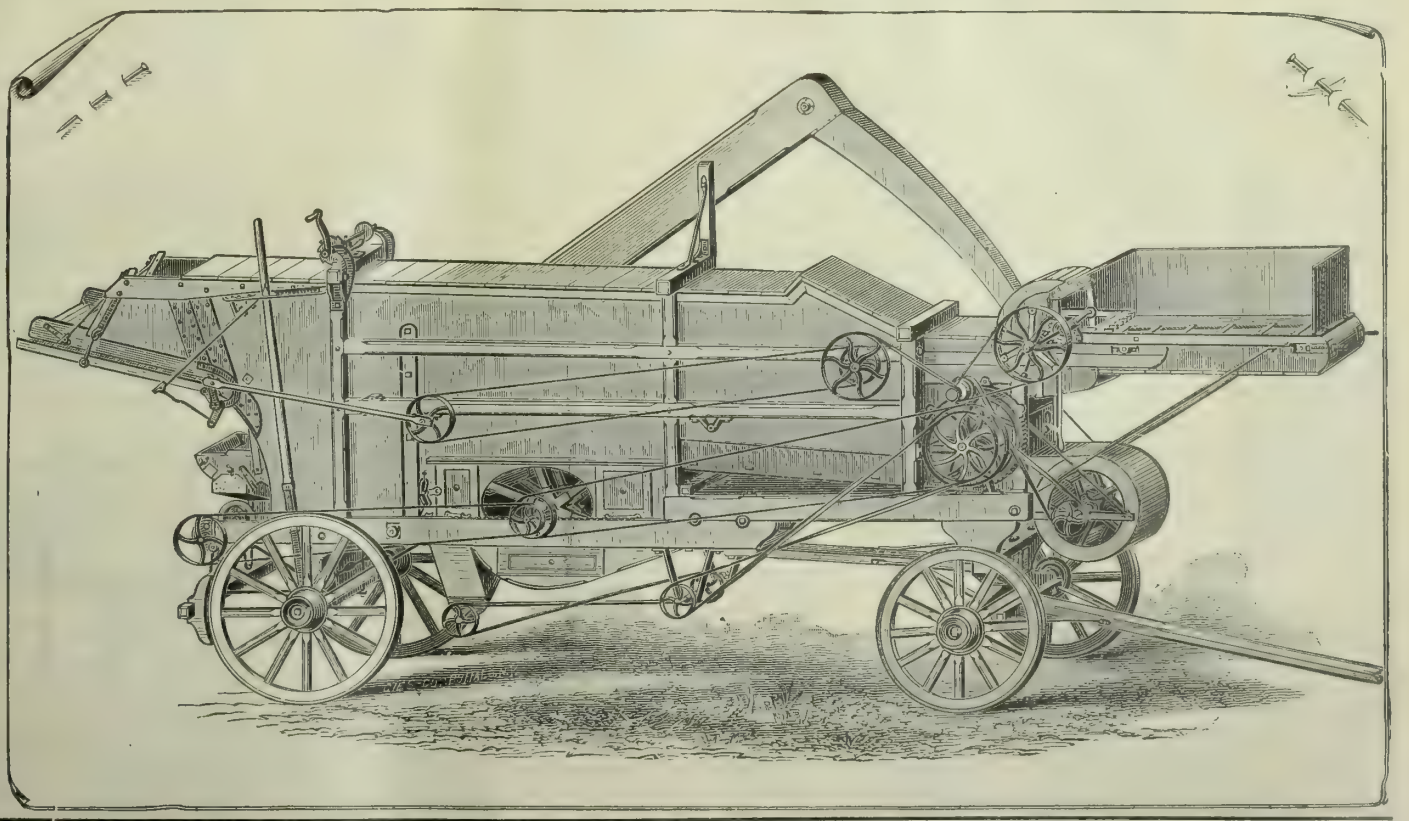
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TRACK AND FARM.

Our Horses in Front.

There has never been a more sensational period in the history of the American turf than that which has passed over in the past two weeks, and the California horses running in the East are responsible for it. Salvator, the Haggin colt, surprised them all by winning the Suburban, and the noise of that victory had not ceased to be heard when he came to the post in one of the greatest match races ever run on American soil, and made the unprecedented run of a mile and a quarter in 2:05, carrying 122 pounds.

The comments upon that extraordinary victory had not ceased when Firenzi, the mare of the Haggin stable, came to the post in the Coney Island Cup, and with 117 pounds on her ran the distance and won in one second better than record time. The people were still talking about Salvator and Firenzi, when Racine, one of the Palo Alto colts, started in a race at Chicago and broke the record for a mile—a record that has stood for 13 years.

Three such performances to come in one week, and all of them to be done by Californians, is a record that will stand for years, and gives the home people the chance to truly say that the best of them all belong to us. California has the greatest trotting filly that the world ever saw, the best four-year-old colt that ever ran, the best mare that the country has produced, and the greatest three-year-old of his year. No other State in the Union—not even Kentucky, the boasted home of the horse—can make such a showing, and the State may well be proud of her equine victors. Neither Salvator nor Firenzi were bred here, but they have been brought to their excellence in the California stables and they will pass their last days on the California ranches. Racine and Sunol were both born and trained here.

Some Rich Programs.

Oakland, Napa, Petaluma and San Jose announce their programs for the fall fairs, and one glance over them is sufficient to show that the people are awakening to the importance of the trotting horse in California, and they offer to the horsemen the most liberal purses ever known in the State. The four associations offer an aggregate of $50,000 in purses and stakes for the trotters, pacers and runners, and the trotters get more than half of it. Oakland puts up $10,000 for the trotters alone.

The programs are the best in many respects that we have ever had in the State, and are worth more than a passing notice. Oakland gives $600 to the three-year-old 2:40 class; $1000 to the Stamboul 2:27 class; $1200 to the Electioneer 2:20 class; $1200 to the Mountain Boy three-minute class; $1000 to the Grand Moor three-year-old new-list purse; $1000 to the Hawthorne 2:35 class purse; $500 to the Guy Wilkes two-year-old purse; $1200 to the Director 2:24 class purse; $1000 to the Sidney free-for-all pacing purse; $1200 for the Dexter Prince 2:40 class purse; $800 for the Mambrino Wilkes 2:30 class; $500 for the pacing 2:30 class, and a sulky set of harness and a gold medal to the three-year old that will beat Sable Wilkes' record of 2:18.

The events in the program of the Los Angeles Association closed their entries on the 1st of July, and a private note from the secretary says that everything filled and that the Los Angeles Fair will be one of the largest of the year. The trotting events filled with a good number of northern horses among the names. The fair begins on the 4th of August.

A meeting of the State Agricultural Society was held last Tuesday, and some unimportant changes were made in the program, which was published some time ago in the RURAL.

Notes at Random.

The California horses at Chicago, with the single exception of Racine, have done anything but good running.

The stables of Marvin and Hickok are now at Detroit, Mich., where they will await the opening of the grand circuit.

Joe Courtney has been deposed from the management of the Winters stable and Tom Conley has been installed in his place.

Jim L, 2:20, by Dan Voorhees, has been taken from the stud and put into training for the circuit. He is being worked at San Jose.

After the close of the State Fair, nearly all of the running stables will go to Reno and Carson for the meetings there, where liberal purses are offered the runners.

Frank Baldwin, the manager of the Fresno track, has also been made the manager of the new track at Coronado Beach, and the first races of the new course are to begin this week.

Ringwood, the Sydney stallion, has been sent to the Bay District track and placed in James Dustin's hands for training. It is intended to give him a low record this year if possible.

The Napa 2:30 class trot, in which there are eight nominations, will be the first hot race of the season, and the horsemen believe that at least three of the contestants will get records near 2:20 in the race. Five horses that are in the 2:30 class give promise of beating 2:20 before the season is over.

The thoroughbred stallion Enterprise, owned by Price Bros., of San Luis Obispo, was exercising on the track a few days ago, and in a collision with another horse on the track, while at full speed, was killed.

The entries to the colt stakes of the Los Angeles Association closed on the first of June, and all of them filled well. Among the sires represented in the stakes are Stamboul, Alcazar, Guy Wilkes, Gossiper, Will Crocker and Woolsey. The 2:30 class trot and the District Races closed on the same day, and they, too, received a large number of entries. None of these events will go unfulfilled.

One of the Eastern papers says of a California horse: "Esperanza by Grinstead out of Hermosa is the crack two-year-old filly in the Santa Anita stable, and is said to be one of the grandest youngsters ever owned by Baldwin. In her work at Morris Park the other day, in company with Cleopatra, she ran the three-quarters very handily in 1:15, carrying good weight. She is engaged in the Lakeside, Friendly and Hyde Park stakes to be run at Washington Park, Chicago, and her trainer has his heart set on winning the valuable Hyde Park with her. The entire Santa Anita stable has arrived from New York at the Washington Park track."

FORESTRY.

On Spontaneous Forest Reproduction.

EDITORS PRESS:—The last issue of the RURAL PRESS, June 28th, contained an excellent photo-facsimile of new forest growth on abandoned mine site in Placer county.

The interest which pictorial illustrations always arouse would have been enhanced did the context tell us with what species this washed-out country was being re-forested and what the character of the old timber, if any, in the immediate neighborhood. The cut, good though it be, of course, fails to illustrate this point, though it does show from the sparsity of the young growth the improbability of the final product ever yielding the best quality of timber for mill uses.

It is unfortunately true of most, and in particular of California pine forests, that the destruction of the primeval woods is subsequently followed up with a new growth of inferior species.

Along the western slopes of the Sierras, in the very heart of the timber country, large areas, formerly covered with yellow and sugar pine, are chiefly wooded with the relatively worthless "tubercled," "digger," or other "scrub" pines; the probabilities are, that these preponderate in the illustration referred to.

The valuable timber sorts reproduce themselves freely when the first growths are felled; but after being burned over a few times, and trampled and pastured out by sheep, their vitality succumbs more readily than these apparently tenacious but less worthy kinds. It is almost certain that private enterprise will never be directed toward any elaborate or extended artificial forestation of these denuded tracts; and almost as problematical are the chances of their reclamation at the hands of the General Government, if one may be guided in forming such an opinion, by its apathetic indifference upon a subject that has called forth the exercise of a broad-minded and patriotic public policy from every progressive government under the sun save ours. If the energies of the Government are ever aroused to activity in this direction, it will require years of patient toil and careful and intelligent observation to demonstrate if any practical inducements can be held out to justify a resort to any other than the purely natural system of re-forestation now going on in Placer county. Meantime, could the well-wishers of the country and those alive to a knowledge of the transcendent importance to the prosperity of this coast involved in the problem of forest preservation, have the faintest assurance of the early inauguration of *any* policy other than mismanagement, or non-management, of the remaining timber lands of the federal government, they would gladly drop all agitation and trust to nature, supplemented by good sense to accomplish the rest.

No conceivable contingency, or possible expansion of our population, can occur within generations, to require the occupancy of these lands for other purposes than forest. During this time, while they are exerting to the full the primary functions and benefits of forestry, they are as surely accumulating a reserve of State and national wealth, as to which the uncertain and fluctuating yield of our breadstuffs is but an insignificant trifle.

To disabuse those who may think this presentation of the subject is but the overdrawn picture of an enthusiast; it may suffice to say that the dispassionate and qualified estimates of so conservative and competent an authority as Prof. C. S. Sargent places the annual value of our forest products in excess of seven hundred million dollars!—a sum more than sufficient in two years to completely extinguish the national debt. Without disparaging or underrating in the least the value of what nature is doing for us, we fully believe that the intelligent intervention of man in matters pertaining to forests, can be as pregnant in good results as his interposition has been in the fields of horticulture and general agriculture; but lacking that, we can only rejoice most heartily that the unassisted forces of nature are at work upon the devastated, abandoned and soil-denuded wastes of the upper foothills to rehabilitate them in *any* fashion, and in a measure repair the ravages of man's cupidity and wanton criminality.

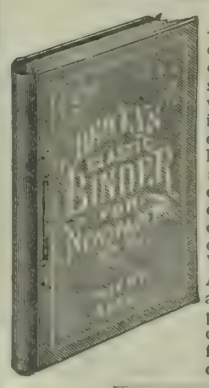
True, this rehabilitation may not be contemplated to yield the greatest final results to ourselves and posterity, still it is a point gained; and if the sentiment of the communities in the districts where these young forests are struggling to re-assert themselves can be awakened strongly enough to result in concert of action that will declare a vendetta against their constitutional enemies—fire and sheep, for all time, they will be happy not only in the consciousness of well-doing but in directly advancing their own immediate and material prosperity as well.

WM. S. LYON.

Los Angeles.

[This important communication from the head forester of the State Board will be read with much interest, and we trust its suggestions will be heeded.—EDS PRESS.

To Subscribers and Readers.



A HANDY PAPER BINDER—A. T. Dewey's patent elastic binder, for periodicals, music and other printed sheets, is the handiest, and very cheapest of all economical and practical file binders. Newspapers are quickly placed in it (as received) and held neatly, as in a cloth-bound book. It is durable, and so simple a child can use it. Price (size of this paper, Harper's Weekly, and Scientific American), 75 cents; postage 10 cents. Postpaid to purchasers of this paper, 50 cents. For sale at this office. Send for illustrated circular. Agents wanted.

DRYING FRUIT.—Secretary Young of the San Diego Producers' Union, says reports from various parts of the county show that a goodly number of the growers are preparing to dry their crops. Some will dry in the sun, some have bought evaporators and others are building kilns.

Consumption Surely Cured.

To the Editors:—

Please inform your readers that I have a positive remedy for the above named disease. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any of your readers who have consumption if they will send me their Express and P. O. address. Respectfully,

T. A. SLOCUM, M. C., 181 Pearl St. New York.

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33 and 35 Main Street, San Francisco. Write to or call there on FRANK BROTHERS, for Farm Implements of every description and Buggies, Carts or Spring Wagons.

DIVIDEND NOTICE.

The German Savings and Loan Society,
526 California Street.

For the half-year ending June 30, 1890, a dividend has been declared at the rate of five and forty-hundredths (5 40-100) per cent per annum on Term Deposits, and four and one-half (4½) per cent per annum on Ordinary Deposits. Payable on and after Tuesday, July 1, 1890.

GEO. TOURNY, Secretary.

DIVIDEND NOTICE.

SAN FRANCISCO SAVINGS UNION, 532 California Street, corner Webb; BRANCH, 1700 Market Street, corner Polk.—For the half-year ending with 30th June, 1890, a dividend has been declared at the rate of five and four-tenths (5 4-10) per cent per annum on term deposits and four and one-half (4½) per cent per annum on ordinary deposits, free of taxes, payable on and after TUESDAY, 1st July, 1890.

LOVELL WHITE, Cashier.

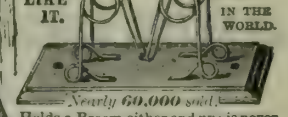
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Supersedes all Cautery or Firing. Impossible to Produce any Scar or Blemish.

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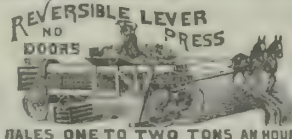
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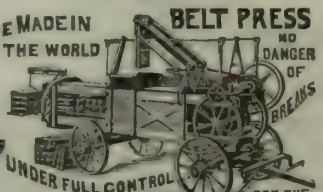
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Best and Strongest Explosives in the World.

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The Only Reliable and Efficient Powder

For Stump and Bank Blasting. From 5 to 20 pounds blows any Stump, Tree or Root clear out of ground at less cost than grubbing. Railroaders and Farmers use no other.

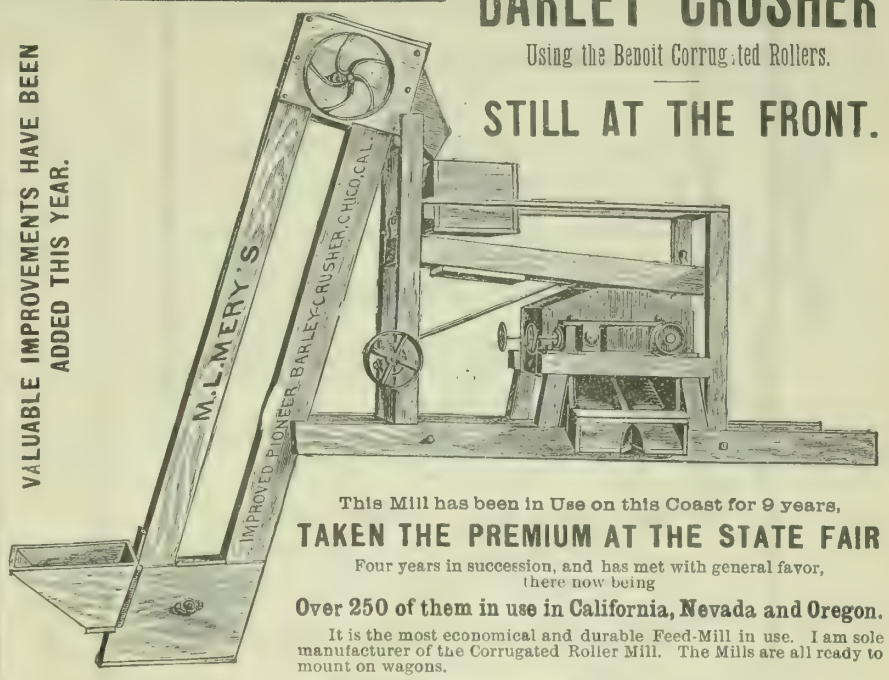
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Using the Benoit Corrugated Rollers.

VALUABLE IMPROVEMENTS HAVE BEEN ADDED THIS YEAR.



STILL AT THE FRONT.

This Mill has been in Use on this Coast for 9 years,

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Four years in succession, and has met with general favor, there now being

Over 250 of them in use in California, Nevada and Oregon.

It is the most economical and durable Feed-Mill in use. I am sole manufacturer of the Corrugated Roller Mill. The Mills are all ready to mount on wagons.

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Mr. M. L. Mery, Esq.—DEAR SIR: The 9x14 Barley Crusher bought of you and used in the California Mills, gave entire satisfaction; have crushed 8000 pounds an hour. I have also crushed as much or more on set 10x20 when working for General Bidwell, which set he is using in his mill to-day. Yours truly,
GEORGE SHAND.

TRAVER, May 3, 1887.

Having used one of the Barley Crushers manufactured by M. L. Mery, of Chico, Butte County, I can say it will do all that is claimed for it, and to those wishing an A No. 1 machine, I would recommend it as the very best. I have crushed 35 tons in 11 hours' work.
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I thank the public for their kind pratronage received thus far, and hope for a continuance of the same.

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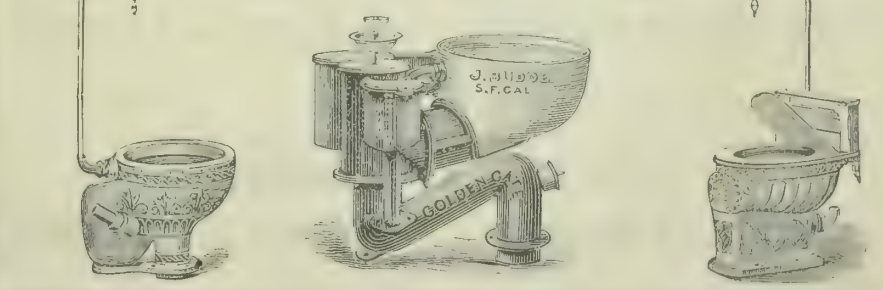
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Handsome Woodwork, Latest Designs.



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PHAETON BODY,



With Patent Spiral Spring Lazy Back. Has a very soft and easy spring; is well-proportioned, roomy and comfortable. Has seat for two, wooden dash and box under seat for parcels. Body is framed, glued, and strengthened by rocker-plates and steel braces. Finished in rich Scarlet Lake, or Brewster Green, with Black body. Substantial one-inch Sarven wheel, 15-16 inch steel axle. Upholstering, Corduroy or Evans Leather. Shafts leather trimmed. Weight 175 lbs. Shipped securely crated. Fully warranted.

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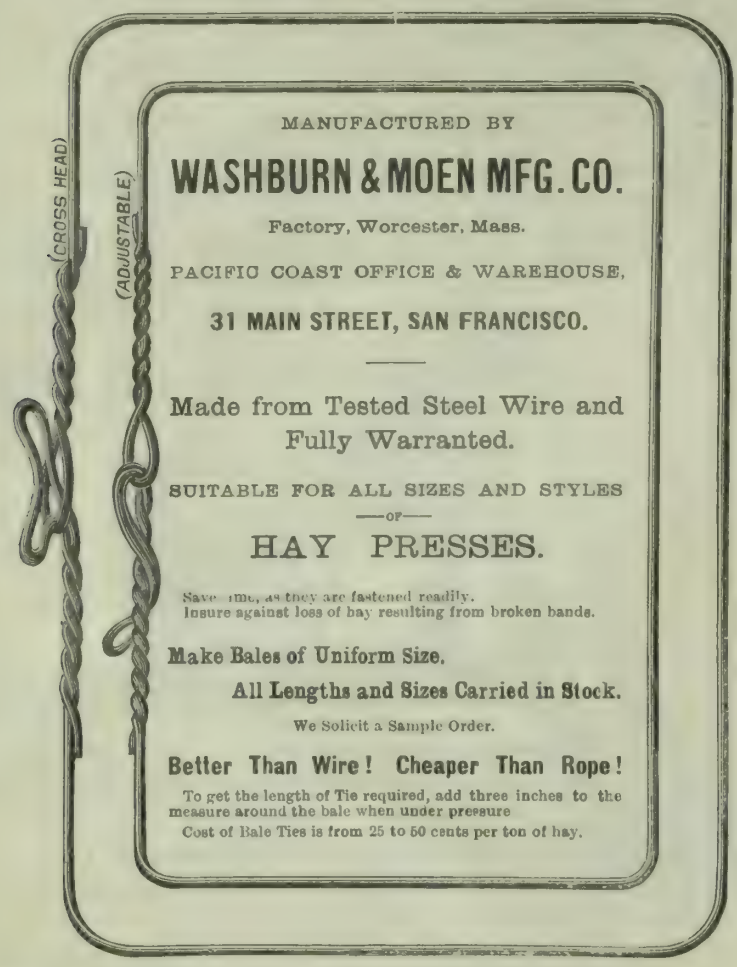
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Made from Tested Steel Wire and Fully Warranted.

SUITABLE FOR ALL SIZES AND STYLES

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HAY PRESSES.

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Insure against loss of hay resulting from broken bands.

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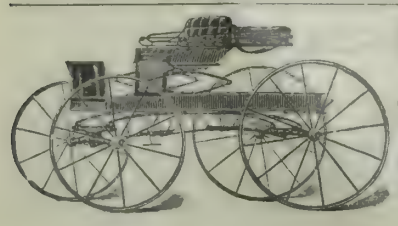
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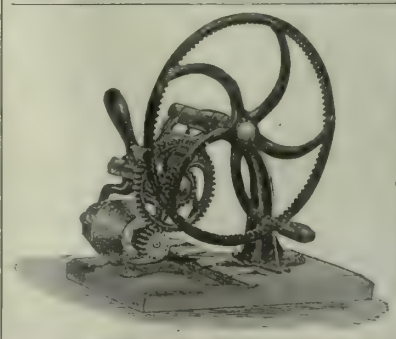
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The only Sickle Grinder that does its work thoroughly. Grinds anything on a ranch. Grinds one or both sides of a section at the same time. Corundum Stone doesn't heat or wear out.

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TRACTION ENGINES,

Portable Straw-Burning Boilers & Engines.

IRON AND BRASS CASTINGS.

Machinery of all kinds furnished at shortest notice.

Heald's Patent Wine-making Machinery,

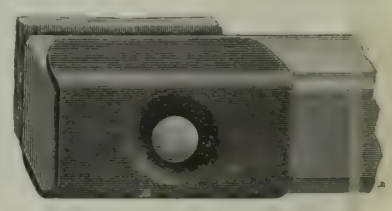
Including Grape Crushers and Stemmers, Elevators, Wine Presses and Pumps, and all appliances used in Wine Cellars. Irrigating and Drainage Pumps. Heald's Patent Engine Governor, Etc.

KNABE PIANOS

It is a fact universally conceded that the KNABE surpasses all other instruments

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NELSON'S DRAPER SLAT PROTECTOR



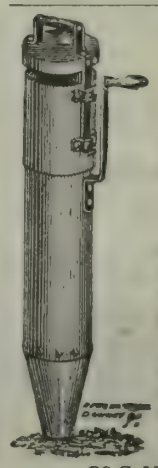
An Iron Ferrule, which incloses three sides of the slat-end, with a rivet passing through this Ferrule.

IT IS A COMPLETE PROTECTOR.

Parties desiring these Protectors for Header Drapers or Combined Threshers made with them on, can get them by addressing

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BROWNE'S Patent Squirrel Exterminator.

This is an apparatus for burning straw and sulphur and forces the fumes down their holes which never fails to kill. I will give $100 in case the exterminator does not kill (if properly applied) every ground squirrel that it deathly fumes comes in contact with. Thousands are in use. Price $3.00. Send for circulars to

F. E. BROWNE,

30 S. Main St., Los Angeles Cal.

State Horticultural Society.

At the regular meeting held June 27th at the State Board of Trade, Judge Blackwood presided in the absence of President Hilgard, who was in Southern California. Dr. Gustav Eisen was elected a regular member.

The Board of Directors reported that a proposition had been received from Dewey & Co. to furnish a stenographer and publish a full report of the proceedings of the society in the RURAL PRESS for $5 a meeting. The directors advised that the proposition should be accepted on trial, the arrangement to terminate whenever deemed advisable by the society. The proposition was agreed to.

The directors also presented the following for the approval of the society:

That the State Horticultural Society desires to impress upon those intrusted with the California exhibit at the Chicago World's Fair the desirability of having departments under the immediate management and control of experts in the branches of production represented, and in accordance with this plan it urges that the display of horticultural products should be conducted by practical horticulturists.

That our delegates to the World's Fair Convention be instructed to present this proposition for the approval of that body.

The resolutions were adopted.

Mr. Lelong exhibited peach apricots from R. C. Kells of Yuba City, of which seven weighed two pounds and the fruit measured 6½x7 inches in circumference. Mr. Lelong showed also the *Prunus Simoni* grown by Mr. Thomas of Visalia, which was reported to have sold in the East at $12 per crate, after having been 20 days en route—showing the durability of the variety as well as its acceptability at the East. He also showed the Clyman plum, a California seedling, which has sold this year notably well at the East.

The Secretary showed the Grelck plum as grown and propagated by Chapin & Meeker of Poway, San Diego county, a plum of the cherry-plum class, but ripening two weeks earlier than the common cherry-plum, and notably superior to it in quality and in appearance.

Howard Overacker, Jr., exhibited the trunk and stump of a prune tree worked on the apricot root, on which the top had broken squarely off at the juncture of the two woods, although it had attained four inches in diameter. Mr. Overacker also showed peaches thinned and unthinned to illustrate the attainment of size by thinning. Mr. Wolleb exhibited Schmidt's Bigarreau cherry, a handsome black variety recently introduced.

Fruit Prospects and Prices.

Rev. A. H. Perkins of Alameda reported the prune crop fair in his region, and early peaches excellent.

Judge Blackwood of Haywards reported apricots a light crop, Bartlett pears fair; prunes have gained in size, and will produce fair weight, though less in point of numbers. He had been offered 2½c. per pound for his apricots, which is much better than earlier in the season, and he had come to the conclusion that, as a rule, it is not advisable for growers to sell futures on their fruit.

Howard Overacker, Jr., of Niles, reported apricots a short crop, prunes good, Bartlett pears fair. Prices have improved; 2½c. is offered for peaches and 3c. for Bartletts.

I. A. Wilcox of Santa Clara reported that some fruits had dropped badly. Peaches were a good crop. Prunes had sold for 2½@2¾c. per pound.

W. G. Klee, who had recently visited Ventura county, reported the apricot crop very large.

Dr. Eisen reported the outlook for the raisin output of Fresno about the same as last year.

I. H. Thomas, of Visalia, reported by letter as follows: "The grape yield in this county and Fresno will be large; prices in sweat boxes 5 to 5½ cents. Apricots will all be dried in a few days; selling at 11 to 12 cents dried. The peach crop will be fair. Prices for green fruit for drying 1½ cents per pound. Prices offered for dried peaches 11½ to 13 cents per pound."

There was a general discussion concerning the desirability of obtaining fuller reports of crop prospects and prices. Mr. Bancroft urged that the society should undertake this work, and Rev. A. H. Perkins thought it would be feasible, by aid of blanks sent out to growers, to get valuable reports. Upon motion, the subject was referred to the Board of Directors, to perfect and submit a plan of operation which could be tried during the next fruit season.

A letter was read from John G. Jessup, of Oregon, asking the society what steps had been taken in regard to committees appointed to erect a monument to the memory of his father, W. H. Jessup, who died in New Orleans while attending to the business of the society at the exhibition two years ago.

The Secretary stated that it was understood that the money due the society for premiums for fruit exhibited in Mr. Jessup's name at the New Orleans exhibition should be devoted to erecting the monument, but Mrs. Jessup had received the money and devoted it, by the advice of friends, to other purposes.

An essay on cherry growing, written by W. H. Pepper, of Petaluma, was read by the Secretary. The essay is given on another page of this issue.

A general discussion of the coming World's Fair, at Chicago, was had but no action was taken.

B. M. Lelong distributed copies of his printed report of his recent investigation of fruit prospects and insect matters at the East and South, and exhibited specimens of the injurious and beneficial insects which he had collected. The subjects were received with much interest by members.

Mr. C. B. Turrill suggested that the chief of the department of the census embracing the statistics of horticulture be communicated with and asked, if it be found impossible for him to visit California, to appoint a Californian horticulturist to supervise the collection of statistics relative to California horticulture. The secretary was instructed to correspond about the matter.

Dr. Gustav Eisen accepted an invitation to address the society, at its next meeting, on the raisin industry.

Against Brutality.

Governor Waterman has placed himself honorably upon record as earnestly opposed to the brutal slogging matches which are, by their viciousness and frequency, giving our State a vile name and outraging every sense of decency. He has written the following letter:

G. A. Johnson, Attorney-General, Sacramento—DEAR SIR: The fair name, honor and renown of California has ever been dear to me, whether in the private capacity of a citizen or as one in the occupancy of official position. In my devotion to the interests of California, in the endeavors I have always made in behalf of her progress and prosperity, and my ambition to see her occupy the front rank in the States of the Union, I have been actuated by the purest and sincerest of motives. In this I have not occupied an isolated place, but have found myself one among many. In my official and personal intercourse with yourself, it has been my good fortune to be thoroughly in accord with yourself on many propositions, and particularly those affecting the progress and prosperity of California, and I take this opportunity in connection therewith to thank you thus publicly for the many courtesies I have received personally at your hands and the assistance at all times rendered the Executive office.

Therefore, in furtherance of our mutual views respecting the position occupied by California at home and abroad, I desire most sincerely to direct your attention to the fact that the State has been thoroughly and completely disgraced by the maintenance of organizations given up to degrading and disgusting exhibitions of brute force in the so-called scientific contests between so-called scientific athletes, which are nothing more nor less than prize-fights, in opposition to decency and the good order of society, against which the law made and provided in such cases should be operative in those localities of the State where these unlawful practices take place. They should no longer be permitted to defame and degrade the soil of our State, and the mere fact that is advanced that their patrons consist of those in the higher walks of life, should be a still further incentive to put an end to the exhibitions alluded to, in order that their pernicious example may not affect those in the lower walks of life.

As it is now, it is an evil and a shame, producing no good or benefit, and only indulged in as a mere speculation by those who pursue prize-fighting as a means of subsistence and support, and for gambling purposes. Will you do me the favor, in the absolute interests of the State, of inquiring into the matter, and if the local officers of law are not able to cope with the subject, I invoke your aid, as the chief law officer of the State, and ask you to proceed immedtately and take such decisive action and measures as will in the future preserve and protect from so foul a blot the escutcheon of the State of California. Yours, very truly,

R. W. WATERMAN, Governor.

From the Huer-Huero.

EDITORS PRESS:—While we highlanders of the chaparral may see ourselves outstriped by our neighbors of the valley in many ways, still, like Donald of the Glen, we have our recompenses and enjoyments. At Creston our friends have a Grange and a Farmers' Alliance, both in full blast. They also have a beautiful schoolhouse with gingerbread all over it and a silver-tongued bell away up in the dome. The carpenters are hammering away at two new church buildings for them, and their goose seems otherwise to honk at a considerable altitude.

We of the Huer-Huero do not envy our neighbors for these things nor expect to rival them in their prosperity. We are plain country folk and do not try to put on city airs. Our schoolhouse is modest, for it had to be measured by our purses. It is being built from the proceeds of a tax upon the district, which was carried without a dissenting voice.

We had a picnic there the other day—the first one ever enjoyed by us in this neighborhood, and the Rev. Mr. Allan of Creston a few Sundays ago delivered to us the first sermon that ever found its way into these hills.

A neighbor also a short time ago had one of his horses stolen, so you see we are coming rapidly to the front in the ways of civilization.

The young orchards set out last spring are promising well and we are persuaded that before many years we will be heard from in the way of fine fruits of almost every description that can be grown in the State.

The Government land hereabouts is all taken except the very roughest. Good land can still be had at a low price, but will soon rise in value, as it is proving its great adaptability for fruit trees and vines. J. K. T.

Creston, S. L. O. Co, June 25, 1890.

THE first drive of logs on the Truckee river made by a local lumber company contained 4,000,000 feet.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING JUNE 24, 1890.

430,767.—TUBE-CLEANER—F. Brady, San Quentin, Cal.

430,828.—CULTIVATOR—J. D. Burkhart, Dayton, Wash.

430,779.—LATCH-OPENER — W. M. Leavens, S. F.

430,807.—GAS APPARATUS—McCollum & Burt, Riverside, Cal.

430,669.—ANIMAL SHEARS—D. F. McDonald, Berkeley, Cal.

430,667.—SHIP'S BERTH — D. F. McDonald, Berkeley, Cal.

430,741.—ORE FURNACE—J. R. Moffitt, Chinese Camp, Cal.

431,002.—BED-LOUNGE—A. Morris, S. F.

430,787.—ATTACHING ADDRESSES TO LABELS, ETC.—J. D. Robertson, S. F.

430,762.—DRIER—H. H. Taylor, Santa Rosa, Cal.

430,710.—WELDING MACHINE — Toulouse & Delorieux, S. F.

430,904.—CAR COUPLING — G. W. Weller, Baker City, Or.

The following brief list by telegraph for July 1, will appear more complete on receipt of mail advices:

California—Peter Abrahamson, S. F., oven-door; George D. Crocker, Oakland, swinging-window; George Cummings, S. F., automatic damper for steam boilers; Frederick Gutzkow, S. F., elevator; Charles R. Hay, assignor of one-half to R. H. Marchant, S. F., can-printing device; Bartlett McIntyre, assignor to Vulcan Iron Works, S. F., gang-edger; George W. Thissell, Pleasant Valley, fruit-grader. Washington—Hans O. Strand, Montisano, shingle-cutter and dresser. Oregon—George B. Williams, Portland, automatic air-brake; George B. Williams, Portland, releasing attachment for air-brakes.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Progress in San Diego.

San Diego is not to-day considered a booming city and possibly has less inhabitants than when the census enumerator began work, yet he who thinks that when the "boom" died the city also died errs greatly. The reaction from the wild excitement of speculative days caused city and county alike to pause, but after a few short months when values had again settled to a working basis, new enterprises were projected and to-day the faith of the people in their beautiful city and its tributary country is stronger than ever. This summer finds more street-paving being done than any other one season in the history of the city. I might almost say more than all former efforts combined. Within the past few weeks the first cable-car line of the city has been opened to the public and as a model of construction and equipment it bears inspection. Throughout the county increased willingness to invest capital is shown. The Jamul cement works are being developed and will soon be ready for business. This summer the Otay Watch Co. made their first watch. This summer also the West Coast Match Co. of National City manufactured their first matches. The manufactures of asbestos, paints, and terra cotta ware is rapidly increasing. Iron works for the production of mill, mining and ranch machinery are doing their part to develop the surrounding country. Of these and other industries, many and varied, I shall in the future give a more minute description. J. B. H.

An Excellent School for Girls.

The Snell Seminary—a view of which appears upon another page—has been established in Oakland for a dozen years. It enjoys a well-won reputation as a school where pupils not only receive thorough intellectual drill and instruction in all branches deemed most desirable for young ladies, but are also subject to such influences and training as tend to form noble characters and adorn them with the graces of true womanhood. The location and appointments of the buildings, the high aims and long experience of the principals, and the general esteem in which the institution is held, all commend it to the favorable consideration of parents who have daughters to educate.

A Holstein Dairy in Berkeley.

The San Jose *Mercury* of June 26th says: A carload of fine Holstein-Friesian cattle sold by Geo. B. Polhemus to P. G. Galpin of the firm of Doyle, Galpin & Co., lawyers of San Francisco, passed through the town last night. The cattle presented a magnificent appearance, and are not only a credit to Mr. Polhemus but to Santa Clara county. It is safe to say that a finer lot of cattle cannot be found."

These cattle were *en route* for Mr. Galpin's ranch near Berkeley, Alameda county, where he has fitted up a dairy with the latest improved machinery and appliances to properly match the fine cattle with which the lands are to be stocked. Mr. Galpin will find much satisfaction in this progressive undertaking.

TACOMA PORTRAYED.—Will Carson has published a very large view of Tacoma in colors. Accurate sketches of the buildings and the general surroundings give a very good notion of the city and its location.

FRUIT OUTLOOK IN SOUTHERN OREGON.—H. Carter, volunteer United States Signal Service observer at Ashland, speaking of the crop outlook in Southern Oregon to a reporter, said: "We will have the finest crop of fruit this year, size and quality considered, Southern Oregon has ever seen. The yield, too, will be larger than in any year past. A number of young orchards are just beginning to bear, and the trees are all healthy and thrifty. As for peaches, we can beat any other section in the State. They are absolutely as fine an article of that fruit as the world produces. Ashland will ship more fruit this year than ever before, and we also have prospects of getting one or more canneries."

A RACER UNDERVALUED.—A Terre Haute dispatch says that the famous racehorse Axtell has been assessed at $8000. The Farmers' Alliance is not satisfied. The members claim that Axtell cost $105,000 and earned $40,000 the past season, and that $75 000 is a fair cash valuation. Axtell's owners threaten to remove him from Terre Haute if the assessment is made high.

GLANDERS IN SANTA BARBARA CO.—The Lompoc *Record* refers to Soren Larsen, an experienced veterinary surgeon, as authority for the statement that there are quite a number of glandered horses in that vicinity—enough, if not disposed of or cured, to spread the disease through all that portion of the country.

AGRICULTURAL DIRECTORS.—E. C. Voorhees of Amador county and Eugene J. Gregory of Sacramento were appointed directors of District Board of Agriculture No. 26, by the Governor, on the 26th ult.

TWENTY FIVE stone-cutters at the Stanford University were discharged on Monday of last week. They will not be re-employed until Stanford returns from Europe, in August.

Recent Improvements at Santa Cruz.

Pertinent to the views of Santa Cruz, which appear upon the first page of this issue, are some statements concerning the recent improvements and development of the country, for which we are indebted to the Carnall-Fitzhugh-Hopkins Co. of San Francisco, a firm which is taking a leading part in the progress of the region:

The magnificent beach, the delightful climate, and the picturesque environment of Santa Cruz have made it a name in almost every land in the world, and lately the denominational church societies have here followed the example of the Methodists in founding their now widely known summering place at Pacific Grove. The natural advantages and the abundant rail facilities of Santa Cruz have attracted more than one church to establish here a summer home at the seaside. The most important of these is

Garfield Park,

The establishment of the Christian Church of California. It is located within the city limits, and occupies ten acres of land on a handsome plateau in full view of Monterey bay, in the center of which tract there is now in course of construction a Tabernacle with a seating capacity of 2000, to cost when completed $15,000. Already cottages of the members of this church are going up on the lots of Garfield Park, and by midsummer of this year the Tabernacle will be completed, and an encampment of many thousands of people will be in session at this point. Here will be the very life center of this flourishing and ambitious church society; and before the end of this year its educators propose to found in the vicinity of Garfield Park a sectarian college of first-class order, and thus establish an educational center that will be of great advantage to the locality.

Surfside.

Another enterprise which is now claiming much attention is one in which the Carnall-Fitzhugh-Hopkins Co. and their resident manager, E. A. Crennan of Santa Cruz, are conducting with much enterprise. The tract is properly named "Surfside," and it occupies a high tableland in the southwestern part of the city, and commands the most extended views of all that picturesque scenery described above—from the farthest end of Monterey bay to the summit of the Santa Cruz mountains. It lies adjacent to the curvilinear streets of Garfield Park and extends down to the shore line, fronting on the famous Cliff drive and overlooking the wildest part of the whole coast of the bay, where the most magnificent displays of surf may be seen. Its avenues are the nearest thoroughfares from the business part of the city, and from the Tabernacle in Garfield Park down to this part of the cliff, which attracts thousands of people, winter and summer, to view the wild play of the waves upon the rugged shore.

Surfside has been laid off with broad streets and avenues, and subdivided into large, handsome lots. Its drainage is perfect. The pipes of the water company are laid to it. Its position is unparalleled. Its views are charming. Its roads and drives are delightful.

An advertisement in this issue gives other facts concerning this property, and indicates how those interested may by inquiry receive still further information.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

JERSEY BULL No. 468 P. C. J. C. C. for sale cheap. A fine four-year-old animal. Address Dellwood Poultry Yards, Napa, Cal.

IMPORTED REGISTERED CLYDESDALE Horses and Holstein Friesian Cattle from the most noted families. H. P. Mohr, Mt. Eden, Alameda Co., Cal. Visitors welcome. Correspondence solicited.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

CHARLES E HUMBERT, Cloverdale, Cal., Importer and Breeder of Recorded Holstein-Friesian Cattle. Catalogues on application.

WILD FLOWER STOCK FARM, Fresno Co. A. Heilbron & Bro., Props., Sac. Breeders of thoroughbred strains and Cruikshank Shorthorns; also Registered Herefords; a fine lot of young bulls in each herd for sale.

PERCHERON HORSES.—Pure bred horses and mares, all ages, and guaranteed breeders, for sale at my ranch near Lakeport, Lake Co., Cal. New catalogue now ready. Wm. B. Collier.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. None better.

REGISTERED HOLSTEIN CATTLE. Also best thoroughbred Poultry and Eggs. Address Hibbard & Ellis, Santa Rosa Breeding Association, Cal.

P. H. MURPHY, Perkins, Sac. Co., Cal., Breeder of Recorded Shorthorn Cattle and Poland China Hogs.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

P. PETERSEN, Sites, Colusa Co., Importer & Breeder of registered Shorthorn Cattle. Young bulls for sale.

JOHN LYNCH, Petaluma, breeder of thoroughbred Shorthorns Young stock for sale.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

M. D. HOPKINS, Petaluma, importer and dealer in Eastern registered Shorthorns, Red Polled Cattle, Holsteins, Devons and Shropshire Sheep.

GEO. B. POLHEMUS, Coyote, Cal. Holstein-Friesian cattle, comprising males and females on advanced register. First premium in great milking test at State Fair, 1889, was won by a member of this herd.

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GEO. BEMENT & SON, Maple Grove Farm, Oakland P. O., breeders of Ayrshire Cattle & Essex Swine.

HENRY HAMILTON, Westley, Cal., breeder of Kentucky Jacks and Jennies, Draft Horses and Holstein Cattle. Jacks, Horses and Mules for sale.

EL ROBLAR RANCHO, Los Alamos, Santa Barbara Co., Cal., Francis T. Underhill, proprietor, importer and breeder of thoroughbred Hereford Cattle. Information by mail. C F. Swan, manager.

POULTRY.

JOHN McFARLING, 706 Twelfth St., Oakland. Cal., Importer and Breeder of Choice Poultry. Send for Circular. Thoroughbred Berkshire Pigs.

R. G. HEAD, Napa, Cal., breeder of the choicest varieties of Poultry. Each variety a specialty. Send for new Catalogue.

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CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

DELLWOOD POULTRY YARDS, Napa, Calif. Thoroughbred Fowls and Eggs for Hatching. Light Brahmas, Langshans, Plymouth Rocks, Brown, Black and White Leghorns, $2 00; Houdans and Buff Cochins, $2 50; Minorcas and Spanish, $3.00 per 13. Genuine Imperial Pekin Ducks' Eggs, $1.50 per 11.

O. J. ALBEE, Lawrence, Cal. Pure bred poultry.

CHAS. R. HARKER, Santa Clara, Calif. White Plymouth Rocks, exclusively. None better anywhere, East or West. If you want the latest and best improvement in poultry, get *genuine* White Plymouth Rocks. Write for prices. Eggs, $3 per 13; packed to go safely any distance.

SHEEP AND GOATS.

KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

L. U. SHIPPEE, Stockton, Cal., importer and breeder of Spanish Merino Sheep, Durham Cattle, Jacks and Jennys & Berkshire Swine high graded rams for sale

E. W. WOOLSEY & SON, Fulton, Cal., importers & breeders Spanish Merino Sheep; ewes & rams for sale.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Cross-bred Merino and Shropshire Sheep. Rams for sale.

R. H. CRANE, Petaluma, Cal., breeder and importer. South Down Sheep from Illinois and England for sale.

ANDREW SMITH, Redwood City, Cal.; see adv't.

SWINE.

JOSEPH MELVIN, Davisville, Cal., Breeder of Poland-China Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

TYLER BEACH, San Jose, Cal., breeder of thoroughbred Berkshire and Essex Hogs.

ANDREW SMITH, Redwood City, Cal ; see adv't.

BEES.

APIARIAN SUPPLIES for sale by Mrs. J. D. Enas, Napa City, Cal.

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San Francisco, Cal., Oct. 22, 1888. **PETER SAXE & SON, Lick House, S. F.**

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Twenty-two trains a day to all parts of the Coast. Majority of Premiums and Gold Medal won by this herd, State Fair, 1889. Milk, Beef and Show Ring is the foundation of this herd. Six months' credit on bankable paper.

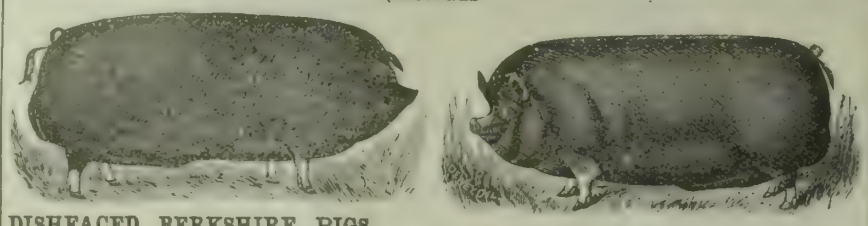
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Young Stock for sale at reasonable prices. Every animal guaranteed.

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EGGS FOR HATCHING.



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One gallon, mixed with 60 gallons of cold water, will dip thoroughly 180 sheep, at a cost of one cent each. Easily applied; a nourisher of wool; a certain cure for SCAB. Also

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(POISONOUS.)

Mixes instantly with water. Prevents the fly from striking. In a two-pound package there is sufficient to dip 20 sheep, and in a seven-pound package there is sufficient to dip 100 sheep.

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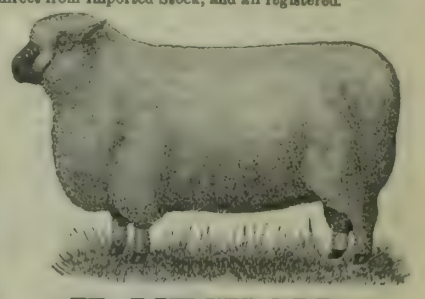
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Importer and Breeder of Shropshire Sheep

They were all imported from England in '88, or bred direct from Imported Stock, and all registered.



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—BREEDER OF—

American Merino Sheep Without Horns.

The only flock in the United States. When we bought our sheep East 20 years ago, among them was a ram without horns. He grew to be a large fine sheep, shearing at 2 years old, a 12 months' fleece, 35 lbs. of long white wool.



I have bred from him and his get ever since and have never made an out-cross and never used the same ram but one year on the same flock. My rams at 2 years old will weigh from 160 to 180 lbs.; have a strong constitution, without wrinkles, and will shear on an average about 25 lbs., a 12 months' fleece, of long white wool. Rams and Ewes for sale. P. O. Address:

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SPANISH MERINO SHEEP.

PREMIUM BAND OF THIS STATE.

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Horses bought and sold. Auction Sales every Wednesday and Saturday at 11 A. M. A full line of Draught, Driving, Saddle and Business Horses. Particular attention paid to country sales. Special inducements to parties having sale horses. Stock sold on commission and boarded at low rates.



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The Dairyman's Account Book is the most practical thing of the kind ever seen. It gives ruled pages for daily record of milk yield, butter made, and sales, for 12 months; convenient size, nicely printed and bound. Wells, Richardson & Co., Burlington, Vt., manufacturers of the celebrated Improved Butter Color, the purest, strongest, and brightest color made, will send a copy free to any butter maker who writes enclosing stamp. Also sample of their Butter Color to those who have never used it, and a pretty birthday card for the baby, if you ask.

POULTRY, ETC.

OAKLAND POULTRY YARDS,

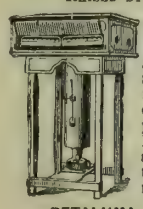
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Manufactory of the PACIFIC INCUBATOR and BROODER. Agency of the celebrated silver finish galvanized wire netting for Rabbit and Poultry-proof fences, the Wilson Bone and Shell Mill, the Pacific Egg Food, and Poultry appliances in great variety. Also every variety of land and water Fowl, which have won first prizes wherever exhibited. Eggs for hatching. The Pacific Coast Poulterers' Hand-Book and Guide, price, 40c. Send 2c. stamp for 60-page illustrated circular to the PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.

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HALSTED INCUBATOR
COMPANY,
1312 Myrtle Street, Oakland, Cal.
Send Stamp for Circular.

EGGS FOR HATCHING from Prize-Winning Black Langshans. My birds are first-class. $3 for 13 eggs. Correspondence cheerfully answered.
W. E CORNELL, Box 136, Des Moines, Iowa.

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THE UNRIVALED

Insect Exterminator

Manufactured solely from Pyrethrum flowers, grown in California, in a locality where the soil and climate are peculiarly adapted to the production of flowers rich in the essential oil which makes them so remarkably destructive to insect life.

Avoid the Worthless and Spurious Preparations, sold as Insect Powders, and use Buhach from original packages, and clear your premises of all Annoying and Destructive Insect Pests.



None Genuine Without the Trade Mark.

If your dealer doesn't keep it, order directly from the

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SOLE MANUFACTURERS,
STOCKTON. - - CALIFORNIA.



THE SMITH PATENT COMBINED KITCHEN UTENSIL consists of a Can, Biscuit or Cake Cutter, Doughnut Cutter, Patty or Tart Cutter, Measure, Dredge, Strainer, Nutmeg, Cheese or Bread Grater, also Nutmeg and Stick Cinnamon Holder. In order to more thoroughly introduce the Utensil, anybody sending us 35 cents by mail, the price of the Utensil, we will send him free a copy of the most valuable and practical egg preserving receipt that has ever been used by people who know how to double their money in a few months by putting down Eggs. This Receipt is the result of eight years practical tests and is guaranteed. Costs 30 cents per 100 dozen. Eggs put down by this method, after nine months were found to be perfectly fresh and would fry, poach or boil, and could not be detected from a fresh-laid egg. Good Canvassers wanted. SMITH MFG. CO., Alameda, Cal.

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Italian Queens, $2.50 each; Black Queens, $1 each. Swarms from $2.50 each; Smoker, $1. Comb Foundation, $1.25 per pound; V-groove Sections, $4 per 1000 Comb Honey wholesale and retail; Hives, etc. W STYAN & SON, The Homestead Apiary, San Mateo, Cal.

STOCKTON FAIR

For 1890.

September 23 to 27, 1890, Inclusive.

RACES!  RACES!

FIVE DAYS RACING! ELEVEN DAYS FAIR!

Closing October 4, 1890.

ENTRIES FOR EACH RACE HEREIN NAMED CLOSE JULY 1, 1890.

Additional Program will be Issued about July 1st.

TUESDAY, SEPTEMBER 23, 1890.

No. 2—Running. Amador Stake; for all ages; open to Amador, Calaveras, San Joaquin and Stanislaus counties. $20 each for all starters; $150 added. Second horse half of entrance money. One mile.

No. 4—Trotting. 3:00 class. GUARANTEED PURSE..... $1,000

WEDNESDAY, SEPTEMBER 24, 1890.

No 8—Trotting. 2:25 class. GUARANTEED PURSE..... $1,000

THURSDAY, SEPTEMBER 25, 1890.

No. 12—Trotting. Four-year-old or under. Purse $500. Open to Amador, Calaveras, Tuolumne, and all San Joaquin Valley counties. Four moneys.

FRIDAY, SEPTEMBER 26, 1890.

No. 19—Trotting. 2:30 class. GUARANTEED PURSE..... $1,000

SATURDAY, SEPTEMBER 27, 1890.

No. 23—Trotting. 2:40 class. GUARANTEED PURSE..... $1,000

CONDITIONS:

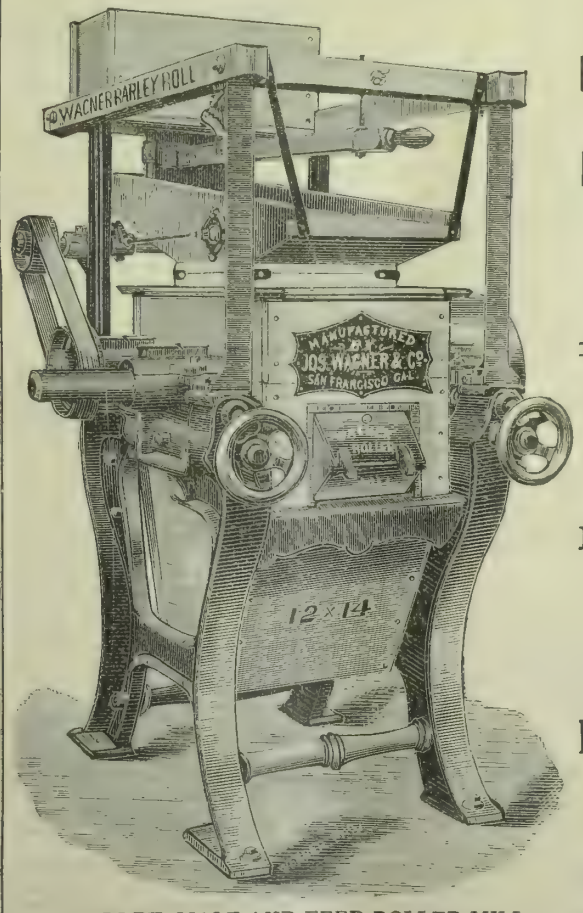
Horses for Races No. 2 and 12 must have been owned in the counties named six months prior to the day of the race. Five or more to enter, three or more to start.

GUARANTEED PURSES—Entrance 10 per cent of purse, payable as follows: July 1st, 1890, with entry, $30; August 1st, $35; September 1st, $35, when horse must be named. Neglect of above requirements will forfeit entry and previous payments. Eight entries required, four making final payment; three or more to start. Four moneys.

All other conditions, as appears in National Trotting Association Revised Rules, subject to full conditions of this Association published in our Speed Program of 1890, will govern.

L. U. SHIPPEE, President.
J. M. LARUE, Secretary, P. O. Box 188, Stockton, Cal.

JOS. WAGNER MFG. CO.,



BARLEY, MALT AND FEED ROLLER MILL.

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FLOUR, FEED, CORN
— AND —
MEAL MACHINERY,
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SHAFTING,
PULLEYS, BOXES,
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ESTABLISHED 1856.

SHERMAN HALL & CO.

COMMISSION MERCHANTS,
122 MICHIGAN ST., CHICAGO, ILL.
Warehouse, Nos. 122 to 128 Michigan St., Nos. 45 to 53 La Salle Avenue.

Commissions one cent per pound, which includes all charges after wool is received in store until sold. Sacks furnished free to shippers. Cash advances arranged for when desired. Write for circulars. Information furnished promptly by mail or telegraph when desired.

Commission Merchants.

MOORE, FERGUSON & CO.,

WOOL, GRAIN, FLOUR
—AND—
General Commission Merchants,
310 California St., S. F.

Members of the San Francisco Produce Exchange

Personal attention given to Sales and Liberal Advances made on Consignments at low rates of interest.

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Commission Merchants
—AND DEALERS IN—
CALIFORNIA AND OREGON PRODUCE,
Green and Dried Fruits,
Grain, Wool, Hides, Beans and Potatoes.
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Consignments Solicited.

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SUCCESSORS TO
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501, 503, 505, 507 and 509 Front Street and 300 Washington St., S. F.
General Commission Merchants.
GREEN and DRIED FRUITS.
Poultry, Eggs, Game, Grain, Produce and Wool.

[ESTABLISHED 1854.]
GEORGE MORROW & CO.,

HAY and GRAIN
COMMISSION MERCHANTS,
39 Clay Street and 28 Commercial Street
SAN FRANCISCO, CAL.
SHIPPING ORDERS A SPECIALTY.

EUGENE J. GREGORY. [Established 1852.] FRANK GREGORY.
GREGORY BROTHERS CO.,

Commission Merchants,
PACKERS AND SHIPPERS OF
CALIFORNIA FRUIT AND PRODUCE.
126 and 128 J St., - Sacramento, Cal.
San Francisco Office, 313 Davis St.

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Green and Dried Fruit, Produce, Eggs, Etc.
Consignments solicited. 413, 415 & 417 Washington St., San Francisco.

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All Kinds of Green and Dried Fruits.
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INCORPORATED APRIL, 1874.



Authorized Capital	$1,000,000
Capital paid up and Reserve Fund	800,000
Dividends paid to Stockholders	627,500

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General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on Wheat and country produce a specialty.

July 1, 1889. A. MONTPELLIER, Manager.

ANY ONE wishing to rent a well-improved farm of 480 acres in a healthy locality, at very moderate cash rent, can learn particulars by applying to "Cash Rent," Box 27, Tulare, Cal.

S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 2, 1890.

The weather continues favorable for harvesting. There is an absence of hot drying winds, and in their place we have fairly cool weather, which is all that can be asked for securing the crops. Trading in farm products continues quite active in fruits, and a growing demand for cereals at advancing prices for wheat. The Eastern and European markets for wheat have advanced since last Monday, closing strong to-day. The following is to-day's cablegram:

LIVERPOOL, July 2.—Wheat—Steady. California spot lots, 6s 10½d to 7s; off coast, 36s 3d; just shipped, 35s 9d; nearly due, 36s 3d; cargoes off coast, firm; on passage, quiet; Mark Lane wheat, quiet but firm; English country markets, generally dearer.

Foreign Grain Review.

LONDON, June 30.—England is likely to require all the cereals America can send this year. The continued wet weather and cold, blighting winds are rapidly destroying the crops. Hay is rotting on the ground; wheat is getting mildewed; fields are being turned into ponds, and nothing is ripening. As for fruit it nearly all comes like most other things from abroad. People are dependent on foreign supplies for provisions and delicacies of every kind. Every year makes the prospect worse for the English farmer. Fortune seemed likely to be more favorable the present season, but rain set in, and since the beginning of June the country has been wrapped in gloom.

The *Mark Lane Express* says: The weather has been exceedingly unfavorable for wheat. Oats promise well, but barley is less regular. May English wheat is firm. Owing to the scarcity of samples, flour is inactive. *At Liverpool there was a decline of 3d to 6d per sack on American. Punjab advices are that the last yield of wheat is 2,000,000 quarters below the previous yield. Reports to-day of the scarcity of good English wheat caused an advance of 6d to 10s. Foreign wheat is firm in request while it has advanced 6d. Flour is steady and maize is stiffening.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	June.	July.	Aug.	Sept.	Oct.	Nov.
Thursday....	6s11½d	7s½d	7s¾d	7s10d	7s9d	7s9½d
Friday	6s11½d	7s9d	7s10d	7s11d	7s9½d	7s9½d
Saturday	7s0d	7s0d	7s9d	7s11½d	7s9½d	7s9½d
Monday	7s½d	7s½d	7s½d	7s9½d	7s9½d	7s9½d
Tuesday	..	7s½d	7s11d	7s9½d	7s9½d	7s9½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	35 6d	35s3d	35s6d	Firmer.
Friday	35s6d	35s3d	35 6d	Steady.
Saturday.....	35s6d	35s3d	35s6d	Firmer.
Monday.....	35s9d	35 6d	35 9d	Strong.
Tuesday	35s9d	35s9d	35s9d	Firmer.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York for the past week:

Day.	June.	July.	Aug.	Sept.	Dec.
Thursday	92⅝	92⅝	91½	91¼	91⅞
Friday.....	92⅝	92⅝	91¼	91	91⅞
Saturday	92½	9	91½	91½	92½
Monday	...	93	92	91⅝	93⅝
Tuesday.....	...	91¼	93½	93⅝	95

The closing prices for wheat have been as follows at Chicago for the past week:

Day.	June.	July.	Aug.	Sept
Thursday.....	86¼	86¼	87	87⅞
Friday.....	85⅞	87½	88	88⅞
Saturday	85⅞	86	86⅝	87⅛
Monday.....	86	86¼	86⅜	86⅞
Tuesday.....	...	...	88⅜	89⅛

NEW YORK, July 2.—Wheat—96⅝c for cash, 94⅛c for July, 93⅞c for August, 93⅜c for September and 95¾c for December.

CHICAGO, July 2.—Wheat—88⅜c for August and 89⅜c for September.

Increasing Cost of Canned Fruits.

PHILADELPHIA, June 28.—An investigation has been made by the *Press* into the effect the increased rate of duty proposed on tin plate would have on the price of canned goods. The figures are as follows: The proposed increase of duty to $2.15, so far as the increased price on canned goods is concerned, would amount to about 3c per dozen cans of the standard quart measure.

Eastern Wool Markets.

NEW YORK, June 27:—*Bradstreet's* says: A waiting disposition is manifested by most operators in wool, whether at mills, city lofts or in the country. Much machinery is temporarily idle, and there is no prospect of an immediate revival of activity in manufacturing. Requirements for material for consumption are accordingly reduced. Hitherto the country markets have been stronger than those on the seaboard, as is usually the case during the clip time, but of late weakness has developed in the interior as well as in New York, Philadelphia and Boston. A great deal of stock at the points of production is held above the views of Eastern buyers. Quotations for many descriptions of wool on the coast are nominal on account of reduced supplies. Little or no speculative interest is manifested. The London sales opened with prices five to ten per cent lower than at the close of the last series. This, coupled with a dull goods market abroad, tends to discourage the American wool trade still further. The latest dispatches, however, indicate rather more buoyancy here.

NEW YORK, June 29.—Weak streak in wool. Speculators assert that the juice is squeezed out of the prices. Manufacturers are somewhat gloomy over the prospective condition of woolen goods. It is certainly nearer a trade-buyer's market than at any time since the new clip. Some of the principal points are said to be ready to receive bids once refused. London market dull. Sales of 20,000 lbs. Spring California and 75,000 lbs. of scoured at private terms; 126,000 lbs. Spring Texas, part Western, 17@20c; 80,000 lbs. Fall, 20c; 22,000 lbs. scoured, 52½c; 100,000 lbs. XX Ohio and fine Delaine, 35c; 130,000 lbs. XX and above, 34c; 3000 lbs. unwashed Delaine, 27½c; 20,000 lbs. Kentucky Braid, 22@23c; 40,000 lbs. foreign pulled, 17½c; 228,000 lbs. domestic, 835,000 lbs. foreign, private terms. Boston reports many idle mills and consequent light business. Sales, 2,005,000 pounds foreign and domestic, including 210,000 pounds of Spring California at 17@27c. The Philadelphia market is lightly attended.

Messrs. Sherman Hall & Co. of Chicago write under date of June 24th as follows: The amount of business transacted in wool last week is less than for the previous week, but is considerably in excess of the receipts, indicating a healthy condition of trade. Manufacturers are buying steadily to meet current needs, and are not overstocking in anticipation of any increase in prices of woolen goods. Prices are consequently firm, with light stocks of all grades, giving an advancing tendency to the market as soon as the demand will cause a scarcity of any grade. The volume of sales foot up nearly 800,000 pounds, covering all descriptions of wool, from pulled to the best unwashed. The sales of pulled from Armour and Swift forming a less percentage than for times past. Woolen-goods market continues steady and firm, excepting on very heavy winter woolens, which are quite dull. Spring and summer wear, and also worsted goods, are well sold ahead and are very firm. The demand for Colorado and New Mexico wools is still very urgent. Long wooled pelts are strong with a large inquiry.

Miscellaneous.

NEW YORK, June 29.—New samples of California barley were shown, and the quality was commended. The opposition to the proposed tariff on Canadian barley is bringing large delegations of maltsters and merchants from many prominent Eastern points who are working vigorously and jointly for a reduction. These committees strongly support the bill against adulteration of beer products, and they ask the West to add its influence.

Peaches of 1889 pack scarce from $2.10@2.25. New goods would find buyers, but few are now offering. Well-known brands of raisins range here at $1.65@1.80, loose; $1.90@2.10, layers, free on board at the coast. California hops are full at last figures with light offering, but rather more of a brewers' demand than usual for summer. There was a fair inquiry for fine brewers.

Local Markets.

BARLEY

	Buyer Season. H.	L.	*Buyer 1890. H.	L.	Buyer 1890. H.	L.
Thursday...	...	...	108	108	...	...
Friday.....	...	...	108½	108	108¾	108½
Saturday....	...	...	108½	108	108½	108¾
Monday.....	...	...	108¾	108½	109	108¾
Tuesday....	...	...	109	108¾	109	109

*After August.

WHEAT.

	S. S.	Nov.	B. '90.	*B.S. '90	S '90.
Thursday....	h.	....	139½	145½	....
	l.	....	139½	145½	....
Friday.....	h.	136½	139½	145¾	....
	l.	136½	139½	145¾	....
Saturday.....	h.	....	138½	144½	129⅝
	l.	....	138½	144½	129⅝
Monday.....	h.	....	139½	145½	....
	l.	....	139½	145½	....
Tuesday.....	h.	138	141⅛	147⅝	....
	l	138	140⅝	146¼	....

BAGS—The market is steady at 7c for standard size grain bags.

BARLEY—The sample market has exhibited more strength toward the close of the week under review. Receipts are free, but the demand is good. In futures, trading has been quiet, owing to dealers not being disposed to short the market at present prices. The following are to-day's Call Board sales:

Morning Session: No sales. Sales yesterday afternoon were: Buyer season—200 tons, $1.14¾; 100, $1.15; 100, $1,15½ ₩ ctl.

BUTTER—The market continues to be well supplied. The local consumption is large but the shipping demand is slow. It takes the best gilt-edged to fetch our outside quotations, and this too in a small way. Large consignment parcels would have to be placed at slightly lower prices.

CHEESE.—The market is fairly steady at current quotations. The demand appears to be enlarging.

EGGS—The market is liberally supplied with eggs from east of the Rocky Mountains. As a rule they are good. Selected California eggs bring full prices.

FLOUR—The market has a stronger tone. The scarcity of gilt-edged milling wheat is against millers.

WHEAT—The sample market is very strong at an advance. As usual exporters are paying more in the country than in this city. Our quotations cover to-day's bids in the interior. Still higher prices are reasonably expected by large operators. In options, trading has been quiet owing to short sellers fearing that the market will go to still higher figures. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—500 tons, $1.41; 100, $1.41½; 400, $1.40⅞; 500, $1.40¾. Buyer season—200 tons, $1,46¾ ₩ ctl. Sales yesterday afternoon were: Buyer 1890—100 tons, $1.40⅝; 800, $1.40½; 100, $1.40⅝ ₩ ctl.

[COMMUNICATED.]

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending July 2d, were as follows:

Flour, qr. sks.	105,347	Middlings, sks	3,767
Wheat, ctls.	141,220	Alfalfa, "	....
Barley, "	29,629	Chicory, bbls.	20
Rye, "	724	Broomcorn, bdls.	....
Oats, "	528	Hops, bls	57
Corn, "	3,986	Wool, "	5,590
*Butter, "	1,213	Hay, tons	3,560
do bxs	988	Straw, "	90
do bbls	....	Wine, gals	193,855
do kegs	....	Brandy, "	5,260
Cheese, ctls	1,105	Raisins, bxs	150
do bxs	46	Honey, cs	186
Eggs, doz	32,280	Walnuts, sks	....
do " Eastern.	93,900	Flaxseed, sks	....
Beans, ctls	1,157	Mustard, sks	....
Potatoes, sks	25,976	Almonds, sks	....
Onions, "	2,089	Peanuts, sks	....
Bran, sks.	7,183	Popcorn sks	....
Buckwheat, sks	....		

*Overland 126 ctls.

Cereals.

Messrs. Clapp & Co. of New York write as follows: Looking back over the past 60 days we cannot perceive any reason to conclude that the 1890 world's crop will reap more than expected.

Present indications point to a:

SURPLUS.

United States and Canada (if we reduce reserves to the minimum points) of	90,000,000
Australia	20,000,000
India	26,000,000
Russia and Roumania	88,000,000
Austro-Hungary	8,000,000
Turkey and Principalities	10,000,000
Sundries	20,000,000
Total	262,000,000

SHORTAGE.

United Kingdom	145,000,000
France	25,000,000
Belgium, Holland, Spain and Portugal	20,000,000
Italy and Sicily	30,000,000
Greece	4,000,000
Germany and Switzerland	20,000,000
West Indies, Central America and China	25,000,000
Total	269,000,000

Inspector Abel of the Produce Exchange reports stocks of grain in tons in city warehouses July 1st as follows:

	Wheat.	Barley.	Oats.	Corn.	Bran.
June 1, 1890	3,596	13,869	2 509	524	150
July 1, 1890	2,102	9,619	2,321	1 161	200

At Port Costa the amount of wheat was: June 1, 55,095 tons; July 1, 45,760 tons.

The receipts in June were 5652 tons barley, 1682 tons oats, 1862 tons corn, and 3562 tons bran.

The local wheat market held weak up to Friday when a better tone set in resulting in a decided improvement on last Monday. The advance was brought about by adverse crop advices abroad, and confirmation of a short crop in India. The situation in this State is in favor of the holding interests, for when prices recede to very low figures it is only a question of time when they recover and make quite an advance, particularly with the statistical situation and crop advices being favorable to the selling interest. The crop in this State will be short of last year's while the tonnage supply will equal that of the past season. It is stated by those well informed regarding crops that there are more fields foul this year than for a long time past. This is said to have particular reference to the Sacramento valley. While the grain will be more foul the grade will be largely improved. Millers continue to meet with difficulty in buying the more choice grades of wheat. While this is partly owing to scarcity, it is probably largely due to strong holding.

Barley has ruled fairly steady throughout the week. The general feeling among the better informed is that prices will rule higher during the season of 1890–91 than they did during the past season. This opinion is based on the light carry-over, short crop and large consumption. The grade this year will average higher, both in size and weight and in color, than for several years past. It now looks as if England will again draw from us, provided the Canadians are prevented by high duties from selling to the New England and Middle States. Without the latter outlet, Canada will have to ship to England, in which event our barley will have stronger competitive selling abroad. This may be partly offset by better prices at the East, provided the railroads do not get, as they have always done, the advance brought about by higher tariffs by charging higher freights.

Oats have held dull but strong. The available supply is light, but buyers do not express any uneasiness owing to new coming in soon. The consumption continues free.

Corn is steady under moderate receipts. The buying appears to be confined as far as possible to legitimate requirements. Crop advices are favorable.

Rye is fairly steady.

Feedstuff.

In ground feed there is nothing new to report. The demand is free, but the supply is liberal. With a falling off in the supply which is liable to occur, there may be another slight advance in the price of bran and middlings. Ground barley is firm and meets with good sale.

Dealers report more liberal offering of new hay, which causes easier prices. It is not at all unlikely but they are pursuing their usual tactics of bearing the market so as to contract for supplies at a low range of prices. It is claimed by many that the crop will be less than it was last year, while others again are very pronounced in the opinion that the crop will be larger. There is one thing both parties are agreed upon, and that is that the carry over of old is very small while the consumption will probably be larger.

Fruits.

Cherries are nearly out of the market, as are currants. The receipts of apricots, plums, peaches and apples, while fairly free, are not up to former seasons. There are more of the first three being dried and also being shipped to the East than there was in 1889, this, of necessity, cuts off a large source of our supply. The quality of the peaches and apples show a decided improvement. Pears are coming in sparingly,

In berries there are no material changes to note in either raspberries or strawberries. Blackberries are in freer receipts, but yet prices do not shade off much.

For green fruits, dryers and canners pay previous quoted prices, but it is claimed that fully ¼c a pound more has been paid in some instances for prunes, apricots and peaches than we quoted. The first consignment of canteloupes came from the ranch of F. S. Hill, at Winters, arriving in good condition and selling readily at 50 cents apiece.

In dried fruits there continues an exceptionally good demand with full prices paid; even a slight advance on our outside quotations has been realized by some driers. The run is chiefly on peaches and prunes, but apricots are not neglected. Nectarines are steadily gaining in favor. Figs promise to meet with a good demand.

For raisins in the sweat there is a good inquiry. From 5 to 6c is paid. It now looks as if the raisin pack will meet with a better market than it did in 1889. The cholera in Spain ought to operate against the importation of Spanish raisins, for it is claimed that the paper in the boxes can bring the germ of the disease.

The first consignment of watermelons came to hand on yesterday. The shippers were W. R. Strong Co. of Sacramento and G. W. Thissell, Winters.

New dried apricots are coming to hand and sell at 12½@14c in sacks, and 14@15½c in boxes for sun-bleached. Sun-bleached, dried peaches, future delivery are quoted at 12@13½c for unpeeled. Dried prunes, 6@8½c, according to size.

Live-stock.

Bullocks are weak under free offerings and only a fair demand. Mutton sheep are very strong. Missouri points are drawing from this coast while there have been free shipments by sea up north. The local demand is active, while the supply is less than last year owing to the past winter being of the worst kind for sheep. Hogs are steady. Cows and horses are unchanged.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4@4¼c ₩ lb; dressed, 6@7c ₩ lb.; heavy, 3¾@4c ₩ lb.; dressed, 5½@6c ₩ lb. Stock hogs, 4¼@4⅝c ₩ lb.

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¾@—c ₩ lb.; second quality 5@5½c ₩ lb.; third quality, 4½c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6@8c ₩ lb.; large, 4@6c.

MUTTON—Wethers, 7½@8c ₩ lb.; ewes, 7@7½c ₩ lb.; lamb, spring, 7½@8¼c.

Vegetables.

In garden truck rhubarb is about out of market, as is asparagus. Summer squash, tomatoes and cucumbers are lower under freer receipts. String beans and peas do not show any material change. Corn is coming in more freely with quality improving. Egg-plant, okra and peppers are in slightly better supply.

The receipts of onions do not show much of an increase, but owing to a more restricted outlet the market is in buyers' favor. The quality shows to better advantage.

The receipts of potatoes have been quite free. The shipments from this city are not very large, but from interior supply points there are free shipments to distributive points that draw from us, which in cutting our dealers off naturally brings about lower prices here. The quality of the potatoes is good.

Miscellaneous.

Poultry holds steady for all kinds except for broilers which are lower.

Honey continues easy under free receipts quotable as follows: New White comb, 10@11c; do, in 1-lb frames, 11@11½c; new White extracted, 5½c; Amber, 4@5c ₩ lb.

Beeswax is firm at 22@24c ₩ lb.

Beans come in sparingly but owing to a slow demand prices do not rally.

Hops continue strong. Recent contracts for new crop are reported at 15@19c. *Four Corners*, published at Wheatland, says: The crop on Bear river will not be so large as anticipated, but will be of excellent quality; crops in Washington and Oregon are reported not so promising. The Sacramento crop will be short. Stocks on hand are very small. There seems to be a great demand growing in England for California hops, as is evidenced by the fact that four or five heavy dealers of London have been to this coast making connections. California hops stand next to Kents in London, as the writer found by personal investigation last fall. A large part of the Pacific coast crop is contracted for, and those who have not already secured them will probably have to pay good prices all around. Everything points to a curtailed yield and fair prices, and we think the growers will manage to get a fair return this year.

Wool continues to move off freely owing to growers meeting the market. It takes the very best selected clips to fetch top quotations.

Exports by sea last week aggregate as follows: Wheat ctls, Liverpool, 75,420. Flour bbls, China, 14,819; Japan, 2791; Hong Kong, 16,023; Nanaimo, 101, Honolulu, 250; Tahiti, 1120. Dried fruits lbs, Guaymas, 1109; Victoria, 750. Beans lbs, Hong Kong, 14,374; Sydney, 2148; Honolulu, 8168; Victoria, 1886. Broomcorn lbs, Sydney, 31,564; Melbourne, 93,629; Auckland, 6497. Hay bales, Honolulu, 1005. Bran sks, Honolulu, 2024. Wine gals, Guaymas, 2622; New York, 208 696; Victoria, 370; Honolulu, 1927, Tahiti, 485. Wool lbs, New York, 1,044,486. Mustard seed lbs, New York, 19 304. Brandy gals, New York, 25,850. Barley ctls, Honolulu, 3574, Victoria, 201; Tahiti, 460. Corn ctls, Honolulu, 366.

From the *Commercial News* of July 2d the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	246 052	254,871
On the way to neighboring ports	17,477	29,829
In port, disengaged	13,567	11,455
In port, engaged for wheat	32,821	46,511
Totals	309 917	342,666

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1889, to June 26, 1890, the following are the exports from this port:

	1890.	1889.
Wheat	13,495.859	13,008,653
Flour	1,148,340	845,232
Barley	952,248	1,298,153

Rope.

Baling, Duplex, lb	12
" Manilla, lb	15
Twine, for hops, balls, tarred, lb, Manilla	16
" " grape vine, balls, lb "	16
" " " coils, lb "	16
" spring, lb "	18
" binder (600 ft. to lb), lb	10

Duplex twine 3c per lb less.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, *or beyond the time he intends to pay for it*, let him not fail to write us *direct* to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

California Fruits East.

CHICAGO, June 26.—The Montgomery Auction Co. sold to-day for account of the Earl Fruit Co. and others, two cars of fruit. Royal Ann cherries brought $2.40@2.15; black Bigerreau cherries, $2.05; Black Republican cherries, $2.55@2.40; peaches, $1.35@1.15; apricots, $1.15@1; cherry plums, $2.05.

CHICAGO, June 27.—Porter Bros. Co., agents for the California Fruit Union, have just sold two carloads. Peaches brought 95c to $1.35; apricots, $1.10 to $1.65; plums, $1.15 to $3.40; figs, $2.

NEW YORK, June 27.—The latest quotations for foreign products in this market which come into competition with California products are given herewith, to enable Californians exactly to estimate the present competition here: Malaga raisins, loose, per box, from $1.75 to $2.60, the latter being for four-crown Malaga raisins; $2 25 for Valencia raisins; off stock, 7½ to 7¼c; same, layers, 9½ to 9¼c; Sultana raisins, 9 to 12½c; London layers, $2.25 to $2.45; French prunes, sixties to nineties, 8¾ to 9c; Turkish prunes, boxes, seventies to one hundreds, 7¾c; Turkish prunes, bags, 5¾ to 5⅞c. The first Valencia raisins are expected to arrive about the 1st of September.

NEW YORK, June 27.—A prominent dealer in canned goods says there has been a large increase in the sales both of this year's and last year's California pack, and large quantities of California goods are being handled at Philadelphia. There is an advance of from 10 to 15 per cent on the opening prices for California peaches, and the market for apricots is firmer. Apropos of this statement the *Commercial Bulletin* has the following: Quite a fair amount of 1889 pack, standard California peaches, has been moved here at $2.10 to $2.25, as to the brand, and apricots, new and old, are decidedly firmer at $1.60 to $1.65 here for standard brands. It is also reported by dealers that some of the more progressive retailers are placing orders for first-class brands of new salmon, recognizing the fact that the article is cheap at the present prices.

NEW YORK, June 28.—A sale of California fruit took place this morning and was largely attended. A smash-up on the Erie railroad delayed the consignment 24 hours, making an immediate sale necessary. The fruit was soft, but brought good prices. Plums averaged $2, cherries $1.75, peaches $2, and apricots $2.15.

Goodsell auctioned a lot of California fruit to-day. Thirty boxes of plums brought from $1.20 to $2.25; 185 boxes of cherries, $1.05 to $1.85; 100 boxes of peaches, $1.80 to $2.20; 200 crates of apricots, $2.15 to $2.20.

CHICAGO, June 28.—Porter Bros. Co., agents for the California Fruit Union, sold apricots to-day at 35c to $1.75, peaches at $1 to $1.70, plums at $1.20 to $5.60, and figs at $1.55.

NEW YORK, June 30.—It is ascertained that a number of offers for California prunes, apricots and peaches went out from here last week at a considerable advance over the offers of the previous week. Better offerings are made for both canned and dried fruits from California. Several packers have withdrawn prices the past few days. Some who previously adhered to the opening figures now quote 10 cents per dozen advance on peaches. Meantime it is reported, on seemingly good authority, that the pack of fruits in this State will be short. It is also reported in the green-fruit market that the cherries in New Jersey are attacked by the cherry rot, thereby further shortening an already short crop.

At the sale of California fruits this morning, at Goodsell's auction, the following prices were obtained: One hundred boxes peaches at $2.10@2.20 per box; 100 boxes apricots, $1.90@2.25 per box; 25 boxes cherries, $1.35 per box.

CHICAGO, June 30.—Two auctions occurred today of California fruit. Sgobel & Day auctioned one carload at the following prices: Royal Hative plums, $2.50@2.80 per box; Alexander peaches, $2.05@1.85 per box; Royal apricots, $2.10@1.60 per half-crate. All this fruit came in good condition, and was from the California Fruit Union; but some apricots were a little green. There was a large attendance of spectators. The demand is strong, there being little fruit in the market, excepting bananas and oranges.

Goodsell auctioned a lot at the following prices: Peaches, $2.20@1.60; apricots, $2.25@1.80; cherry plums, $1.85.

Porter Bros., agents for the California Fruit Union, sold four carloads of fruit. Peaches sold for $1.45@$1.85, with the exception of rotten stock at $1.20; apricots, $1.50@$1.85, with the exception of overripe at $1.30; plums, $1@$5.60; Bartlett pears, $5.90; figs, $1.40@1.55.

CHICAGO, July 1.—Porter Bros. sold to-day two carloads of fruit:

Plums, small boxes, brought $1.10 to $1.45; regular size, $1.50 to $4.40; apricots, $1.65 to $2.50; peaches, $2; Bartlett pears, $5.80.

CHICAGO, July 1.—The Montgomery Auction Co. sold to-day one carload of California fruit at the following prices: Peaches, $2 to $1.80; apricots, $1.95 to $1.60; Royal hative plums, $2.65 to $2.50; cherry plums, $1.90.

CHICAGO, July 2.—In the market for California green fruits, apricots and peaches are a shade firmer, but plums are a trifle easier. Apricots, 20-lb boxes, according to quality, $1.80@2.20. Peaches, $2@2.25. Prunes, crates, Black Tragedy, $3@4. Plums, 20-lb crates, Claude, $2.25; do, Cherry, $1.50@1.75; do, 10-lb crates, Cherry, $1.15@1.25; do, 20-lb, Royal Hative, $1.75@2.25. New figs, 10-lb boxes, $1.25. Oranges rule quiet with sales as below: California St Michael, paper rind, $6@6.50; Rodi, small sizes, ₩ box, $6.50@7; Rodi, large sizes, ₩ box, $5 @6.50. In beans there is but little movement. The late hot weather has been calculated to curtail consumption and cause a corresponding reduction in sales. The supply is ample, and prices range as below: California Lima beans, choice, 5¼@5½c ₩ lb; do, common, 2@4c. Hops are quiet on account of being scarce; the demand is fair and the market rules firm. Washington, according to quality, 24@ 25c. Oregon, 23@25c.

A RESERVOIR which will make a lake three miles in diameter, with an average depth of 65 feet, is to be built by the Hemet Land and Water Company at San Jacinto. Work begins inside of two months.

BUGGIES AND BUCKBOARDS.—A complete assortment of vehicles in every grade and style. For circulars write Frank Brothers, San Francisco.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

June 25-July 1. DATE.	Olympia. Rain	Temp.	Wind	Weather	Portland. Rain	Temp.	Wind	Weather	Eureka. Rain	Temp.	Wind	Weather	Red Bluff. Rain	Temp.	Wind	Weather	Sacramento. Rain	Temp	Wind	Weather	S.Francisco. Rain	Temp	Wind	Weather	Fresno. Rain	Temp	Wind	Weather	Keeler. Rain	Temp.	Wind	Weather	Los Angeles. Rain	Temp	Wind	Weather	San Diego. Rain	Temp	Wind	Weather
W.	.00	60	SW	Cy.	10	62	Nw	Fr.	.00	56	N	Fr	.00	80	N	Cl.	.00	76	Nw	Cl	00	66	SW	Cl.	.00	80	Nw	Cl	.00	78	Nw	Fr.	.00	68	SW	Cl.	.00	64	SW	Fr.
T...	.00	62	SW	Cy.	.01	58	S	Cy.	.00	58	N	Cl.	.00	86	Nw	Cl.	.00	82	N	Cl	.00	66	W	Cl.	.00	86	Nw	Cl	.00	80	Nw	Cy.	.00	70	SW	Cl.	.00	64	SW	Cy.
F...	.00	68	Nw	Cl.	.00	72	N	Cl.	.00	60	Nw	Cl.	.00	94	W	Cl.	00	90	Nw	Cl.	00	66	SW	Cl.	.00	95	Nw	Cl.	.00	85	Nw	Cl.	.00	68	W	Cl.	.00	66	W	Cl.
S...	.00	80	Nw	Cl.	.00	86	Nw	Cl.	.00	56	SW	Cl	.00	104	Nw	Cl.	.00	86	SW	Cl.	.00	58	W	Cy.	.00	102	W	Cl.	.00	90	SW	Cl.	.00	70	W	Cl.	.00	70	Nw	Cl.
S...	.00	80	NE	Cl.	.00	90	Nw	Cl.	.00	54	SW	Fy.	.00	98	E	Cl	.00	86	S	Cl.	00	58	SW	Cy.	.00	100	W	Cl.	.00	92	Nw	Cl.	.00	68	Nw	Cl	.00	68	Nw	Cl.
M..	.00	90	Nw	Fr.	.00	84	N	Cl.	.00	56	Nw	Fy.	.00	98	SE	Cl.	.00	80	S	Cl.	.00	60	SW	Cl.	.00	98	W	Cl.	.00	90	SW	Fr.	.00	70	W	Cl.	.00	72	W	Cl.
T...	.00	86	N	Cl.	.00	94	N	Cl.	.00	58	W	Cy.	.00	92	SE	Cl.	.00	82	S	Cl.	00	60	W	Cl	.00	100	Nw	Cl	.00	92	SW	Cl.	.00	74	W	Cl.	.00	70	W	Cl
	.00				.11				.00				.00				00				00				.00				.00				.00				.00			

EXPLANATION. Cl. for clear; Cy, cloudy; Fr., fair; Cm., calm; - indicates too small to measure. Temperature, wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 2, 1890.

BEANS AND PEAS.			
Bayo, ctl	3 90	@	4 20
Butter	2 00	@	2 25
Pea	2 20	@	2 40
Red	2 25	@	2 75
Pink	2 85	@	3 00
Large White	—	@	—
Small White	2 20	@	2 40
Lima	4 75	@	5 00
Fld Peas, blk eye	—	@	—
do green	—	@	—
do Nies	2 00	@	2 25
Split	6½	@	—
BROOM CORN.			
Choice to Extra	80 00	@	95 00
Fair to Good	70 00	@	75 00
Poor	50 00	@	60 00
CHICORY.			
California	6	@	6½
German	6½	@	7
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair, lb	10	@	12
do good to choice	13	@	15
do Giltedged	16½	@	17
do pickled	—	@	—
do in kegs	—	@	—
do Creamery in rolls	17	@	17½
CHEESE.			
Cal, choice mild	7	@	8
do fair to good	6	@	6½
Young America	8	@	9
N. York Cream.	12	@	13
Western	7	@	10
EGGS.			
Cal. ranch, doz.	20	@	21½
do do sel'cted	22½	@	—
do. store	17	@	19
Est'rn, cld st'rage	—	@	—
do fresh	15	@	17
do selected	18	@	20
do to arrive	—	@	—
FEED.			
Bran, ton	14 00	@	15 50
Feedmeal	20 00	@	22 00
Gr'd Barley	23 00	@	24 00
Middlings	21 50	@	23 00
Oil Cake Meal	25 00	@	—
Manhattan Food Per 100 lbs	7 50	@	—
HAY.			
Compressed	10 00	@	14 00
Wheat, per ton	8 00	@	10 00
do choice	12 00	@	14 00
Wheat and Oats	10 00	@	14 00
Wild Oats	7 50	@	10 00
Tame do	8 00	@	10 00
Clover	8 00	@	9 50
do ch'ce red top	—	@	—
Barley	7 00	@	9 00
Barley and Oats	—	@	—
Alfalfa	—	@	—
Stock Hay	—	@	—
Alfalfa Cmpr'sd	—	@	—
Straw bale	45	@	55
New hay, Wheat	—	@	—
do do Oats	—	@	—
FLOUR.			
Extra, City Mills	4 00	@	4 20
do Co'try Mills	4 00	@	4 20
Superfine	3 00	@	3 60
GRAIN, ETC.			
Barley, feed, ctl.	96¼	@	1 01½
do Choice	1 02½	@	1 05
do Brewing	1 07½	@	1 10
do do Choice	1 12½	@	1 15
do do giltedg'd	1 17½	@	—
Chevalier once	—	@	—
do com to good	—	@	—
Buckwheat	1 75	@	2 15
Corn, White	1 00	@	1 10
Yellow	1 10	@	1 25
Oats, milling	1 65	@	1 75
Surprise	1 70	@	1 75
Choice feed	1 60	@	—
do good	1 55	@	—
do fair	1 50	@	—
do Gray	1 45	@	—
do Black	1 40	@	1 50
Rye	90	@	93¾
Wheat, milling.			
Gilt edged	1 38½	@	1 40
do Choice	1 36½	@	1 37½
do fair to good	1 35	@	—
Shipping, cho'ce	1 35¾	@	—
do good	1 31¼	@	1 33½
do fair	1 26½	@	1 30
HIDES.			
Dry Ight to h'vy	8	@	9
Salted	5	@	8
HOPS.			
Oregon, 1889	14	@	20
Cal 1889 Choice	18	@	20
do Fair to G'd	13	@	16
ONIONS.			
Silver Skin	1 00	@	1 75
NUTS - JOBBING.			
Walnuts, Cal. lb	7	@	8
do Ch'ice	9	@	11
Almonds, hd shl.	5	@	6½
Softshell	9	@	10
Paper shell	12	@	14
Brazil	11½	@	13
Pecans	9	@	14
Peanuts	5½	@	7½
Filberts	11½	@	12½
Hickory	6	@	9
Chestnuts	14	@	—
Pine nuts	7	@	8
POTATOES.			
New	75	@	1 00
do choice	1 25	@	1 50
Early Rose, sks.	—	@	—
Chile	—	@	—
Peerless	—	@	—
River Reds	—	@	—
Humboldt	—	@	—
Petaluma	—	@	—
Burbanks	1 50	@	1 75
Sweet	—	@	—
POULTRY AND GAME.			
Hens, doz	6 00	@	8 00
Roosters, old	6 00	@	7 50
do young	8 50	@	11 00
Broilers, small	2 50	@	3 50
do large	4 00	@	5 00
Fryers	5 00	@	6 00
Ducks, tame	4 00	@	5 00
do young	5 00	@	6 50
Geese, pair	1 00	@	1 25
Goslings	1 25	@	1 75
Turkeys, Gobl'r	19	@	21
Turkeys, Hens	16	@	18
Pigeons	2 50	@	3 00
Rabbits, doz	1 50	@	1 75
Hare	1 75	@	2 00
EGG FOOD.			
Manhattan, ₩ lb	12	@	—
PROVISIONS.			
Cal. Bacon.			
Heavy, lb	10½	@	11
Medium	12	@	—
Light	13	@	—
Extra Light	—	@	—
Lard	9	@	12
Cal. Sm'k'd Beef	11	@	12
Hams, Cal	12	@	13
do Eastern	12½	@	13½
SEEDS.			
Alfalfa	9½	@	10
Canary	4	@	4½
Clover, Red	12	@	13
White	20	@	22
Cotton	20	@	—
Flaxseed	2	@	2½
Hemp	8	@	8½
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German.	5	@	6½
do Common	5	@	6
Mustard, yellow	1½	@	2
do Brown	2½	@	3
Rape	1½	@	2
Ky. Blue Grass.	14	@	16
2d quality	13	@	14
Sweet V. Grass.	75	@	—
Orchard	12	@	14
Hungarian	7½	@	8
Lawn	27½	@	40
Mesquit	6	@	
Timothy	6	@	6½
TALLOW.			
Crude, lb	3	@	5
Refined	6	@	
WOOL, ETC. SPRING—1890.			
Humboldt and Mendocino	20	@	24
Sac'to valley	15	@	22
Free Mountain.	20	@	24
S Joaquin valley	12½	@	17
do mountain.	17	@	22
Cala'v & F'th'll.	15	@	24
Oregon Eastern.	13	@	22
do valley	20	@	25
So'n Coast, def.	10	@	14
So'n Coast, free.	12½	@	19

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 2, 1890.

Bananas, bunch	1 00	@	3 50
Cranberries	—	@	—
Limes, Mex	4 50	@	6 00
o Cal sml cases	75	@	1 50
emons, Cal., bx.	1 00	@	1 50
do Sicily, bx	5 00	@	6 00
do Malaga	4 00	@	6 00
do do Seedling	1 50	@	2 50
Pineapples, doz.	3 00	@	3 50
Strawberries			
fair, chest	5 00	@	8 00
choice, chest.	10 00	@	15 00
Cherries, box	45	@	1 00
Apricots, bx	50	@	75
Currants, chest.	3 50	@	5 00
Raspberries do.	5 50	@	9 00
Bl'kberries, do.	5 00	@	7 00
Cherry plums	80	@	—
Figs, box, black.	40	@	75
do white	50	@	75
Plums, blue, bx	50	@	1 00
Peach plums	1 25	@	1 50
Pears, bx	50	@	—
do Bartlett.	1 00	@	1 50
Peaches bkt	40	@	1 00
do box	50	@	1 20
Apples com box	50	@	75
do choice	1 00	@	1 25
VEGETABLES.			
Okra, dry, lb	6	@	10
do green	15	@	20
Parsnips, ctl	1 25	@	1 50
Peppers, dry, lb	12	@	—
do green, lb	10	@	12½
Turnips, ctl	75	@	1 00
Beets, sk	75	@	1 00
Cabbage, 100 lbs	75	@	1 00
Carrots, sk	50	@	60
Mushrooms, Cultivated, lb	—	@	—
Wild, lb	—	@	—
Cucumbers box	25	@	75
Tomatoes, bx	50	@	1 10
Rhubarb bx	50	@	1 00
Garden peas, lb	2	@	3
Sweet do do	1½	@	2
String Beans	2	@	2½
Wax, do	2	@	4
Fountain do	2	@	4
Asparagus, bx	50	@	1 00
do choice bx	1 50	@	1 75
do fancy	2 00	@	—
Squash, summer, bx	25	@	75
Garlic, lb	8	@	12
Green corn doz	15	@	20½
do do com sk	1 00	@	1 25
Egg Plant, lb	10	@	12½

WAKELEE'S

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VAQUERO CONTEST AT THE STATE FAIR.—The Board of Agriculture has decided that inasmuch as the old California vaquero's life is a novelty to a great many of our present residents, that an exhibition of the manner in which experts handle the California bronco, would not be out of place. And to that end, they have directed that one morning, Monday, Sept. 15th, be devoted to this novel sport. The announcement will no doubt attract wide attention both from contestants and spectators.

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A NEW BOOK.—NOW READY.

CALIFORNIA FRUITS

—AND—

HOW TO GROW THEM.

A MANUAL OF METHODS WHICH HAVE YIELDED GREATEST SUCCESS; WITH LISTS OF VARIETIES BEST ADAPTED TO THE DIFFERENT DISTRICTS OF THE STATE.

BY EDWARD J. WICKSON, A. M.,

Lecturer on Horticulture in the College of Agriculture, University of California; Horticultural Editor of the PACIFIC RURAL PRESS, of San Francisco; Secretary of the California State Horticultural Society; President of the California State Floral Society, Etc.

Contents.

PART I: GENERAL.—The Climate of California and its Local Modifications; Why the California Climate Specially Favors the Growth of Fruits; The Fruit Soils of California; The Wild Fruits of California; California Mission Fruits; Introduction of Improved Fruit Varieties.

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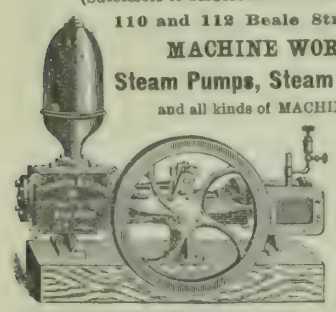
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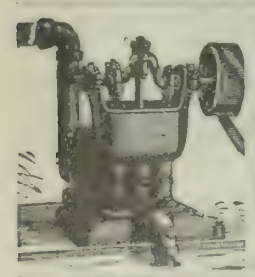
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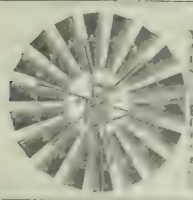
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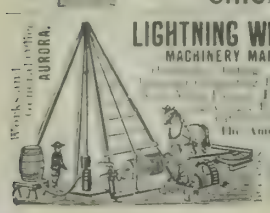
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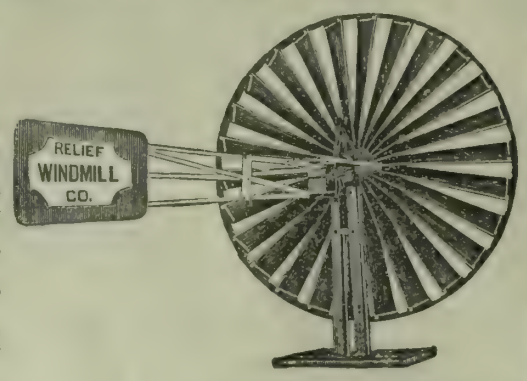
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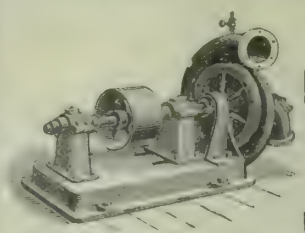
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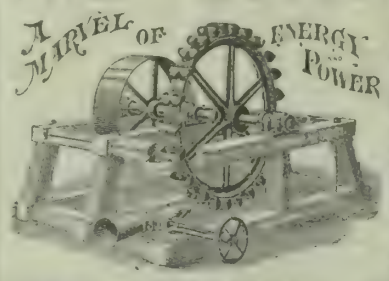
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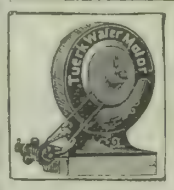
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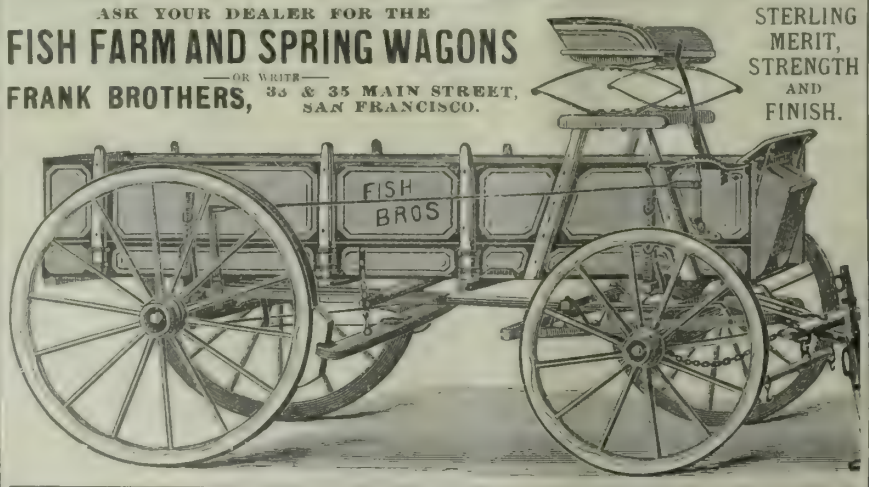
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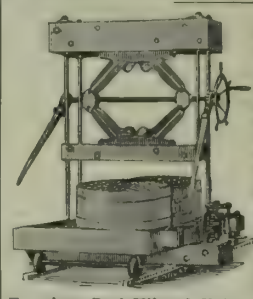
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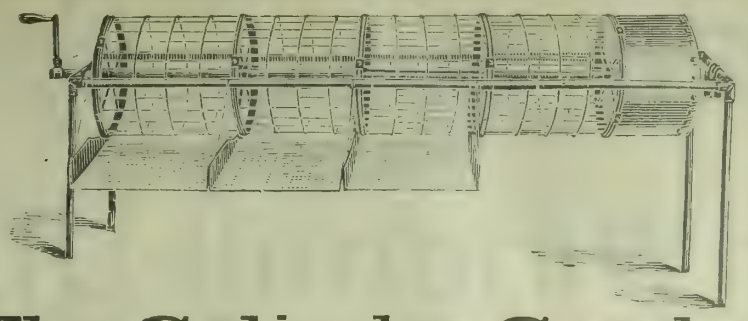
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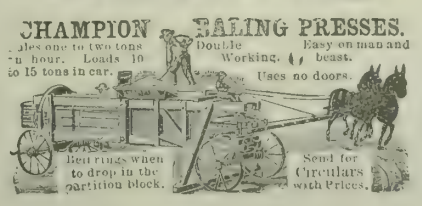
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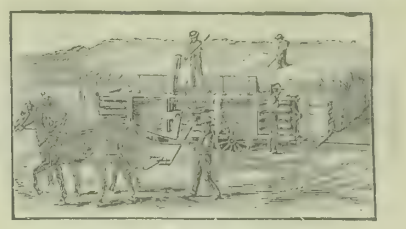
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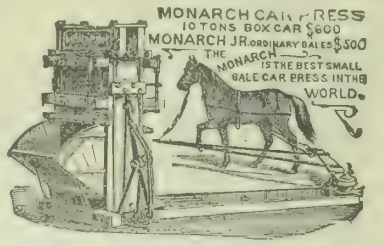
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Size of bale in press, 22x24x46 inches. Average weight of bale, 260 pounds. Capacity, from 20 to 35 tons per day. Uses 5 men and works with 1 or 2 horses at option of baler. REQUIRES NO TRAMPING. Uses rope or wire. Puts from 7 to 8 tons in a box car.

Price.....$1000



The SELF-TRAMPING JUNIOR MONARCH.

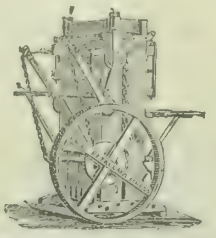
Size of bale in press, 22x24x46 inches. Average weight of bales, 260 pounds. Capacity, from 15 to 25 tons per day. Uses 3 or 4 men, at option of baler. Works with 1 or 2 horses. Uses rope or wire. DOES ITS OWN TRAMPING. Puts from 7 to 8 tons in a box car.

Price.....$500

THE MONARCH.

Same principle as Junior Monarch, only smaller and heavier. Size of bale, when in press, 17x20x40 inches. Average weight of bale, 220 pounds. Capacity, from 12 to 20 tons per day. Requires 3 men and 2 horses. Uses wire only — rope will not hold. DOES ITS OWN TRAMPING. Puts 10 tons or over in a box car.

Price.....$600



THE GENUINE PRICE PETALUMA.

Size of bale in press, 24x24x50 inches. Average weight of bale, 250 pounds. Capacity, from 10 to 18 tons per day. Requires 4 men and 2 horses. Uses rope or wire. Hay has to be tramped into the press Puts from 5 to 6½ tons in a box car.

Price.....$350



THE IMPROVED EAGLE.

Size of bale in press, 26x26x50 inches. Average weight of bale, 235 pounds. Capacity, from 10 to 15 tons per day. Requires 4 men and 2 horses. Uses rope or wire. Hay must be tramped in the press. Puts from 4½ to 5½ tons in a box car.

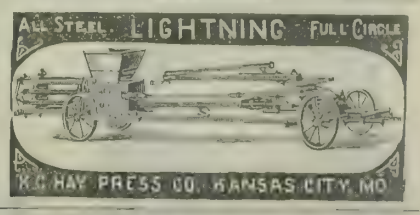
Price.....$250

The above is the finest line of Baling Presses in the United States They are nearly double the capacity of those of other makers.

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San Leandro, Cal.



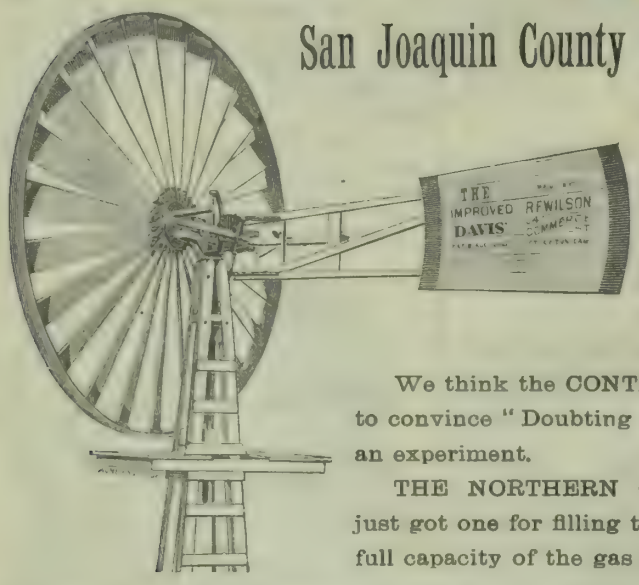
I CURE FITS!

When I say cure I do not mean merely to stop them for a time and then have them return again. I mean a radical cure. I have made the disease of FITS, EPILEPSY or FALLING SICKNESS a life-long study. I warrant my remedy to cure the worst cases. Because others have failed is no reason for not now receiving a cure. Send at once for a treatise and a Free Bottle of my infallible remedy. Give Express and Post Office. **H. G. ROOT, M. C., 183 Pearl St. New York.**

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Put Your Windmill Up to Stay!

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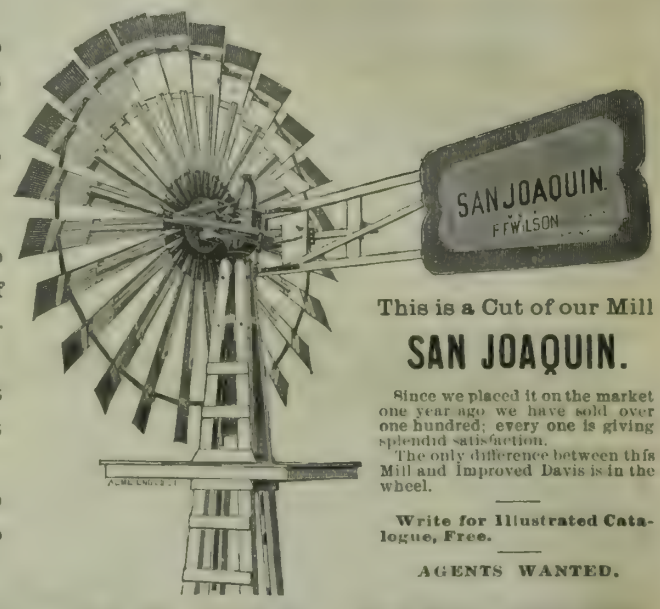
San Joaquin County has purchased Three More Large Windmills and Tanks from us this year for Road Sprinkling.

This makes EIGHTEEN of our Mills in use for the County.

Supervisor Carson says they are the Cheapest and Best Method of furnishing water for the above purpose.

We think the CONTINUED SALES to the County ought to convince "Doubting Thomases" that our Windmill is not an experiment.

THE NORTHERN GAS WELL CO. of this City have just got one for filling the large reservoir so as to get the full capacity of the gas from the well.



This is a Cut of our Mill

SAN JOAQUIN.

Since we placed it on the market one year ago we have sold over one hundred; every one is giving splendid satisfaction.

The only difference between this Mill and Improved Davis is in the wheel.

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AGENTS WANTED.

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CRAWFORD & O'DONELL, Pomona.
G. HUNZIKER, Cloverdale.
F. T. EWING, Yuma, Arizona.
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J. BRUSIE, Oakland and Davisville.
J. W. JONES, Turlock, using Fifteen.
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CRESSEY BROS., San Luis Obispo and San Jose.
H. BARCROFT, Merced, bought over Thirty.
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H. S. SARGENT, Cashier Stockton Savings Bank, using Two.
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SAN JOAQUIN AGRICULTURAL SOCIETY, using Three.
J. HOBART, Ventura.
RICHARD ROBINSON, Ventura.
WASHINGTON HURD, French Camp, using Three, one fourteen, one twenty, and one twenty-four-foot. The twenty and twenty-four-foot mills he uses to fill a reservoir, which has a capacity of two million gallons. He says those two mills will fill the reservoir in five days. When the reservoir is full, the gate is opened and twenty acres of alfalfa, several acres of fruit trees and a young vineyard are irrigated.
SIMON NEWMAN, Newman, using over Thirty, and many other parties too numerous to mention.



This is a Cut taken from the Outfits we furnished to San Joaquin County.

SIZE OF MILL, 16-FT. TANK, 12,000 GALLONS.

With ordinary trade wind the mill will pump the 12,000 gallons in five hours.

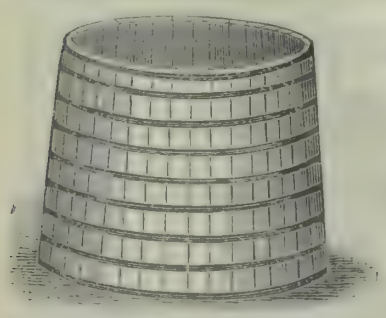
The pump is a five-inch suction and lift pump, 7-inch stroke.

Other Windmill Companies are saying that we will BANKRUPT OURSELVES because we sell at such LOW PRICES.

We answer that strict attention to business, together with a sufficient supply of cash to buy all our material, enables us to quote prices that cannot be met, quality of goods considered.

THERE ARE NO DRONES IN OUR SHOP.

We are quoting Special Prices where our Mill is not in use, and we find that orders invariably follow the first, at advanced prices. Get your orders in first and get this advantage. We think that this is the best way of introducing our Mill in new places. Where our Agents are appointed we cannot offer these Special Prices.



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PACIFIC RURAL PRESS

TWENTY-FOUR PAGE EDITION.

Vol. XL.—No. 2. SAN FRANCISCO, SATURDAY, JULY 12, 1890. DEWEY & CO., Publishers, Office, 220 Market St.

Songsters From Fatherland.

A little over a year ago several hundred singing birds — skylarks, thrushes, finches, nightingales, etc., were imported from Germany and set free at Portland, Oregon. No fears as to their doing well were entertained by those who introduced them, but the question was—would they know whither to migrate at the approach of winter, and would they return the following spring?

Now we are pleased to learn from the *Oregonian*, several persons report seeing some of these songbirds in different parts of the valley. One has heard nightingales in the vicinity of Silverton. James Watt reports that a pair of strange birds which sing late into the night are nesting in his orchard, near Amity, doubtless another pair of nightingales. Many persons have noticed that there is an unusual number of native birds in the gardens about town, and that they are much tamer than usual. This is owing to the fact that since the German songbirds have been brought here there has been more care taken to protect birds of all kinds, and boys have not persecuted them so much. The little songsters are quick to notice this, and show their appreciation by making themselves more at home in the city.

STAKING HOPS.—Mr. Daniel Flint of Sacramento has experimented with four acres of hops in a new system of staking. He used redwood stakes 8 feet long 2x2 inches, set in the ground one foot, and 8 feet apart. Instead of cord he has used wire running at right angles fastened on top of the stakes with a staple. The pickers can reach the arms of the vines and strip them. Mr. Flint finds that this system is far ahead of any other in point of economy.

THERE are fig trees on the ranch of John Fulgham, 12 miles west of Visalia, the limbs of which have bent down, entered the ground and taken root, thus giving promise of another tree from the branch of a living one.

Silk Culture Before Congress.

In a recent allusion to the silk industry, we remarked that there were propositions before Congress ostensibly in the interest of the promotion of silk culture, which the people of California had no confidence in. The statement had a broad application which was not intended. We did not refer to measures for the promotion of silk culture which placed the disbursement of funds under the direction of the Department of Agriculture. We understand that Mr. Amos Adams, the well-known Californian, prepared a bill for the promotion of the silk industry which met the approval of Secretary Rusk, and was introduced in Congress by Mr. McKenna. We intended no reflection upon that measure. It is possible that an effort may be made to enlist the co-operation of prominent friends of silk culture in this state in support of this measure and thus supplement and extend the work now in progress in this State.

A Scene on Lake Zurich.

To give our readers a little change from contemplation of Pacific Coast scenery, we present this week an engraving of one of the most beautiful scenes in Europe, a part of the Lake of Zurich and its surrounding mountains. The Lake of Zurich, lying in the northeastern part of Switzerland, is celebrated for its picturesque beauty and its historical interest. The lake is 23 miles long and 2½ miles broad, and it extends from the city of Zurich in a southeasterly direction, nearly filling the valley to the hills on either side, which are the foothills of the Alps. The shores nearly its whole distance on both sides are sprinkled with the finest villa dwellings, owned by people of all nations. The engraving on this page represents the southern part of the lake, with its beautiful islands and shores, and shows the Alps in the distance. On the island upon the right are graves of some of the leading men of the Reformation, for here they took refuge from persecution.



VIEW OF THE SOUTHERN END OF LAKE ZURICH, WITH THE ALPS IN THE DISTANCE.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Napa Valley Notes.

EDITORS PRESS:—Propitious weather for the farmer has prevailed in our valley since the winter rains. Crops have grown well, as a whole, though late sown grain will not amount to much, and many fields have already been cut for hay. Thus far the season has been pleasantly cool, a few days only of warm weather now and then being noted. This has made it exceedingly agreeable for field men on our rancher, and in fact, for "all classes and conditions of men."

Our cherry crop, which was in many orchards an excellent one, in all a fair one, has ripened, been picked and marketed. Some disturbance in the weather—either rains when the trees were in bloom, or late frost, or we know not what—shortened the crops somewhat. Several orchardists, who took advantage of the Napa Valley Fruit Union, shipped their fruit to different points East and received excellent returns therefor. Our cherries have long been noted for their superiority in our State markets, but when we lately read in the market reports from New York City that ours were the finest white cherries ever sold on Broadway, retailing at 40 and 60 cents per pound, we were naturally elated.

Five or six carloads of cherries were shipped Eastward from Napa City this season, netting, as before stated, fine prices. Present indications are that more of our orchardists will send their fruit East another year through the Union, the success met with this year tending to infuse new life into the fruit business.

This, in fact, was needed, for the complaint of small returns from local or S. F. markets has not been infrequent. The large cannery, located in Napa, which was in operation last season, and where considerable of our valley fruit was sold, is closed this year. Agents for canneries in other parts of the State, are frequently in our orchards and make large purchases.

It is true that quite a large number of trees in our orchards were killed by excessive moisture last spring, but that fact should not discourage our orchardists, for so severe a season will not, in all probability, come again for a score of years, if ever. Our loss, too, is small compared with that of several other localities in this State. Our younger orchards, planted to the more approved varieties of fruit, better pruned and more carefully cultivated, are coming into excellent bearing condition, and are not disappointing their owners.

The apricot crop will be light in many parts of this county, as, also, will that of early peaches. A few varieties of this latter fruit are ripening and are selling in the local markets at good figures. In valley orchards apples will not yield largely.

The fruit-drier at Napa has been enlarged and will probably soon commence operations.

The vineyards that cover the valley and spread over many of the hills, from Yountville northward to Calistoga, are in splendid condition. To see this large area (one may ride for 12 or 15 miles through solid vineyard) is worth coming far to behold. The contrast between this mass of bright green verdure and the golden yellow stubble-fields later in the season, is particularly pleasant, though, for a fact, very few stubble fields are now to be found in the upper valley.

As one views this large tract of vineyard the question naturally arises, "Where will all the help come from to handle this crop?" For the vines will yield largely this season. Then, again, comes up the matter of cooperage. The capacity of our many cellars will be taxed to their uttermost. We note very few quotations for the prospective crop, though some fair offers have been made.

H. W. Crabb of Oakville has laid out a fine race track in the midst of his large vineyard, where he or his drivers speed his fast horses. You have probably noticed Mr. Crabb's application for space at the World's Fair at Chicago, and what he proposes to do in the way of displaying his wines. He is one of our most enterprising vineyardists and wine-makers.

Haying is over. The yield, in the aggregate, is large, though per acre it is smaller than last year. Much is now being baled; rates $1 10 per ton. The larger portion of the crop is thus cared for. Prices are not very encouraging for farmers. Some of them will feed their crop, or a greater portion of it, to stock, buying sheep or cattle, afterward selling them to the butcher. There is but little money made in raising hay, yet the annual production is quite large—large enough to keep prices down.

Early wheat is almost ready for the header, and the harvest will have commenced by the time this letter reaches you. Late sown wheat has not done very well.

The very high figure at which potatoes were rated last winter, induced many of our farmers to plant a large amount of this esculent. This crop looks well, generally speaking, and disproves the theory, a long time prevalent, that good potatoes could not be grown in this valley. We know of one man who realized handsomely on his crop last season.

The annual fair of the Napa and Solano Agricultural Society, which will be held at Napa next fall, promises to be a notable one. The two that have been given here proved successful, and, profiting by past experience, the directors will endeavor to make the coming one more so. The track, one of the finest in the State, is always kept in excellent condition. The tall, close board fence surrounding the track and the stalls, have been whitewashed lately, making the premises very attractive. Since these fairs were inaugurated there has been an increased interest manifested in many parts of the country in horse and cattle breeding, particularly in the former. Cattle and sheep are raised in limited numbers only in the larger valleys of this county, but in the hilly portions their number, in the aggregate, is quite large. Still, our local butchers frequently draw on Oregon and Nevada for supplies of beef cattle.

Very little real estate has changed hands in the county for a year or more, though prices have not lowered to any great extent. There has been a very small demand for farm lands throughout the State, during the last year, so we are not alone in this matter. Orchard property has proved so valuable this season, it is patent that land suitable for fruit culture will not depreciate in value, but rather will be held firm at present prices, which are lower than in many other of the bay counties.

Constant improvements are being made in Napa. Though some are disposed to cry "hard times," yet there is no place of its size in the State that is more prosperous or stands on a firmer footing than Napa. Forty or fifty thousand dollars worth of new buildings are now being erected, or will be this season. This speaks well for a dull year. R

Napa, July 3, 1890.

Arizona Notes.

EDITORS PRESS:—The correspondents' page of the RURAL of June 21st skipped! Ay? I, for one, plead: "Excuse me. Too busy." So, too, all round. But we all turn up at the post-office on time, and expect the RURAL to be just the same, whether we help a mite, with our page so generously allotted to correspondents, or not. Arizona is not forgotton; but the average reader of the RURAL, I dare say, is puzzled to know where all those fat cattle come from; and how comes it that a country of climatic conditions such as is attributed to Arizona can produce anything!

Let some reader of history examine the report of Commodore Wilkes, who, under the high authority of the United States of America, reported California a dreary waste, scarcely able to sustain the population then in the country (A. D 1837). Lieut. Cushing says of Arizona (A. D. 1889) that when the resources of Arizona are as well in hand as prehistoric man of the stone age had them, Arizona will be the pride of this American people; will be a garden.

Our Bees.

While the winds of California are "playing sad havoc" with our brother bee men, our alfalfa fields are blooming, and our bees are busy. We can't boast of the big things on the work of a day or a season, but for one year, with another I find Arizona for honey business safer than Southern California.

The reason I know. "I've been there!" Last October, between the 1st and 10th, my bees made a run of storing in honey, filling up very full, after I had very cautiously gauged their supply for their winter use, and I had to go over the whole apiary, to give the queen room to get into winter shape, else spring would have found my hives blocked up with hard crystalized honey.

Our Indians.

Last week a certain gentleman and his most estimable spouse from San Francisco, stopped off for a day or so at our town of Tempe. Soon after taking quarters at the Tempe hotel, a party of Indians rode into town. Our new guest flew, screaming to her room, creating some little attention. Our hotel proprietor succeeded partially in quieting the lady by assuring her that one's person and property were 50 per cent safer in Tempe than in the City of San Francisco or New York.

Our Mormons is another source of supply to the "penny-a-liner."

Not long since, our county had a convocation of teachers, known popularly as teachers' institutes. In the duties of the day a certain young lady reported, read her piece, and represented Mesa City, our Mormon colony. In the evening, at the hotel, a certain lady lately from the East, a graduate of one of those Eastern normals, accosted Miss H. of Mesa City, with:

"And you have been teaching out in the Mormon settlement!"

"Oh, yes."

"Well, do you know," continued our lady from the East, "that I am coming over there one of these days, just to see a Mormon! I have read and have heard so much about them that I really am anxious to see a Mormon."

"Well," replied Miss H., "if just to see a Mormon is the only cause of the trip," rising to her feet with a gentle bow, "I can save you the trouble. Behold, a Mormon! Born of Mormon parents and zealous in the faith; yet I speak the English language and pride myself in our free schools and in being a school-teacher."

Our Eastern lady had really been picturing a Mormon out in her mind as something quite different, but her face turned red, just a little.

Tempe, A. T. GEO. KAY MILLER.

THE APIARY.

Some Bee Talk.

EDITORS PRESS:—A few days ago I made a visit to my friend C——, who is somewhat interested in bees. He had just finished irrigating his garden, and was preparing to put a few sections on the most populous of his hives, when I made my appearance.

"Hello! you are just the fellow I want to see," he exclaimed, as he caught sight of me; "just come here and take a look at this colony. I hived them last Thursday, and I want you to see what they have done in a week."

He gave them a few puffs of smoke at the entrance and then removed the cover, exposing to view a beautiful mass of white-capped honey.

"They have the foundation in both stories drawn out and filled with brood and honey," said Mr. C——. "I took every frame out this morning."

"Yes, they have done splendidly," I answered.

"Don't you think that they are pretty bees?" he asked, as he removed a frame and held it to my view.

"Yes, they are pretty bees surely; they are as well marked as any Italians I have ever seen. Where did you get the queen—one that you raised yourself?"

"Well not exactly," he answered. "Do you remember those queen cells that you gave me last spring, when I visited you? After they were all hatched out I distributed the queens around through the apiary. You gave me eight queen cells, and they all came from the same hive. Well, you know all my bees were pure blacks before I introduced these queens, and there were nothing but black drones here; and how this one queen came to be purely mated I cannot understand. I do not think that she got mated with a drone from your apiary, as it is ten miles from here."

"Such a thing might be possible," I answered; "drones make wonderful flights sometimes, and worker bees, too, for that matter. If I remember right, Mr. H. A. March of Fidalgo, Washington, had bees that went between seven and eight miles away in search of stores."

"How did he find out that they went that far?"

"Why, the bees went across the water to an island seven or eight miles distant; he watched them, saw them go toward the island, took a boat and went there and found his Italian bees there by the hundreds. He watched them after they were loaded up and saw them take a direct line toward his apiary."

"Well, according to that, I should not be much surprised if drones did really go ten miles."

"Yes, I am inclined to believe that bees will mix at that distance, and no doubt that queen of yours was mated by a drone from my apiary."

"I have been bothered considerably this spring by skunks eating the bees, and to remedy this I had to elevate the stands as you see them. I set a steel trap and caught a couple, and since then I have not noticed any signs of their presence."

"Yes, it is a pretty good idea to have your hives off the ground at least 16 inches. When Mr. Schaeffle visited me at Placerville, he told me that he did not like my style of having the hives so close to the ground; it was too handy for skunks and toads. I was never bothered by the toads eating bees, but sometimes by skunks; my hives, as you know, were set only about four inches from the ground; but whenever I noticed the presence of skunks, I set a figure-four trap in the apiary, bated with honey, and I have always managed to catch them. A few good healthy skunks would soon destroy an apiary, as they kill the bees only for the honey they contain, and it takes several thousand bees to satisfy their appetite. I have never caught a skunk in the act of killing bees, and I do not know how they do it."

"Well, I have, and I will tell you," said Mr. C. "I got up early one morning to go to town, and as I went down to the barn I noticed some black object in front of the hive, and upon closer inspection I found it to be a skunk; it was switching its tail at the entrance of the hive, getting it full of enraged bees, and then it would turn around and pick the bees out of its tail, one at a time, crush them between its teeth, some way to get the honey out, drop it and pick up another. I think that a skunk would destroy a great many bees in a few hours. Oh, yes! Mr. W., I have a hive here I wish you would examine before you go; three weeks ago it contained a virgin queen, and this morning I looked at them, expecting to find a laying queen, and instead, I found it infested with laying, or fertile, workers. What do you think I had better do with them?"

"Oh! that will be easy to remedy," I answered; "let me have your smoker, and I will get a frame of larvæ from this fine Italian colony; you bring me that empty hive yonder, and we will set it where the fertile-worker colony stands; we will place this frame of unsealed brood in the empty hive, and carry the fertile-worker colony to a new location." No sooner said than done. "Now let us remove all the combs in the fertile-worker colony but one; we must shake all the bees off, and put nothing but the combs at the new stand; the bees, being mostly old ones, will return to the old location, and the fertile workers will remain with the old hive, at the new location; in two or three days, take the one frame from out of the old hive, and drown the bees that are on it or kill them some way. The fertile workers must be killed, because if they go back they will return to their old tricks again, and the colony soon dwindles out of existence."

"How do you suppose the queen got lost? She was a fine-looking queen, and I remember of taking especial notice of her."

"Possibly when she was out on her wedding flight," I answered; "a great many virgin queens are lost that way. Some seasons I notice as high as 15 queens lost in an apiary of 100 colonies. Sometimes the queen's wings are defective, which prevents her from flying out to get mated; generally, in that case, you will find her in the hive laying drone eggs; but never kill a queen that lays drone eggs, until you are pretty well convinced that she is actually a drone-layer, as many young queens, when first beginning to lay, commence with drone eggs, and keep it up quite awhile sometimes."

"Yes, I have noticed that several times; one queen, that I have, laid drone eggs for about a month before she commenced to lay worker eggs, and I was about to pinch her head off, when I discovered she had been mated. Hello! Mrs. C. is calling; supper must be ready, so let us go."

More of this interesting visit anon.

Grizzly Flat, Cal. S. L. WATKINS.

THE VINEYARD.

Table Grapes on the Foothills.

EDITORS PRESS:—Mr. Whitcomb of Colfax has carried off the honors on table grapes for years past. When in Colfax I visited the different vineyards and orchards, and would like to predict that Colfax will make a record not only in grapes, but in peaches as well this season. Why Mr. Whitcomb has all the notoriety is difficult to understand, as Messrs. Baker, Irvings, Hubley, Harkness and Hanson have equally as fine and larger vineyards.

I found the vineyardists busy, sulphuring, suckering and cutting back. The preferred method of sulphuring was by means of a small box with wire cloth tacked over the bottom. The box was about half filled with sulphur and a sufficient quantity dusted on to each vine by moving the sulphur over the bottom of the box by the hand. It occurred to me that a "Hunter Flour Sifter" would be "just the thing" for this work. The grapes in this section are free from mildew. The sulphuring at blossoming is done to make the grapes set.

All of the fruit and grapes of this section are grown without irrigation, cultivation alone producing the finest table grapes in the State. I think it possible for some of the growers to do still better, as in Mr. Whitcomb's vineyard I saw great clods of earth that would have brought a Sacramento or Sutter county fruit-grower out with his pulverizer at once. That the section does so well with moderate cultivation is proof that it is the right location for table grapes.

I asked Mr. Whitcomb: "What grape is the most profitable?"

"The Purple Damascus."

"Is it better than the Tokay?"

"Yes; it's ever so much better a grape—a fine grape—and once it is known the Tokay will be a drug in the market."

"How about its shipping qualities? Will it open up as fine as the Tokay?"

"Yes, sir, I've shipped them to London and they arrived in the very best condition. Mark my words; for this section the Purple Damascus is the coming grape."

Mr. Hubley is counting on his Emperors making a showing this season. In the past he pruned them too short. Mr. Woolsey of the famous Q ranch of Ione, in an evening's pleasant and profitable conversation, stated in reply to my query as to his opinion of the proper method of pruning the Emperor:

"I think the Emperor belongs to the same family as the Sultana and in consequence the first two buds would not bear, and therefore the canes should be left with three to five buds." Then he smiled and laughingly added, "For years I pruned my Sultanas as I did my other grapes and wondered why I couldn't get the yields other growers did. Finally, in looking up grapes in my 'California Fruits,' I found that all these years I had been cutting off my grapes by close pruning. The Emperor and the Sultana want lots of wood."

Grapes, like other fruits, have a great range of adaptations. Up at Georgetown the altitude is too great for any but Eastern grapes, which do well where even the Mission fails. The Tokay has had the field as a shipping grape, but now, as already stated, Mr. Whitcomb claims the Purple Damascus must excel it. My friend Mr. Felix Gillet, of Barren Hill Nursery fame, took me through his vineyard at Nevada City when his 400 varieties were ripe, and, without knowing the varieties, I selected from taste and sight those that I specially preferred; and this spring Mr. Gillet treated me to one of his pleasant surprises by sending me five rooted grapevines of the kinds preferred by me. They proved to be the White Mal-

voise, Bordelais, Gen. de la Marmora, Chasselas de Port and Ramonia of Transylvania. I want no better grapes than I feasted on in Mr. Gillet's model vineyard. I visited Mr. Gillet at one time near the spring of the year, and he treated me to grapes that were as fine in appearance and flavor as though they had just been picked from the vine.

Murphys, Cal. E. H. SCHAEFFLE.

HORTICULTURE.

How to Dry Apricots.

At the last meeting of the Sutter County Horticulural Society, a committee of five, consisting of Messrs. H. P. Stabler, J. P Onstott, B G. Stabler, R. Davis and R. C Kells was appointed to prepare and publish a series of bulletins on fruit drying. The object of the publication is to reach the small growers who do not attend the fruit meetings and who usually make a very inferior article of dried fruit. The committee claim no originality, but are simply setting forth the methods of the most successful driers in the State.

Allow the fruit to become thoroughly ripe on the tree; pick carefully and immediately haul to the drying ground, where the fruit should be graded into at least three sizes.

Trays for drying are usually two by three feet, and made of sawed lumber not dressed. In cutting use a sharp knife, or a Mosher patent pitter. See that the fruit is cut entirely in two pieces, and not pulled apart leaving a rough edge. As soon as possible after picking, cut and place the fruit on the tray, cup side up.

The fruit is now ready for the bleacher, which consists of a box three by four feet on the bottom and seven feet high, the inside to contain cleats which allow the trays of fruit to slide in. The amount of and time of burning the sulphur are disputed questions among fruit men, but for a bleacher of the size above indicated, a double handful of sulphur ignited on the ground under the fruit and allowed to burn for 30 minutes will be found sufficient. The trays are then placed on the ground in the sun. After two or three days, some driers prefer to bunch the fruit from seven to eight trays into one, leaving a day or two. Before the fruit is so dry that it will rattle on the tray, and while it still has a leathery feel, it should be taken up in the heat of the day and spread about ten inches thick on a tight floor in a room protected from moths by wire screens on the doors and windows. As often as once a day for a week the fruit should be turned with a wooden shovel.

Grade again just before packing. It is then ready for sacking or boxing. Only the best quality of white sacks should be used, or if boxed, the regular 25 and 50-pound boxes are the proper kind. Line the bottom and sides of the box with oiled paper, face the bottom with average fruit and press with a common lever press.

Disease of the Walnut.

The Santa Ana *Blade* gives the following: There is a disease prevalent among soft-shell walnut trees known as the "black knot" which gives the walnut growers some trouble. It is a growth, or rather an accumulation, of diseased wood at the surface of the ground or just beneath it, which if allowed to accumulate will in time destroy the tree. This disease is to the tree about what the cancer is to the human system.

There has been considerable discussion as to the cause of this disease. Some claim that it is produced from a bruise or cut of the trunk of the tree, while others claim that it is caused from an insect of some kind that is working on the affected part. The latter theory appears to be the more plausible one. Dr. Miller, who owns a fine young walnut grove consisting of 19 acres, has made a special study of the black knot, and has from his study and experiments found a remedy that is a sure cure. The first thing he does is to clean the dirt from around the diseased part of the tree, then take a sharp instrument and trim off all the diseased portion of the trunk. To prevent the tree from blowing about and thus aggravating the diseased and weakened portion, he braces it with three or four guy ropes, as the case may require.

Often the entire circumference of the trunk is diseased. When this is the case the Doctor treats one side at a time, always treating the north side first. After that side has healed over he then operates on the south side, taking pains always to protect the diseased portion from the hot sun immediately after removing the diseased wood.

Dr. Miller says he has had about 20 trees in his orchard affected with the black knot, and has succeeded in curing them all. He showed a representative of the *Blade* some of the trees operated on that present a healthy and natural appearance, the abnormal growth having entirely disappeared.

THE PEACH APRICOT.—A prominent fruit-grower of Sutter county in a recent letter to a local paper gives the following opinion of the peach apricot, which is gaining such a reputation in the orchards of that region: "It attains to enormous size, is a regular bearer, a good canner and a splendid drier. This locality seems to be especially adapted to this variety of apricot, while it does not do well in other localities, and vice versa with some other varieties. The Blenheim does well in the coast counties and grows to a good size, but as yet has not grown to be large in this locality, while the Moorpark grows to a good size but is a shy bearer. Hence I think the peach apricot is the apricot to grow in the vicinity of Marysville and in Sutter county. I mention these facts for the benefit of those who are about to plant apricots. As we now hold the reputation of growing the finest peaches in California, I think we can soon gain the same reputation with the apricot, especially when we can grow specimens that will weigh over a quarter of a pound each."

Olives in the Foothills.

EDITORS PRESS:—Three years ago we decided to transform our very poor grain field of seven acres into an olive orchard. The soil is red, sandy loam—lava formation, not more than 18 inches to 3 feet in depth, underlaid with rotten sandstone, and originally covered with a thick growth of chaparral and manzanita. After seeding for hay about ten years, it really no longer paid for seed and labor.

We could not afford to buy many olive trees, so we began with 200 very small ones—one-year-old cuttings—none of them a foot high, and the stems scarcely as large as a slate pencil. These were planted out in March of 1887. In July only three or four had died, the rest making a most vigorous growth.

One day, however, about 30 were killed by irrigating while the thermometer was at 103°—scalded, I suppose.

The second year they made an astonishing growth, and now most of them are over seven feet in height, with stems from two to three inches in diameter. About ten of them bloomed the latter part of April, and now have fruit.

No sign of scale appears, and we scarcely fear that pest in this hot, dry climate.

These trees were irrigated four times the first season, three times the second, and twice last summer. They have also been mulched twice with about a wheelbarrow load of stable manure to each tree. JESSIMA LEIGH.

Butte Co., June 27th.

[It would be an ungrateful tree which would not grow under such generous treatment.—EDS. PRESS]

LATE ORANGES.—There are many of the older and more experienced orange growers in California who are turning their attention to the profit in oranges that come into the market late in the season. After four yoars of almost exclusive planting of Navel oranges we find the sentiment is growing that the Mediterranean Sweet or Valencia are really the best oranges for profit to be planted. The great demand there is always for oranges in the months of April, and especially May, has caused the change in opinion concerning the Navel orange. J. DeBarth Shorb of San Gabriel advised a Pomona fruit grower the other day to plant Mediterranean Sweets. He argued that this variety of oranges kept better, hung on the trees weeks longer than the Navels, were always popular and were very abundant bearers. He said he sold, two weeks ago, Mediterranean Sweets from five acres for $2.55 a box, and the net profit was nearly one-third greater than for Navels at $3.50 a box. Mr. Shorb believes that the Mediterranean Sweet will always be the best-selling orange there is, and he quotes the fact that it has sold in Chicago and St. Louis for weeks at a better price than the far-famed Navel.—*Pomona Progress.*

THE FIELD.

Wheat Sown too Deep.

A Report From the Oregon Experiment Station.

On the 28th of April last, John S. Vinson of Nolin, Umatilla county, Or., addressed to following letter to B. S. Pague of the U. S. Signal Service, and Oregon Weather Bureau, Portland:

SIR:—I send you a sample of growing wheat, and am willing to expose my ignorance in the effort to assist in discovering the cause of so much trouble in raising wheat in this section. You will notice the grain started to grow, but for some cause the growth was checked, and new roots were sent out from the stem, the old roots dwindling away. I think the grain was put in the ground too deep.

If I am right, this will account for the poor stand obtained on old mellow soil, as it would require very favorable seasons to produce crops where two growths are necessary.

Please let me know your opinion of the causes of the second growth, and if it is the best condition to produce crops.

I am not an experienced farmer, nor do I find any one that is able to enlighten me on this subject.

We expect a very fair yield of good quality, of all kinds of grain, but fall-sown grain is not a good stand.

Mr. Pague promptly referred the matter to Prof. E Grimm, director and agriculturist of the Experiment Station at Corvallis, who reported as follows:

Prof. Grimm's Report.

The wheat plants sent me I find not unlike some grasses which I have observed growing in the arid regions of Colorado. The leaves of the plants are attenuated, and the bleached appearance of their lower portions show that they were covered with soil to the depth of 2 to 2½ inches. The plants showed two sets of roots, one of which was at the base of the leaves and the other set from 1½ to 2 inches lower, and which had started from the seed, as is easily shown by the old seed which remains. This would place the seed at the depth of 3½ to 4½ inches. It has been found if wheat be sown too deeply germination is impaired, and often re-rooting takes place at the upper joint and the parts of the original stem and roots die away, thus causing great loss in the vitality of the plants. With fall-sown grain this evil is usually corrected to a great extent, but spring wheat is always weakened, as there is no time for the plant to remedy the evil. In loose soils, and where the rainfall is light, the danger of deep planting is greater than with retentive soils in moist climate, as the moisture required to mature the crop must be husbanded in the former case, and the plant rushed through its different stages of growth as rapidly as possible. It has been found by carefully conducted experiments that wheat planted at a depth of one-half inch will come above the ground in about 11 days, while at a depth of 3 inches it required 20 days, and at 4 inches 21 days to come to the surface. These figures will vary in different soils and under different climatic conditions, but it is evident that in a dry climate depth of planting is an important consideration as regards the length of time required to push the plants through their first and most critical period of growth. In Umatilla county the effect of deep planting would affect the fall-sown grain similar to spring-sown grain in the Willamette valley, as the time lost in Umatilla county with fall grain would extend the time of root development so long that evaporation from the soil directly and exhalation from the plants would exhaust the soil moisture and not give the plant sufficient time to rectify the evil.

This is especially true in comparatively dry climates. It is to be remembered that for every one pound of dry matter stored up the plant has evaporated 300 pounds of water, and for an average crop of wheat, or barley, or grass, there would pass through the plant 700 tons or seven inches of water. It is evident from this that when soil moisture is limited as in Umatilla county, deep planting would be next to ruinous to the crop. One or two inches would be the best depth of planting; beyond this the wheat is liable to joint rooting, as just noticed, and besides losing much time in coming up, they become thin and attenuated and do not stool or tiller, or if so this process is weak and irregular. Lateral buds spring from the axils of the leaves, and as the growth of one succeeds that of another, upward decay and irregularity in the growth of others is the result. If only the upper bud succeeds as was the case with the specimens sent, much time is lost by decay of the lower part and the formation of a new system of roots. In this case I do not think there was sufficient soil moisture to supply the water which a large leaf surface would require, and hence the condition of this crop observed.

In transmitting the above, Assistant Director Pague adds:

Questions relative to soils and products, effect of climate on same, etc., will be gladly answered if submitted. It is one of the main objects of this Bureau and of the Experiment Station at Corvallis to enlighten the soil-workers upon any questions that may arise in their occupation relative to soil, climate, productions, insects, and the like.

Hay Rakes.

EDITORS PRESS: An important point in hay rakes was brought to my attention by Mr. Morris of Yolo. When cutting volunteer hay the old stubble has been a serious damage to the crop. A wire rake gathers all. Mr. M. has lately started in with an acme rake, such as is advertised by Byron Jackson. He finds that it rakes the hay all right, but that the stubble drops down between the teeth, as it works back toward the wheels. This leaves the hay clean and bright as though it had been sown on purpose.

Mr. Morris claims an important advantage over driving the horses, as illustrated in Mr. Jackson's cuts, by placing a boy on each. When they come to the winrow, the bunch or the stack, instead of backing out, each boy turns his horse about and drives the other way, easily making short turns in any direction desired.

Mr. Morris is a very practical and successful farmer, whose enthusiasm in behalf of this new departure in hay-making will be of great advantage to the manufacturers. F. S. C.

POULTRY YARD.

Growing the Mongolian Pheasant in Oregon.

EDITORS PRESS: — Regarding the Chinese Pheasant, I am having extra opportunities of observing their ways and manners and customs while young. We found a nest and set the eggs under a domestic hen, and now have 12 China pheasant chickens, five weeks old, running at large with the hen the same as any chickens. They are as tame as ordinary chickens, but their native disposition for running and hiding is still there. They are funny little fellows, and act like little turkeys, only they are more sprightly and comical. They come home regularly to their roosting coop at night, or in case of a storm, and appear to appreciate shelter and something to eat as well as their more civilized cousins. But they eat—like the "Shanghai chicken" of the old song, they "eat most anything they can overhaul." They are "rustlers for grub," as a miner would say, and the vineyardists and fruit and berry men, and market gardeners of California will be able to recognize that characteristic whenever they become plentiful in that State. They will eat grapes now (and the grapes are not bigger than peas), strawberries, cherries and nearly everything else in the fruit or vegetable line. They eat all kinds of insects as well, and as active and vigorous birds must, who get around as much as they do, consume large quantities of food. They are constantly on the go, and to say of them that they run with the hen is hardly correct; the hen runs with them, that is, when she can keep up. But they are of no practical use. We have plenty of other birds which do all their work without their destructive habits. The quail is very much preferable. But we have got him, and there are still men foolish enough to want to introduce him into other places. They are welcome to do so, so far as my consent goes. I wish they would take away all there are around here.

Aumsville, Or. F S. MATTESON.

How I Glutted the Egg Market.

"I have made the hen a study for many years and love to watch her even yet as she resumes her toils on a falling market year after year."—BILL NYE.

EDITORS PRESS:—This pathetic sentiment wakes a mournful echo in many a heart.

I have had the usual experience, fired by glowing editorials in local papers on the "Profits of Poultry-Raising." I made calculations on envelopes and newspaper wrappers, figured up a fortune, started into the business with ardor, kept scientific book accounts, found that the outlay was considerably more than the income, that hens would lay only when the price of eggs was at the minimum, and then—gave it up and left the incorrigibles to shift for themselves.

This spring, however, most of my 40 hens being young, they astonished me by laying several dozen eggs more than we could possibly consume at the table. This encouraged me somewhat. I even sold enough to come to $5.40 when eggs were at 15 cents. Then the price advanced to 20 cents, and those hens with one consent immediately stopped laying without even a cluck, posting up a notice on the poultry-house door, "On a Strike."

I know that hens *ought* to "cluck" when they leave off laying, so I set about searching for the reason why. I found it. I had left the care of feeding to alien hands, and my 40 hens only received a dole of one pint of wheat morning and night. I found two or three sacks of middlings that were left over from last year's hog feed, and began to experiment.

I mixed five pounds of middlings with sour milk, adding a tablespoonful of cayenne pepper, feeding this once a day in addition to their grain. The result was marked and delightful. For a month I had received one or two eggs a day, but under the new regimen the egg supply gradually increased to 20 eggs per day, *within ten days.*

We now eat eggs three times a day, and I took twelve dozen to market (the country store) yesterday, receiving 25 cents per dozen.

Pentz, Butte Co. JESSIMA LEIGH.

Raising Chickens.

EDITORS PRESS:—As the season is far advanced for an article on the raising of young chicks, yet I deemed a few thoughts would be appropriate for the later hatches of the season, and especially at a time, too, when fowls have not the vitality and vigor that they have earlier in the season to impart.

In the first feeding of young chicks, care should be taken not to give them soft food. We boil an egg *hard* and mix it with oatmeal and have it as dry as possible, and feed with that kind of food during the first week, and when the chicks begin to pick up wheat, feed with dry wheat the last feed at night, or with cracked wheat, which is better. The water in the drinking vessels should be changed quite often during the day, and the coops ought to be cleaned daily. By following the above methods, there will be but few losses by disease.

We commenced late in the season to raise chickens, and have 75 or 80 chickens, and have lost but two from disease. Although it is late, we are still hatching as fast as we can get hens to sit. I will add that we never let the hens out of the coops with the young chicks in the morning, when there is a heavy dew or when it rains. O. F. SHAW.

Soquel, June 30, '90.

DIFFERENCE IN TIDE LEVELS NEAR NEW YORK.—Observations of the tides of the Harlem at Forham Landing with those of the Hudson at the mouth of Spuyten Duyvil Creek show that the level of mean high water in the Hudson is nearly a foot lower than in the Harlem, and that the mean rise and fall of the tide in the Hudson are a little more than two feet less than in the Harlem.

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

Think up Your Plans.

While you are busy in harvest time and Grange meetings are slack, Patrons, just try to keep your eye on the main chance, thinking and planning for extra good services in reviving Grange work when harvest is over.

Owing to severe and long-continued rains, farming was delayed through our past winter; work being belated in the winter, made our farmers very busy in spring and early summer to catch up. Otherwise, we believe much more time would have been devoted by zealous Patrons to forwarding Grange interests this year. So just keep the matter in mind, brothers and sisters, and have your plans ready for some splendid work in August and September before the State Grange meets. Write out some good suggestions for the RURAL PRESS and then follow them up.

Election is Approaching!

EDITORS PRESS:—As another election is close at hand, the question naturally comes up whom should we elect to make laws for us? The farmer says we have too many lawyers and politicians in the Legislature to expect much good for him.

Who is to blame for this but the farmer? Things will be so just so long as the farmers stay at home from the primaries and allows politicians and saloon men to fix up the ticket for them to vote.

Now, brother Patrons and farmers, suppose we stop this grumbling because somebody don't do something for us, and try to do something for ourselves. We as Patrons have been trying to educate ourselves and our sons in the Grange to be able to fill positions of public trust, either as delegates or representatives in the halls of legislation, and I think we have succeeded in fitting a sufficient number to represent us, if we only put them forward. If we are ever going to do anything in this way for ourselves, why not now?

Well, then, begin now to think and talk together as to whom you want to put forward in your party to represent you, and do not stay at home, but go to the primaries and elect none but a good, sober, industrious man as delegates to your county conventions, and you will have done a day's work that will be worth more to you than any other you have done in a long time. Don't say that you have no time except to go to the general election—that is too late! Don't trust yourself in a structure built on a rotten foundation; but let us all come out and, as good citizens, do our duty to ourselves, our families and our country. V. W. S.

Highland Ranch, June 30, 1890.

[This timely plea commends itself to every thoughtful reader, and we desire to add our hearty endorsement to V. W. S.'s cogent appeal.—EDS. PRESS.]

Stockton Grange Up and Doing.

The Children's Day, mentioned in the PRESS last week, was decidedly a success and the surprise complete. The happy faces of our children, with their bonbons, flags and national bags of good things, were indeed a pleasing sight. The Grange hall was beautifully decorated with flags of all sizes, filling the room and all present with enthusiastic patriotism. The exercises commenced with a march by the children in their different-colored caps, and embraced music, recitations and songs, closing with another march. The older members indulged in speaking, discussed the merits of the Grange, and came to the conclusion that the day could not have been better spent nor the children been much happier. The committee then furnished everybody with delicious iced lemonade, which was greatly enjoyed, and thus closed the Children's Day.

Stockton Grange has taken a new departure and instituted a series of open meetings on the first Saturday in each month, to continue through the summer and fall, the last one to take place the first Saturday in November. Members from the different Granges in the county have attended and assisted in these entertainments, and many, not members of the Order, have voluntarily offered their services.

It is hoped that good results will attend these meetings, that the brothers and sisters of neighboring Granges will continue their interest in them and take part with the sisters of Stockton Grange. NATHAN T. ROOT, Sec'y.

Stockton, July 6, 1890.

WILL Brother Nash, Master of Hollister Grange, and Worthy Overseer Roache correspond with the officers of Gilroy Grange and if feasible unite in a visiting and revival meeting as soon as harvest work will permit?

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

The propriety of holding political conventions under the auspices of any secret or fraternal organization is very questionable. Our Order is doing well. Its influence is most salutary and effective. With the profoundest regard for the Grange and its individual membership that proposed to have a convention of Masters and Past Masters for political purposes, I feel that I have no authority as Master of the State Grange to call such meeting, and as a private citizen I most certainly decline to take such action. Let the Patrons of Husbandry do their full duty as citizens and political parties and conventions will not *dare* to trespass on the rights of the agriculturists. Farmers, do your duty. Be honest, be just and fear not. Dare to do right regardless of politicians, parties or conventions. Be men of America. Vote as you think!

The Childrens' Day picnic at Sebastopol, June 28th, was a grand success. Bros. Past Masters David Flint and S. T. Coulter, with a host of enthusiastic Patrons, were present. All had a good time and the day was profitably spent. Long life to Children's Day!

Sonoma County Grangers will hold their next Children's Day jubilee at the splendid Grove and hall of Bennett Valley Grange on the Fourth Saturday of June, 1891.

Subordinate Granges in this jurisdiction will, before this is read, have received from Pomona Grange of San Joaquin county a copy of a proposed election law. Let every Grange examine it with care, and if found deficient in any particular send amendments to the Secretary.

The several committees heretofore appointed by the Master of the State Grange have some very important work to do. The trust that is in their keeping is more responsible than they may think. Let the Chairman of each committee go at once to work. Consult and prepare a report, so that when the State Grange convenes no time will be lost in waiting for reports of standing committees.

There is some talk of the organization of a Grange at Glen Ellen; also at Forestville, and at Healdsburg. All these towns are in Sonoma county.

What can be the reason our Worthy Steward—Bro. W. W. Greer—does not give us some of his hot shot?

The railroad company proposes to give reduced fare to all who attend the State Grange next October. Patrons, prepare to be with us at Watsonville the first Tuesday in October. Save your pin-money, sisters; and brothers, lay by a few spare dollars, for we want to see you one and all.

Sister Ceres lately sent to the readers of the RURAL a communication that is a credit both to her pen and to the station she holds in the Grange. Favor us often, Sister Sanders. We enjoy such mental bread.

Be strong of heart, be steadfast of purpose, and the Grange will prosper.

The Fourth of July has slipped by us, harvest is well along, the crop is fairly good, and why not do a small share of work for the Grange? Remember one good turn deserves another!

Santa Rosa Grange has just elected two candidates and has three more at the outer gate.

Remember, when you go to the State Grange, to buy a *first-class unlimited* ticket to Watsonville, and be sure to *take the agent's receipt* for the money paid. If you do this, you will get home at *one-third* the regular fare.

Worthy Pomona's season is close at hand. Our Patrons will be pleased to read something from her pen on the subject of fruits.

The Grange will *never die*, provided it is constantly supplied with young, vigorous, intelligent new growth. Bring in the best material in your neighborhood, and *especially* don't forget the boys and girls over 14 years of age.

Sister Kinney's address to the members of the Order on the sphere of woman and her work in the Grange deserves to be read and favorably acted upon by every subordinate Grange in California. Think, sisters, of your opportunities, and having thought, then *act*.

The Morrow County Alliance of Ohio have "*Resolved*, that *no elective officer in that county should have an annual salary of more than* $1000." How that sort of fee bill would knock out candidates for office in California!

Facts don't fit where lies prevail.

Will the farmers of this State see to it that the coming Legislature pass some law that will bring relief from the burdens now borne by all persons who patronize insurance companies? It would seem that a healthful competition in the insurance business would not be a bad thing for all classes of people who are now insuring property from the dangers of fire.

A Visit to Salinas.

BY PAST MASTER STEELE.

DEAR BROTHER:—In company with my grandson, Ira Steele, I drove to Santa Cruz, June 27th, on the way to meet with Salinas Grange on the 28th.

Meeting Bro. Pilkington, W. Sec'y of Santa Cruz Grange, I was in consultation with him about Grange revival in that section until close upon train time—which had been changed, without my knowledge, from 4:50 to 4:45 P. M.; so I missed the cars by two minutes, which was a great disappointment.

A telegram to Bro. Hill informed the Grange of our mishap and of the hour we would arrive. Bro. Hebbron, W. Sec., met us at the train and we were kindly provided for during our stay at Salinas.

Bro. Cressey arrived from the south in time for the afternoon meeting, which was called to order by W. M., Hill at 2 o'clock. Bro. Cressey remained just long enough to give a short address, full of mirth at first, followed by telling points, with a vigor peculiar to his earnest nature. It must have cost him considerable effort to attend this meeting, as he left the regular train and traveled on a slow train, far into the night to reach his home.

After he left I presented such facts and thoughts as seemed to me suited to the occasion. It was an open meeting, but the attendance was not large. Those present gave good attention and appeared to be interested.

W. M., Hill presided with dignity and ease He introduced the speakers in well-chosen words, expressing kind appreciation, and entertained the audience most acceptably after my address.

W. Sec. Hebbron also made timely and interesting remarks.

I accompanied Mr. Edwin St. John on a very pleasant drive across the Salinas river over one of the long bridges built by Monterey county. There are four of them constructed by the San Francisco Bridge Co. at a cost of about $10,000 each. The Salinas is a dangerous stream to ford on account of quicksands.

The wheat and barley is fine in this portion of the valley. Mr. St. John estimates the yield from Soledad to Monterey bay at three-fourths of full crop. We visited the fair-grounds and saw a fine lot of young horses being trained for speed.

There are many nice buildings in Salinas. The town is growing and appears prosperous. Farmers are now very busy with their harvest. I intend to visit them again later, when they have more leisure, and hope for good results. Fraternally, I. C. STEELE.

What San Miguel Purposes.

EDITORS PRESS:—San Miguel Grange has decided to take a vacation through the hot weather and harvest time, and reopen on the third Saturday in August.

We have planned our campaign for the vacation. Through our local papers, personally addressed circulars and individual conversations, we are going to try to reach the farmers of our community and get them "in touch" with Grange principles.

When we reopen we propose to have our regular business meeting in the morning and an open meeting in the afternoon, with short addresses, recitations, music, etc., to which all farmers and their families will have a cordial and pressing invitation. I trust we shall gather in a harvest for the Grange. In September we expect to give an entertainment for the financial benefit of the Grange. Like every other enterprise, the Grange can be made a success only by enthusiasm and labor. Fraternally, EMMA A. FISK.

San Miguel, July 7, 1890.

THE OBJECT OF ALL DISCUSSION ought to be the elicitation of truth, and whenever argument is resorted to for the purpose of confirming us in preconceived beliefs, the true ends and aims of reasoning are defeated. We should approach every subject with an unbiased mind, prepared to accept the truth as demonstrated by the facts adduced. We should weigh carefully whatever is worthy of consideration, and then conclude, and not follow the common practice of first forming a conclusion and then casting about for arguments to bolster up a belief that has no logical foundation. There is great pertinency in the remark of an old theological writer, that "Two-thirds of the people do not know what they believe, and one-half of the remaining third do not know why they believe as they do."—*Farmers' Friend.*

NON-RESIDENT ALIENS IN IOWA.—Judge Kavanagh of the Polk county District Court, Iowa, has rendered a decision that an alien can acquire by inheritance no right or interest to real estate in that commonwealth. On Sept. 10, 1889, Bernard Callan, a resident and citizen of Iowa, died in Polk county, leaving a small amount of personal property and several parcels of real estate. He left no widow or children surviving him but several remote heirs in the State of Massachusetts and several others who are citizens and residents of Great Britain. Claims were filed against the estate, to the allowance of which the foreign heirs objected. The claimants contended that the foreign heirs had no standing in court, for the reason that they are aliens and their objections should not be heard. The Court coincided in this view. The law passed by the 22d General Assembly prohibits non-resident aliens acquiring title to, or taking, or holding any lands or real estate in this State by descent, devise, purchase or otherwise.

Sebastopol and Santa Rosa Granges.

BY PAST MASTER DANIEL FLINT.

EDITORS PRESS:—On Saturday, June 28th, W. M., Davis, his two children and the writer went to the picnic at Sebastopol called the "Children's Day." For the sake of independence in going and returning at our convenience, we chose to drive over in a comfortable carriage behind a strong horse.

The roads were good, and we passed many a fine farm with large orchards and improvements.

Sebastopol has the honor of being the terminus of a broad-gauge railroad of which they seem very proud.

The picnic was held on an elevated piece of ground, thickly covered with young oaks, pines and madrona trees. With a little thinning out it will make a fine grove. On arriving, we found a large platform erected and the exercises in full operation. We were escorted to prominent seats and listened to a well-selected and well-rendered program, all except the instrumental and part of the vocal music being by the children. Some of the features were decidedly novel. One was called "The Ten Lazy Boys," and to enact it in a realistic manner, one of the ten was so lazy that he did not get there on time and the Chairman had to pass it for awhile. The ten boys stood in a row, each holding some instrument or implement. No. 10 recited his part or verse and sluggishly manipulated the saw; No. 9 the ax; No. 8 the hoe, etc., then all rested in concert. It caused a good deal of merriment and received more applause than any other piece.

The singing was good, and the persons who took part in training the children deserve a deal of credit.

The children appeared to enter fully into the spirit of the occasion.

The wind seemed to blow right down from the tops of the trees on to our heads, and as Bro. Davis and myself carry around small specimens of our skill in tanning, we feel grateful to the sister who saw our peculiar situation and suggested that we replace our hats.

We had so many invitations to lunch with the Granger sisters that we were in a dilemma just how to act. Finally we followed those who had the largest basket and most boxes, and did not err in our judgment.

After lunch we were called on for remarks, when Bros. Davis and Coulter made some stirring speeches.

The audience on the platform was dismissed, and invited out to participate in the contest for prizes which were quite numerous.

There were a goodly number present and the young folks seemed to enjoy it greatly.

The Children's Day bids fair to become an important event.

The same officers were elected to take charge of it one year hence, in Bennett valley.

The members of Two Rock Grange wore their badges which, I think, a fine feature at all of our picnics. It advertises us and shows we are not ashamed of our Order. Let badges be worn at all Grange picnics next year. I staid with Bro. Davis and his father three nights. They have a fine farm in Bennett valley.

One gets a very good view of a part of Santa Rosa valley in passing to and from the Davis farm. I can see that the town and valley is improving every time I make it a visit and I predict this will be a favorite place for private residence on account of its climate and public schools. The fog that rises over the coast hills has a tendency to cool the air and make the evenings delightful. The streets and roads are paved and graveled, making nice drives for the fine turnouts I saw on the streets.

By previous invitation I attended Santa Rosa Grange on Tuesday, July 1st. I hardly know how I could have spent the time more profitably and agreeably than in attending a Grange like this. In their invitation they said they wanted me to give them a good long talk. I gave them a long talk, but as to its quality, there may be various opinions. I must give them credit for being a well-bred and forbearing people, for they showed me the courtesy and patience of over an hour's listening, and they did the honors of the Grange in good shape, too. Past Master Coulter and two or three other brothers were appointed a committee to escort and introduce Bro. Davis and myself to the Grange, when we accepted the proffered seats beside the Master.

I felt a little encouraged when I saw Sister Le Boyd there from Elk Grove, and when she was called on to entertain the Grange, she did not make any apology for nothing to say, but got right up and gave them an offhand recitation, which was favorably received.

After lunch, which was both choice and ample, Bro. Davis was called on as Master of Ceremonies. I never saw him more at home and in the true elements of a Granger than today. He was the life and soul of the Grange, and roused enthusiasm in all present by his eloquence and earnestness.

Bro. Coulter made some excellent remarks on

taxation, the one-tax theory, election of U. S. Senators, etc.

Ex-Senator Hinshaw of Sonoma Co. spoke in an interesting way on the ways and benefits of legislation, as well as some of the attendant evils. He gave great credit to every Granger in the Legislature, and believed they were there for the very best of motives.

The young Master of Bennett Valley Grange, Bro. Crane, was listened to with attention. Bro. Carr, the veteran of Bennett valley, dropped some good words of encouragement. Sister Huntly gave several stirring pieces of music, which greatly helped out the entertainment. Several others contributed, whose names have have just now escaped me. The meeting was well attended, and great interest was shown in the exercises.

I expect nothing but success from Santa Rosa Grange, from its surroundings and talented members. Let us hear more often through the RURAL PRESS. D. F.

Stanford's Loan Bill.

EDITORS PRESS:—May I express my opinion on Senator Stanford's Loan bill?

It may be a good thing for some small farmers, but I think it will be more help to the rich land-owner than the poor man. It may help in Eastern States, but in the section of California where I live, I can't see much help in it for the farmer who owns 80 or 160 acres of poor land, and nothing at all for the man who rents.

Here land is assessed at from $12 to $20 per acre. The bill gives you half the assessed value; that would be $6 and $10 per acre. Now on 160 acres you would get $960 at $6, and $1600 at $10 per acre. There are but few farmers here who would want so small a sum of money. Few places are mortgaged for less than $2000, and on up to $5000. The rich man with land assessed at $50 to $100 per acre, would reap the harvest. He could borrow money at two per cent on 160 acres or 200 acres of land, and loan it to his poor neighbors at five or six per cent, and maybe a higher rate—it would be according to how tight a pinch the poor farmer was in, or it need not go to a farmer. You may loan to whom you please after you get the money in your hands.

This is taking only a small amount of land for a rich man, but take thousands of acres, as some own here in this State, and see what a harvest it would be! We would soon have millionaires in California as thick as grasshoppers. Stanford put a limit on the down-grade at $2.50, but he overlooked the more important part, the up-grade. In my opinion, there should have been a limit fixed there, say $5000 or $10,000 to any one farmer. It looks to me as if that would be enough of Uncle Sam's money to speculate on.

Most Eastern farmers try to get out of debt. In California we don't care. It rather looks like the more you are in debt, the smarter business man you are.

Now how is Stanford's bill to help us? I think it would make us more extravagant. Then I wager Bro. Snow would buy Betsey a new gown and take her to the State Grange! Maybe I don't see the best side of the bill.

BROTHER TOM.

Letter Notes.

From Past Master Overhiser.

I like the PRESS well. It fills the bill as an agricultural and Grange paper, and I will try to send you some subscribers.

From Worthy Master Davis.

Bro. Flint and I were at Sebastopol Grange 28th ult., and he spoke before the Granges of Sonoma county at Hahman hall, Santa Rosa, the 1st inst. His speech was splendid and will do good. I never heard him do better. There is prospect of several new Granges yet this fall. How is Galt Grange? Can anything be done for Lincoln?—[Cannot some of our good Roseville brothers and sisters note the above and with Wheatland Grange get up a union meeting and fraternal visitation at Lincoln? Some of the old members of Lincoln will help arrange for the gathering?—EDS]

FOURTH OF JULY PICNIC.—Temescal Grange enjoyed a fine day's outing at Oak Grove on the Fourth. The ride to and fro was a pleasant one over the new California and Nevada railroad route. Major Edwin Sherman, secretary of the Alameda and Contra Costa Co. Pioneers, a true and zealous patriot, made forcible and telling remarks, which were loudly applauded by the representative Patrons and Pioneers present. He also exhibited a rare relic to the audience—nothing less than a miniature bell made from metal taken out of the original Independence Bell of Independence Hall, Philadelphia, at the time the attempt was made to repair the crack in that old "Liberty Bell." Nearly every one declared they had a good time. Some mistakes were made which will not likely occur again with Temescal picnic arrangements, one of which caused a lack of time and of a sufficiently numerous rural audience for setting forth the grand principles of our Order to advantage. Financially, the enterprise was a success, the funds received being sufficient to meet expenses for band, printing, advertising, etc. The Grange returns thanks to all attending friends.

A thought is valuable both as a present and as a keepsake.

The Australian Plan of Voting.

A copy of the following circular letter has lately been addressed to every subordinate Grange in California:

The undersigned Committee, who were appointed by the Pomona Grange of San Joaquin county to prepare a form of ballot law after the Australian system, herewith forward to you for your consideration a copy of a law so prepared, the same being approved by the said Grange, and hope you will carefully consider the same, and after due consideration, if you have any amendments to offer, please write them out, by reference to sections, and return the same to the Secretary of the Committee at as early date as possible that we may prepare a bill embracing the amendments offered as near as practicable; same to be submitted for consideration at the next meeting of the State Grange. Fraternally yours,

J. D. HUFFMAN,
Secretary, Lodi, Cal.
E. FISKE,
W. L. OVERHISER,
Committee.

The proposed law is so nearly identical in its provisions with that formulated by the Federated Trades, published in full in the RURAL PRESS of January 26, 1889, and subsequently mailed as a circular to the various Granges, that we deem it unnecessary to reproduce it at the time; but the subject is one of deep interest to all loyal citizens and friends of good government, and we presume the committee will furnish copies of the bill on application.

In Memoriam.

Malachi Jordan, who died June 23, 1890, was one of the old settlers of San Joaquin county, and had done much to develop its agricultural resources. He joined Woodbridge Grange when it was in its infancy, in 1875. Those who knew him speak of him as a true type of "God's noblest work, an honest man." The following preamble and resolutions were adopted July 5, 1890:

WHEREAS, It has pleased our Heavenly Father to remove from our midst our worthy brother Malachi Jordan, we bow our heads in humble submission to Him who holds in His hands the destiny of all; and

WHEREAS, By his demise, his family has lost a loving husband and a kind and indulgent father, the Grange a worthy member, and the community an old and respected citizen; therefore be it

Resolved, That we extend to his bereaved family our most sincere sympathy and condolence in this their hour of affliction.

Resolved, That the charter of this Grange be draped in mourning for the period of 30 days.

Resolved, That these resolutions be spread in full on the minutes of this Grange, be printed in the PACIFIC RURAL PRESS, and a copy be sent to the family.

BRO. E. G. WILLIAMS,
BRO. E. J. MCINTOSH,
SISTER M. A. WHITE,
Committee.

Granges Reported.

The following Granges have reported to June 30, 1890: Carpinteria, Danville, Enterprise, Eureka, Hollister, Lodi, Magnolia, Merced, North Butte, Pescadero, San Miguel, Sebastopol, Stockton, Tulare, Two Rock, Valley, Watsonville, West San Joaquin, Wheatland, Woodbridge.

KELSEYVILLE GRANGE.—This Grange, in Lake county, formerly had 90 members. Some 45 of these have died or moved out of the county. Quite a number of those remaining are anxious to have the Grange revived, and with the help of new members, we expect Kelseyville Grange will soon again be in good working order. Success to those who are laboring for it. Parties interested can address W. C. Coffin, Kelseyville, for further information.

IF brethren in Fresno or Tulare county will do a little canvassing, we are confident a good, substantial Grange can be organized at Centerville, in Fresno county. Why should there not be new Granges at Sanger, Traver and Porterville? Visalia Grange should be revived in full force before the next State Grange. Who will stir up and organize a plan for instituting at least a dozen new Granges this season in Tulare, Fresno and Kern counties?

HOLLISTER Grange is to have a visit from Bros. Cressey and I. O. Steele on Saturday, August 9th. How would the W. M., W. O. and members of Gilroy like to have these old patriarchs cheer up a rousing farming meeting at Gilroy on Friday, the 8th? Now is your time to invite them. Get some new candidates ready for them to finish.

FARMERS' TURNOUT IN KANSAS.—The Farmers' Alliance and other kindred organizations united in a grand demonstration at Emporia, Kansas, on the 5th inst. The procession was five miles long and over 20,000 people were in attendance.

CARPINTERIA GRANGE, it will be remembered, has changed the date of its meeting and picnic from July 17th to Thursday, August 14th, on account of the ripening fruit which must be taken care of during the current month.

EVERYTHING bids fair for a large attendance and an interesting season at the Watsonville session of the State Grange.

The Grange cordially invites every farmer and his wife and children to enroll their names on its roster.

OREGON.

Crops and Grange in Umatilla.

EDITORS PRESS.—Umatilla county has been favored with a splendid season so far. Wheat in the vicinity of Helix, Adams, Pendleton, Athena, Milton and Weston, will make a fine crop. Continued cool weather, with frequent showers, has been all the wheat-grower could ask. The grain promises to be of the best quality, and the yield up to the average. The same cannot be said of other parts of Eastern Oregon, as the rainfall seemed to go in streaks, and in portions of the country that were not favored with early rains, the crops are not so good.

Hay harvest is progressing very well. This is a delightful climate for the curing of hay, seldom, if ever, a shower or dew during harvest. Heading will not commence before the 15th of July.

Juniper Grange

Held a meeting on the 28th. A good attendance was noted, and a progressive spirit was manifest among the members.

Umatilla Pomona Grange

Meets with the Weston Grange July 5th, and a large attendance is expected. At the last meeting of the Pomona Grange it was determned to erect a building at Helix, the lower room to be used as a store, the upper room for a Grange hall.

One of the most important questions demanding the attention of the Grange is the prices that we receive for agricultural products. Whenever circumstances arise that interfere with the rights of producers to market their grain, so as to deprive them of the profits legitimately arising from their labor, some steps should be taken to help relieve the oppressed. I know the idea is prevalent that we can do nothing in that line, but such is not the case. Note the advances that have been made in the last decade by the Grange and kindred organizations, in the way of educating the great army of producers. Where mistakes have been made lessons have been taught, and the breakers can be avoided, to a great degree. If the coming decade is marked by like advancement among agriculturists, accompanied with the experience of the past, great changes will be noted. The progressive spirit of the American people will not allow them to remain in quiet or go backward, and when the expenses of any country or community are greater than their income, bankruptcy is sure to follow. Statistics conclusively show that the producing classes are not enjoying the profits that rightfully are theirs: Corners in produce of all kinds, second and third hands getting immensely rich off the business we create, while the same cannot be said of the farmers. This inequality has wrought sore oppression—oppression as broad as the United States. The same cry comes up from every country. Our cause looks no more doubtful than did the cause of the colonists when the first gun was fired at Lexington, as the same independent and progressive spirit is still to be found in the American people. I believe some of these wrongs will be righted, class legislation will be corrected, by the uniting of the class oppressed. By common consent must this burden be removed.

Helix, Oregon. W. A. S.

A Paramount Question.

Oregon farmers have talked long and loud about agricultural depression. They have discussed the subject on street corners and in Grange-halls, advanced theory upon theory, and adopted plenty of preambles and resolutions. Even politicians have taken cognizance of and studied the all-important subject. Secretary Rusk says:

No possible relief can come to our farmers or to the country, no permanent remedy for present ills is to be found in measures which are rather the outcome of resentment than the product of reason. I would say to the farmers, stand firm as the everlasting hills in demanding what is right and in resisting any possible infringement on your rights as citizens by any other class or combination of people; but beware, lest in your just eagerness to secure your own rights you seek to infringe upon the rights of others. No measure that conflicts with the rights of any one class of citizens but is sure to follow the course of the boomerang and return to injure the hand that shaped it. On the other hand, let it be borne in mind by all classes of our citizens that the present conditions demand consideration now, and that consideration must be full and fair. For the time being, it is paramount to all other questions, and, if necessary, every other interest must be prepared to stand aside in favor of measures looking to the relief of agricultural depression.

Wasco and Sherman Business Council.

We learn that the Wasco and Sherman Counties Business Council of the P. of H. (whose meeting at Erskineville with Milbra Grange was mentioned by W. S. L., Holder in our issue for 28th ult.) was composed of 13 Granges, 8 belonging to Wasco and 5 to Sherman county. The total membership embraced about 500. The recent Council consisted of 51 voting members. There were also present 100 visiting members.

It being an annual meeting, the election of officers for the ensuing year was held, resulting as follows: John Medler, Pres.; E. Pitman, V. P.; H. S. McDanel, Sec'y; A. Canfield, Treas.; L. Bolton, Steward; J. J. Butler, G. K.; P. P. Underwood, Chaplain; Andy Allen, Agent; J. W. Messenger, J. A. Gulliford, M. W. Freeman, Executive Committee; J. W. Messenger, M. W. Freeman, E. Olde, Committee on Co-operation. The next quarterly meeting of the Council will be with Highland Grange, at Kingsley, Wasco Co., Sept. 9th.

Dedication of Mono Hall.

EDITORS PRESS:—July 5th is a day long to be remembered by Mono Grange, No. 25, situated at Lewisville in the southwest part of Polk county. It was the dedication of their Grange hall. W. S. M., H. E. Hayes, was to be present, but as he could not come, he deputized Bro. Voorhees, W. O., to perform the service, Bro. Moore of Corvallis Grange, being master of ceremonies.

It was the first time I ever had the pleasure of witnessing a Grange dedication. It is certainly a beautiful ceremony. Mono Grange was well prepared in every particular. The music was especially fine and suited to the occasion. The part assigned to each was well performed. The visiting member from different parts of Polk and Benton counties were many, and the invited friends from outside the gate were numerous also; but the generosity of the good sisters was sufficient for all, and many lunch-baskets were left intact.

After dinner and dedication came interesting talks by Bros. Voorhees, Moore, Haley, Chitwood, Dodson and others, interspersed with sallies of wit and good humor, which made the occasion pleasant indeed. This Grange is located in the midst of as fine an agricultural district as can be found in the valley. It had the misfortune to lose its hall by fire, several years ago, since which time it has kept running under adverse circumstances.. With a new hall and increased membership, I hope to see it grow to be a power for good.

It is pleasant to see so many visiting Patrons here. It shows a social, fraternal feeling which is the result of Grange work.

Crops look well, considering the dry season, and will soon be ready for the binder.

J. B. STUMP.

Crop Outlook.

The Bulletin of the Oregon State Weather Bureau for the week ending Saturday, July 5th, says: The fore part of the week was extremely warm, latter part cool and cloudy, with local rains to-day. Local thunder showers prevailed on the last two days of June and first day of July. The heat of the fore part of the week did little injury to crops. The weather during latter part of week was very beneficial. Fall wheat is now generally past the point where the weather could injure it. Spring wheat is doing remarkably well, and if no unforeseen causes interfere, the yield will be much greater than anticipated. Corn is growing well.....Columbia Co. reports hay a fair crop, on uplands very good. In Washington Co., hay is an average. In Clackamas Co., fall wheat will be ready to cut inside of two weeks. Crop will be an average one or more, spring wheat and oats growing well. In Yamhill, Polk, Marion, Benton and Lane, wheat outlook is very promising. Spring wheat will make more than was expected. Corn, oats, hops and hay will average well. Codlin moth doing some damage. Fall wheat will soon be ready to cut; heads are well filled. In Douglas Co., good crops are now assured. Josephine and Jackson counties will have fair cereal crop. Fruit crop will be large, except peaches; melons promise to be plentiful; berries are abundant. Clatsop, Tillamook, Coos and Curry counties will have very good crops, fully up to the average.....Hay is generally reported to be short in Western Oregon and an average crop in Eastern Oregon. Wasco Co. has indications of a better wheat crop than for years; the same for Morrow Co. Sherman and Gilliam counties, report average crops. In Umatilla and Union counties, reports indicate a yield of from 30 to 50 bushels per acre. Wallowa, Baker, Crook, Grant and interior counties bid fair to make average or more than average yields. The present outlook is most encouraging for a fine harvest throughout.

LAND for farming purposes can be had in the Grande Ronde at from $20 to $40 per acre. Within ten miles of Salem, Marion Co., Or., land is meeting ready sale at from $30 to $50 per acre.

WASHINGTON.

INDIAN RESERVATIONS.—The House Committee on Indian Affairs has favorably reported on Wilson's bill creating a commission of three persons to visit the Puyallup Indian Reservation in the State of Washington, ascertain certain facts connected therewith and negotiate for the purchase of surplus acres. The Commission is also to determine the northern boundary of the Warm Springs Indian Reservation, Oregon.

THE oat crop in the Palouse country this season is estimated at 18,000,000 bushels, being an increase of 50 per cent over last year's crop. The value of the barley yield for 1890 in the same district will be $1,000,000.

THE hop crop in the vicinity of Puyallup is in excellent condition and resembles that of 1888. It is estimated that the crop for Washington will exceed that of last year by fully 10,000 bales.



My Little Hero.

Earth's bravest and truest heroes
Fight with an unseen foe,
And win a victory grander
Than you or I can know.
Where the heart of the evil beast
Fought in each human soul,
And Earth knows not of her heroes
Upon God's honor roll.

One of earth's little heroes
Right proud am I to know;
His name for me is Mother,
My name for him is Joe.
At thought of a ten-year-old hero
Perhaps have many smiled,
But a battle-field's a battle-field
In the heart of man or child.

There were plans of mischief brewing,
I saw, but gave no sign,
For I wanted to test the mettle
Of this little knight of mine.
"Of course you must come and help us,
For we all depend on Joe,"
The boys said, and I waited
For his answer—yes or no.

He stood and thought for a moment.
I read his heart like a book,
For the battle that he was fighting
Was told in his earnest look.
Then to his waiting playmates
Outspoke my loyal knight;
"No, boys; I cannot go with you,
For I know it wouldn't be right."

How proud was I of my hero,
As I knelt by his little bed
And gave him the bedtime kisses,
And the good-night words were said!
True to his Lord and manhood
May he stand in the world's fierce fight,
And shun each unworthy action,
Because it "wouldn't be right."

—*E. E. R., in The Christian Union.*

Juliet Blanchard's Wedding.

[Written for the RURAL PRESS by KATHERINA ERYANT NOLAN.]

Juliet Blanchard walked along the narrow path under the wide-spreading foliage of the old beeches and through the saplings, which waved their branches directly in front of her. The waning rays of the glorious September sun cast glancing shadows on the tinted brown leaves, whispering and rustling fiercely in the stiff breeze that penetrated even to the depths of the woods, and the quick whir and rush of a partridge frequently fell on her ear as the bird lured her away from its young. She took no interest in baby partridges that afternoon, yet the mother bird, thinking she must have some sinister design, continued to flap on before her until the girl left the shadows of the trees behind and turned up the narrow road which stretched through the little village with many crooks and turns and windings.

The houses lining the street on either side of the way were mostly of simple construction, but occasionally one assumed the airs and graces of an ancestral home, with the pretentious driveways and flower-beds pertaining thereto. Still such places wore an air of faded gentility, as if the owners had made despairing efforts to be grand and then had died, leaving all trifling temporal matters to take care of themselves.

Juliet went along with downcast eyes until she came to one of the more modest of these abodes, when she turned in, walking up the side path to the back door. The children, a saucy, noisy group of frowsy, rollicking youngsters, heard the gate click, and each took a pane of glass into their possession to see who was pervading the precincts of the Blanchard domain like little watch-dogs on the look out for whilom intruders.

"Hallo, Juliet," they yelled in a chorus, and then disappeared as meteors cross the starry heavens for an instant of time and then go out, leaving darkness behind them; but she was not cheered by their lively, loving greetings and made no response whatever.

Entering a door which opened directly into the large room used as a kitchen, dining-room and sitting-room, she hung up her hat, put on her apron, and helped her mother get supper, going about in a dejected, stubborn way, which caused Mrs. Blanchard to look at her anxiously, and speak caressingly to the girl who was her first born. Juliet's hair and eyes were black, and she was rather plain appearing, her nose being too long for beauty, her mouth too large and her lips too thin for the size of her face. She was tall and slender, and carried herself very straight, in direct contrast to Mrs. Blanchard, who was a round-shouldered, light-haired looking little woman, and gave evidences of faded youthful beauty.

The children raced around, playing with the cat, but they were eagerly watching lest the supper be ready and they not on hand to devour it. They helped themselves surreptitiously to the eatables already brought out, but the reason of such secretiveness was not apparent. Mrs. Blanchard did not notice any of their pranks, and Juliet never was known to find fault unless they scattered crumbs. At these evidences of guilt she was wont to indulge in harangues somewhat uncomplimentary to the noses, eyes and hair of the young troop whom she had rocked and lugged around with unfailing devotion during their babyhood as they appeared one after another in the Blanchard household. A perfect ocean of crumbs might have surged through the old kitchen this eventful afternoon without any interference from Juliet whatever, and they danced about, like veritable imps of mischief; but there was a great lull when the gate clicked again, and they all rushed to the windows in a body.

The door opened admitting a man somewhat past the prime of life, who proceeded in a silent, taciturn way to make himself presentable for supper at the kitchen sink. He filled a tin basin with sparkling water from a wooden pail hard by, and hung the long-handled dipper up carefully with a spat, as if he resented finding it rusting in the depths of the water; and when his face emerged from the depths of his capacious hands which held small rivers of water, he rubbed it with a towel until it glowed and reddened under his shaggy, grizzly locks and heavy eyebrows like a fire.

Every movement betrayed the fact that he was a man who did not propose to be trifled with, and Juliet carried herself in an impenetrable way, under the surveillance which his eyes kept up, through the course of combing and plastering his thick locks at the glass between two windows on the opposite side of the room. He handled the coarse bristle brush grimly, and the steely gray eyes were sharply reflected in the old-fashioned looking-glass; but he never opened his somewhat thick lips until he sat down to supper, and then he answered the few questions addressed to him in monosyllables, going off down the street immediately after the meal was over.

His goings and comings did not affect the happiness of the Blanchards particularly, as he did not believe in broils more than in unseemly gayety, so the children improved the shining hours of his absence to enjoy themselves to the full, and thus demonstrated their belief in a world made for frolic and fun. Juliet washed up the dishes and then sat down by the western window with her knitting-work, which rested idly on her lap, until it grew quite dark and the beautiful glowing of the sunset sky had faded out, leaving the stars, a host of twinkling diamonds, to light up the lately glorious track. She finally arose with a sigh, lit a candle and fell to knitting furiously; but when she heard her mother's returning footsteps, she snatched the candle and ran off upstairs. Her room was small and the floor uncarpeted, with the exception of a slight strip at the bedside. She set the candle down on a little square stand, which was covered with a white cloth trimmed with lace, and walked restlessly around the room awhile as if it was too small for the perturbed soul within her. At length she perched herself upon the bed, on the old fashioned counterpane made of patchwork squares, and as she fingered it with one hand, holding her chin in the other, she sat in a profound reverie quite a long time. The patchwork was her own handiwork and was the result of long hours spent with that small dagger which pierces so many tender fingers and wrenches tears from so many despairing hearts who cannot understand why they were born to wield the needle rather than the hammer and saw.

John Blanchard had attended to the smallest details of his eldest daughter's bringing up, but with each succeeding youngster, he had seemed to be more contented to allow her to remain a bright example of his good training, without sharing any honors, so the younger Blanchards profited somewhat through her childish woes. When she slid off the bed, she took up the snuffers, which rested upon a black-looking tray beside the tin candlestick, and pinched the wick off short, with a decision strongly like her Puritan father's movements with the long-handled tin dipper; then she got her best bonnet out of its bandbox, which was stowed away in primitive fashion under the bed, and tied it on before the looking-glass in a mechanical way, smoothing out the narrow ties with deliberation, and gazed spellbound at her reflection in the glass as if it were some one else rather than herself standing there. Suddenly she took it off and hung it on a chair, then brought out a thick, warm shawl to keep it company. Gathering a few articles together, she tied them up in a neat package, blew out the candle and laid down without undressing herself. The boards cracked and creaked as she turned restlessly from side to side, the trees brushed and scratched viciously against her window-panes, and she heard the faint ticking of the big clock down stairs above the beating of her heart. The Blanchards lived in Northern Vermont, in the village of Wrenham, which was noted for its rugged climate and the beauty of its winding, hilly roads, which stretched over hill and dale in every direction, and the inhabitants were true sons of Nature, though in many cases they lacked any of the softness she at times displays.

John Blanchard came home and went to bed, and then the house relapsed once more into silence, and at length, during a lull of the strong wind which blew fiercely, Juliet heard a shower of pebbles strike the window-panes. She got up and lit the candle, put her bonnet and shawl on, took up her bundle, and then, after extinguishing the light, she crept cautiously downstairs. It seemed an age until she reached the outside door, and she tried in vain to still the beatings of her heart; the boards creaked so loudly under her uncertain tread she expected to hear her father call out, but she undid the fastenings, went out and closed it after her, standing for a moment under the starry heavens before starting swiftly and softly on her way. She turned into the path under the old beeches, and here she found a strapping young giant awaiting her.

"O John!" she cried gently, "I was so frightened, but I cannot give you up. I had to come. Oh! I don't see what makes my father so hard, John; other girls have their lovers, and you are so good, John."

He soothed her in rough and manly fashion, hurrying along the path, holding the branches aside, with his big, awkward hands, until they were out upon another road and here a team stood at the bars, which were let down for convenience. He helped her into the carriage, unfastened the grey mare, who whinnied in her delight at his return, took the reins in his strong grasp and they were off up the road, talking in subdued voices, until they came in sight of a little cluster of houses which were in a neighboring township. John explained that a superannuated minister lived at this place, and as he had obtained a license at the last moment that afternoon, the clerk having agreed to keep his secret, he thought the old gent would marry them without any demur. This was quite the case, and proved that John Rutledge had a clear head, for the minister had nothing to lose and everything to gain, so he got out of bed with alacrity, married them hastily, and blessed them heartily, according to the size of the greenback which made his heart glad. They turned the grey mare toward home and she stretched her long legs and made very good time, so that almost before they knew it she stood at the gate of the little cottage, where they were to begin their married life. They were very happy as they realized that the deed was done and well done, and no hard-hearted parent could part them.

In the morning when John Blanchard found that Juliet had not slept in her bed, that Juliet's best bonnet was gone, and his eldest daughter, the shining example of his parental training, gone too, he set his lips firmly, and drew his mouth into a straight line that meant mischief for John Rutledge, Juliet's husband. Mrs. Blanchard was too busy to fret herself very much, but she was heartily glad when Juliet walked in about 11 o'clock to recapitulate with her stern parent and get some of her clothes. Her mother cried a little as she embraced her and said:

"Your father is very angry, but perhaps you can talk it out with him. At any rate I wish you and John happiness and I don't know why your father does not like him I am sure."

Juliet was all ready with her bundle when her father came home to dinner, and she at once charged upon the enemy, while he endeavored to distract her and show that he did not intend to have anything more to do with her. Juliet grasped the back of a chair firmly as she looked at him with a white, set face and she concluded by saying:

"As you would not allow John to come to the house, and I had no opportunity to meet him with your permission, we thought it best to get married, but we don't want any hard feelings."

"You've suited yourself," said her father shortly, as he plastered his hair with all his accustomed precision and vigor.

"Won't you stay to dinner, Juliet?" her mother asked, as she turned to the door to go out. She shook her head, lifted the latch and was gone, the children being spellbound listeners of the colloquy, and the hot tears scorched her eyelids as she thought of them and her mother, but she was not disappointed as she never expected her father to forgive her or voluntarily speak to her again, and he revenged himself upon his son-in-law in a crushing way. In a very short time his disagreeable looks were reflected in the faces of the simple village people in a surly, unjust way extremely galling to a person of his independence. Juliet was made to feel she had committed an unpardonable sin in contracting a marriage under romantic and unbidden auspices, and found no pleasure in going anywhere without John, so he sold his farm and they set out, two brave spirits, to conquer a somewhat hard fate. John Rutledge opined that city folks would not trouble themselves as to whether they had been married at midnight or morn, in season or out of season, with a father's malediction or a father's blessing, and they settled in one of the most thriving manufacturing little cities of Massachusetts, and John soon found work. He was a shoemaker by trade and they lived happily in their cosy home until at the end of ten years John was taken in as a partner in the manufacturing firm where he had begun work at the bench, and three beautiful children had come to grace their pleasant home, so they were on the good road to fortune. At that time Mrs. Blanchard succeeded in perfecting her plans to visit her daughter, and came down from the mountains, bringing the two youngest children with her. She bloomed and flourished into gayety under the genial influence of a happy, prosperous home life, and every one was at the hight of enjoyment when Juliet's baby, a fair-haired, blue-eyed darling, fell ill. He was feverish and very weak, and his grandmother nursed him tenderly, while Juliet hovered round, like a distracted guardian angel. The doctor looked grave, pronounced the dread word, diphtheria, prescribed his medicines, and the very way he put on his hat and walked out, struck alarm to these motherly souls. In two days the little spark of life died out, as the blue eyes rolled upward, and the small hands clinched in a convulsive struggle with the poison in his veins. Juliet knelt at her mother's side with clasped hands and tearless eyes, while strangers performed the duties her nerveless fingers were unable to do.

The physician prescribed disinfectants, and precautions were taken for the spread of the disease. It was useless, for Charlie Blanchard, the youngest boy, fell ill, and a telegram was sent to his father, with the intelligence of the baby's death and the illness of his own child. This summons was a most unwelcome one, but it was not to be disregarded, and his sense of justice must have awakened him somewhat to his deficiences and littleness in the eyes of the great world, as the cars shook and rattled and bounded on after the mad engine, which screeched and snorted and rushed on over the iron track, in defiance of all control, excepting the firm hand of the engineer, who stood at his post and kept his eyes on the straight lines of steel stretched before him, for he returned John Rutledge's greeting with a hearty grasp of his big, brown hand, kissed his wife and Juliet awkwardly, and took up his station at Charlie's bedside, where he watched night and day until the child was out of immediate danger.

When the boy was able to be dressed he signified his intention of returning home and suggested that all of them follow him on a visit to the old homestead as soon as possible. He went to the grave of the grandchild he had never seen, and Juliet knew that the hardness had all gone out of his heart when he placed a bouquet of sweet white roses on the little grave. So they all parted on the very best of terms, and John went to the station to see his father-in-law off. In due time they followed him to Wrenham, and the villagers had gossip for many a day. They retailed the story with many variations as to what the two Johns said, what Juliet said, and the pathetic death of the child received graphic notice under the efforts of these long-tongued dames.

John Blanchard was always a taciturn man, but there was a touch of gentleness which the children of tender years received the benefit of whenever he was brought in contact with them. To see them running after him, clinging to him, it would never have been mistrusted he had treated his own child with harshness for so many years; thus the child in heaven healed the breach as no earthly source ever could have done, and Juliet Blanchard's wedding refuted for once at least that marrying in haste brings repentance with time, as those fond of repeating sage proverbs sometimes aver.

Los Angeles.

The Training of Our Children.

[By MRS. S. M. COOK, McMinnville, Or.]

When I look upon the different lines of work in our Order, and the many others waiting for our attention, I am impelled to speak of just one, that is, the education of the children. I regard this as the most important issue before the American people. If we raise our children properly, the future of this country will be a success—it cannot be otherwise.

The mind is easily influenced in youth. If good thoughts and examples are kept constantly before them, children will grow up good. It is our duty, therefore, as parents and guardians, to live almost exclusively for this purpose, and it is a small sacrifice on our part, if thereby we increase the happiness of future generations. We can inculcate a spirit of purity and patriotism by providing plenty of good books upon these subjects. Let us see that our children do not read the trashy literature of the day, and that their minds are not poisoned by outward influences. It is easier to teach a child the right way than to unlearn the wrong. We should constantly set good examples before them. Teach them that they have certain duties to perform, and while so doing, show them the moral attached to every duty, explain to them that they must be prompt in all things, for by so doing they will form a character unreproachable.

It is also our duty to be interested in our neighbor's children, for we shall find it much easier to train our own aright if their playmates are pure and noble. Let us be ever ready to give a kind word, and encourage the taking and keeping of such pledges as the temperance, white cross and anti-tobacco, for it makes them feel the responsibility resting upon them. If woman's work embraced but this one line—that of teaching the young—we should feel richly repaid for its having been started; for through this line we can make it so desirable to be pure and noble, as to banish evils from the land.

We should also cultivate a taste for flowers, music, and the fine arts, for whatever refines and purifies the mind will also improve the heart.

While I do not believe in hiring our children, yet I would grant them certain privileges, for instance, give them a portion of the garden and products for their own. This will encourage as well as teach them how to work. You will be surprised to note the pleasure with which

they display their flowers, and many a playmate and teacher will receive bouquets from their liberality, thereby learning to be unselfish.

You can understand why it is necessary to be constantly studying to improve our children, for, dear sisters, this life is the field, our children the flowers, and the impure thoughts and deeds the weeds. Shall not we, as good agriculturists, root out the weeds? For one, I will do my best.

*This paper was originally prepared for the Oregon State Grange. Owing to press of business, its reading was not called for; but so beautiful and suggestive an essay should not fail of its mission, and we are pleased to be able to lay it before RURAL readers.

Used to Riding a Thoroughbred.

A wealthy rancher of Wyoming Territory lately told a story of a rich young Englishman who while looking about the West for good investments, visited his ranch. He stayed there a few days, and one afternoon as the cowboys were about to round up a bunch of cow ponies the young man said he would enjoy a good ride in the saddle. He said he was used to riding only thoroughbreds, and he didn't think they had a horse good enough for him.

The boys convinced him that they had one of the finest horses on the plains, and if he knew how to ride he was welcome to the animal. He was apparently insulted when questioned about his ability to ride, and answered that he could ride any kind of a horse. A sleepy-looking bronco was brought out from the corrals and saddled. Though he appeared half dead he was the worst bucker in the herd. "E's lifeless," said the foreigner, when the pony was brought to him. The boys said the "nag" would wake up after the first mile, and the visitor got into the saddle. He didn't linger long. The first buck jump placed him on the horse's neck, and after a second he was in the atmosphere. He turned a double somersault and landed on the sharp end of a cactus plant. When he picked himself up one of the boys asked what he thought of the thoroughbred now. The question made the Englishman turn pale. "E's a good 'oss," he answered, "but 'e lopes too bloomin' 'igh." —*Canyon City, Or., News.*

Chaff.

"COUNT HERBERT BISMARCK thinks that if America would protect German copyrights on books, that country might admit American pork," said Squildig. "Well, that's only reciprocity in products of the pen," replied McSwilligen.—*Pittsburg Chronicle.*

"WHAT a wonderful age of invention it is," said Mrs. Peterson. "I see they are now making wire cloth, and I'll have some this very week to put a seat in Johnny's every-day pants."—*Merchant Traveler.*

FEW men sow their wild oats without getting more or less rye mixed in with them.—*Atchison Globe.*

KARLCHEN, in a crowded tram car, is sitting on his father's knee. A young lady steps in, and the little fellow at once jumps down, politely takes off his hat, and says: "May I offer you my seat?"

LADY: Where's the lobster? Biddy: Sure, mum, I put him in the pot, and when I went out somebody changed him for another. Mine was green, and the one I found was red. I thought yez moight be pizened, so chucked him in the strate.—*Pittsburg Bulletin.*

MINISTER: Well, Bobby, do you think you will be a better little boy this year than you were last? Bobby (hopefully): I think so, sir. I began by taking cod-liver oil last week. —*Epoch.*

SETTLING a plumber's bill is "paying the piper" with a vengeance.—*Boston Budget.*

A TEXAS debating society recently had for a subject: "Is it proper to sound the 'r' in dorg?"—*Siftings.*

"OH, DEAR," said an old man who was fishing for his dinner and lost a large pickerel from his hook, "how desp'ret bad it makes you feel to lose what you never 've had."

ONE of our exchanges tells the story of a young minister lately returned from the German universities, and his first sermon to a country congregation on "The Subjective Influence of Christian Consciousness." One of the deacons said that "the more he unfolded it, the more he covered it up."

THE hight of fashion and the hight of folly are so much alike.—*Atchison Globe.*

BOOK AGENT: I should like to show you our new cheap edition of the Encyclopedia Britannica. Vermont Farmer: Mister, you needn't show me any cyclopedias. My boy graduated from college this week.—*Burlington Free Press.*

WHILE the influenza was at its hight, a child was born in New York. The family were all down with the disease. The new arrival was a boy, and by unanimous consent he was named *Agrippa.*

JUSTICE: I dislike to interrupt counsel, Mr. McCady, but it seems useless to hear further argument from you. Mr. McCady: I beg that your honor will hear me through. This *alibi* is not the only one my client can establish. He has another much stronger yet.—*Epoch.*

PEOPLE who eat onions should immediately sit down and peruse some astonishing work of fiction that is calculated to take their breath away.—*Rochester Post Express.*

YOUNG FOLKS' COLUMN.

The Day After the Fourth.

We put him to bed in his little nightgown,
The worst battered youngster there was in the town;
Yet he said, as he opened his only well eye:
"'Rah, 'rah, for the jolly old Fourth of July!"

Two thumbs and eight fingers with lint were tied up;
On his head was a bump like an upside-down cup,
And his smile was distorted, his nose all awry,
From the joys of the glorious Fourth of July.

We were glad! He had started abroad with the sun,
And all day had lived in the powder and fun;
While the boom of the cannon roared up to the sky,
To salute young America's Fourth of July.

I said, we were glad all the pieces were there,
As we plastered and bound them with tenderest care,
But out of the wreck came the words, with a sigh:
"If to-morrow was only the Fourth of July!"

He will grow all together again, never fear,
And be ready to celebrate freedom next year;
Meanwhile all his friends are most thankful there lies
A crackerless twelve-month 'twixt Fourth of Julys.

We kissed him good-night on his powder-specked face,
We laid his bruised hands softly down in their place,
And he murmured, as sleep closed his one open eye:
"I wish every day was the Fourth of July!"

—*M. Phelps Dawson.*

Tangles.

Enigmatic Snarls, Both Hard and Easy, for Young People of all Ages to Untangle.

203.—A PROVERB



204.—ENIGMA.

A kind of wound that may be made
With a keen or sharp-pointed blade,
Or a "sly mischief" if you choose—
No matter which of these you use,
They both define a certain word
In kind of way that's not absurd,
Nor hard to guess; but now when we
Reverse the reading, what we see
Is mammals, such as cannot run,
And such as never see the sun.

NELSONIAN.

205.—ANAGRAMS OF CITIES.

1. Sam Dion. 2. All sad. 3 Gal on vest. 4. Lave the worn. 5. Lena N. swore. 6. Franc is Sanco. 7. N. V. Reed. 8. Labor time.

GAS BAG.

206.—DECAPITATION.

I'm used for strings and various things,
And proud to be of use;
And so I blame—it brings me shame—
Those who would me abuse.

And I must say, he who in play
Beheads me is a donkey;
He does traduce my honest use
To make of me a monkey.

BITTER SWEET.

207.—HALF-SQUARE.

1. A little nucleus. 2. Raised. 3. Formed out of nothing. 4. (Arch.) Ornaments of carved work introduced into festoons. 5. That which corrodes. 6. Metals. 7. Conducted. 8. Two letters; one a symbol in chemistry, the other a Roman numeral. 9. A sibilant.

ARTHUR KAINES.

208.—A CHARADE.

Some fine *one-two* I fain would do
To give the solvers worry;
Although I fear my *whole's* not clear,
For this I'm really sorry.
Such *two* as this comes not amiss
In way of recreation;
It seems like play, and I should say
Bears to it some relation.
But when one's *one* is bent upon
Some *two* to bring him glory,
The *two* may fail, or be as stale
As any thrice told story.

NELSONIAN.

ANSWERS.

197.—Locke's Essay on the Human Understanding.
198.—Utopia.
199.—Neb-neb.
200.—Horsemanship.
201.—Revocation.
202.—Diary, dairy.

HONORS TO A DOG.—A big dog in Paris has been awarded a collar of honor by the Society for Prevention of Cruelty to Animals for his courage in stopping runaway horses in the streets of the French capital. His last achievement was to stop a runaway team attached to a hack full of passengers which was dashing through one of the principal thoroughfares. As soon as the dog caught up with the runaways he seized one of the horses' bridles, but was shaken off. He then made another leap, seized one of the runaways by the nostrils and held on until the team stopped. He has a record of stopping a hundred runaways in like manner.

The Lesson Bessie Taught.

Bessie must have wakened in the morning with a plan in her busy little head for teaching certain members of the Newton family a lesson. The first thing she did was to go into the library, and, finding on a chair a new magazine that Harry had left there, she pulled off a cover. "There!" thought she, "I'll teach Harry not to leave so valuable a thing as a book where it doesn't belong."

Then she went into the boys' room, and, finding a borrowed book out of place, she remarked to herself: "This will never do. A borrowed book should always be carefully put away; and, besides, I do not believe in borrowing, especially when a boy has as many books of his own as Willie has. I'll just destroy this one to teach Master Willie a lesson." So she soon defaced its pretty, bright cover badly.

Next she visited Marjory's room, and, finding more dust on the floor than should have been there, she evidently thought of the saying, "Dirt is misplaced matter," and gave Marjory a gentle hint by tipping the contents of the scrap-basket out upon the floor.

Then she went into the sitting-room, and, finding Alice's hat on a little workstand, she thought, "Another thing out of place, another lesson to be taught." So she pulled out the feather, leaving hat and trimmings on the floor.

When all was done, she cuddled up on the lounge, well satisfied with her morning's work. At the dinner-table, four members of the family looked as though each wished some one else would speak first. Finally mamma said:

"I see Bessie has been trying to teach us again."

Four voices answered faintly, "Yes."

"She certainly has taught us once more that there should be a place for everything, and everything should be in its place," said papa.

"Including Bessie herself," added mamma.

And Bessie? Well, Bessie was a six-months-old puppy with innocent, soft brown eyes.—*Lucy Southworth Hunt.*

DOMESTIC ECONOMY.

SALAD DRESSING.—Will some of the lady readers or correspondents of the RURAL PRESS give through its columns the best method of making salad dressing with olive oil?—*S., Santa Cruz.*

CREAM COOKIES.—One cup of maple sugar, one cup sour cream, one teaspoonful of soda, a little nutmeg, one teaspoonful caraway, and flour to make a stiff batter; roll thin and cut; bake in a quick oven.

POTATO SOUP.—Four large potatoes, one onion; boil in two quarts of water until soft. Press through a sieve, and add one pint of sweet milk, one tablespoonful of butter, a little salt and pepper. Let it boil up and serve.

CURRANT JELLY.—Stem ripe currants, scald them in a porcelain kettle, do not let boil. Strain through a coarse jelly-bag and then through a flannel bag. Allow three quarters of a pound of sugar to a pint of juice. When the juice has boiled ten minutes, add the sugar and let cook ten minutes longer. Take from the fire, let cool slightly, pour in glasses and set aside to form.

RICE PUDDING WITH BERRIES.—Cold boiled rice may be made into a very nice pudding with the addition of berries. Soften the cold boiled rice with milk, using two cupfuls of milk to one of rice, and stir until all the lumps are dissolved; add three well-beaten eggs, a teaspoonful of butter, a small cupful of sugar and two cupfuls of blackberries, raspberries, strawberries or stoned cherries. Bake slowly for one hour in a buttered pudding dish.

SNOW PUDDING.—One-half box gelatine, one pint boiling water, one coffee cup sugar, two eggs, peel of two lemons. Pour the boiling water over the gelatine; add the lemons and sugar, and strain; whip the whites to a stiff froth, and when the jelly is cool, but not cold enough to stiffen, pour it slowly over the whites, and beat half an hour, or till so stiff one can beat it no longer. Serve with it a boiled custard made of the yolks, and a pint of milk, one-half cup sugar, flavored with vanilla. Pour round the sides of the snow, not on the top.

FRUIT CUSTARD.—To one quart of milk that has been brought to a boiling point, but not boiled, add slowly four eggs, well beaten with three tablespoonfuls of sugar and a pinch of salt. To prevent burning, prepare this in a kettle or boiler set inside of another in which is boiling water. Stir the custard until it thickens, taking care it does not boil, and when done remove from the fire. Have ready custard cups into which thinly sliced peaches or bananas have been put, sprinkled with a little sugar and water, turn the custard over the fruit, filling the cups, and set away until wanted for use. This is a dainty and delicious dessert if properly made.

GOOD HEALTH.

OLD AND YOUNG SHOULD NOT SLEEP TOGETHER.—A prominent medical writer says that no intelligent person who loves his children will allow them to sleep with persons greatly older than themselves. The nervous vitality of a child should not be absorbed by any diseased or aged relative or friend. Children, compared with adults, are eclectrically in a positive condition. The rapid changes which are going on in their little bodies abundantly generate and as extensively work up vital nervo-electric fluids. But when, by contact for long nights with elder and negative persons, the vitalizing electricity of their tender organizations is absorbed, they soon pine, grow pale, languid and dull, while their bed companions feel a corresponding invigoration. It is undeniable that healthful influences are lost, and to a fatal extent sometimes by this ill-advised custom. A woman was prostrated with incurable consumption. Her infant occupied the same bed with her almost constantly day and night. The mother lingered for months on the verge of the grave, her demise being hourly expected. Still she lingered on, daily disproving the predictions of her medical attendants. The child, meanwhile, pined without any apparent disease. Its once fat little cheeks fell away with singular rapidity till every bone in its face was visible. Finally it had imparted to the mother its last spark of vitality and simultaneously both died.

MISTAKES.—It is a mistake to labor when you are not in a fit condition to do so; to think that the more a person eats the healthier and stronger he will become; to go to bed at midnight and rise at daybreak, and imagine that every hour taken from sleep is an hour gained; to imagine that, if a little work or exercise is good, a violent or prolonged exercise is better; to conclude that the smallest room in the house is large enough to sleep in; to eat as if you had only a minute to finish the meal in, or to eat without an appetite, or to continue after it has been satisfied, merely to please the taste; to believe that children can do as much work as grown people, and that the more hours they study the more they learn; to imagine that whatever remedy causes one to feel immediately better (as alcoholic stimulants) is good for the system, without regard to the after effects; to take off proper clothing out of season because you have become heated; to sleep exposed to a direct draft; to think any nostrum or patent medicine is a specific for all diseases.

SURGERY OF THE LUNGS.—In recent months surgeons have given astonishing proofs of the possibility of saving life and restoring health, in many cases, by removing portions of such vital organs as the brain and the liver. Prof. Tillmanns, of Leipsic, has found that surgical treatment may be extended even to the lungs, and to the arrest of consumption. In a case of tuberculosis of the left lung, an opening was made and the diseased part of the lung exposed, when that portion shriveled and was carefully removed. The patient recovered, and is now able to work. Prof. Tillmanns believes that this may prove a desirable treatment when the disease is localized, and states that two operations would doubtless be necessary—one to expose the affected part of the lung and bring about atrophy and shriveling, and a second to remove the parts after being functionally disabled.

THE OFFICE OF IRON IN THE BLOOD.—Iron exists in the blood in the red corpuscles, and gives them color and the power of absorbing gases. The fact that peroxide of iron is one of the readiest absorbents of gases, and parts with them as readily on exposure in thin layers to the air, so that it can be used over and over again for that work, gives a clew to its special function in the red corpuscles of the blood. It enables them readily to absorb oxygen as they pass along the minute blood-vessels of the lungs and to carry it to all parts of the body, where they part with it as it is demanded. It is supposed, also, to take up carbonic acid in exchange for the oxygen it yields up, and to convey to the lungs that portion of this substance which is expired.

COLORED SPECTACLES.—Dr. Konigstein, while giving directions in his class of the uses and prescribing of spectacles, said that green glass as a protection against strong rays was worse than useless, and did more harm to a sensitive eye than good, as they allowed the yellow rays to be transmitted and unnecessarily irritate the eye. As a protection against strong rays, the blue or smoked glasses were the only protection.

SOMETHING NEW IN SKIN-GRAFTING.—A schoolboy recently scalded his leg badly from knee to toe. As there were no signs of healing, the attending surgeon chloroformed a greyhound puppy to death, shaved its body, skinned it, and grafted the skin on the boy's leg. The healing was rapid, and the color of the grafted skin was uniform and very similar to that of the normal skin.

FOR TOOTHACHE.—A Russian practitioner recommends the use of hyoscyamus seeds for toothache. His plan is to burn the seeds, and to convey the smoke through a little paper tube to the hole in the tooth. He declares that in nearly all cases one application, or at most two, will suffice to cure the toothache.—*Lancet.*

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SAN FRANCISCO:
Saturday, July 12, 1890.

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[NEW THIS ISSUE.]

Windmills and Pumps—Pacific Manufacturing Co.
Windmills, Pumps, Etc.—U. S. Wind Engine and Pump Co., Batavia, Ill.
Fruit Graders—C. G. Whitson & Co.
Mosaic Rose—Redmon's Microbe Killer Co.
Sunset Springs—P. D. Grigsby, Monticello, Cal.
Horse Wanted—"W. L.," Box 2517, S. F.

See Advertising Columns.

The Week.

The fruit harvest is now the absorbing topic in all regions where trees and vines are in bearing, and the interest and confidence of the growers is giving strength and spirit to all other branches of industry and investment. Though we have watched the fruit interest of the State closely for a score of years, we never saw a better feeling pervading the whole industry than now prevails. It is true that some fruits are only bearing moderately this year, but the price compensates for much loss in weight and the eagerness of buyers and the unbroken accord which characterize Eastern views of the desirability and availability of the California fruit product for Eastern uses cannot but make the owner of fruit lands and fruit trees firm in his grasp upon a prosperous future. If we are not seriously mistaken, there will be a planting this winter which will call for all available nursery stock, and though there will be another great run on French prunes, there will be a wider demand for other fruits than has been experienced in recent years. We expect to see a much larger planting of pears for example, and it is gratifying to note that other varieties than the Bartlett are going well. We believe, too, that this year's selling of California fruit, which is now being better distributed than ever east of the Rocky mountains, will induce a large immigration seeking fruit lands this fall and winter.

Experiment Stations.

The Regents of the State University at their meeting on Tuesday of this week decided to locate the outlying station for Southern California at Pomona, situated on the eastern edge of Los Angeles county. As stated in our issue of June 21st, Riverside was also an applicant for the location of the station and made very generous offers of lands and buildings. After a careful re-examination of the field, Prof. Hilgard was but stronger in his belief that the Pomona situation was representative in soils and climate of a much larger area of Southern California than Riverside and because the choice of Pomona would allow of a wider range of cultures, and thus prove valuable to a much larger proportion of the people of California. Prof. Hilgard, in his report to the Regents, gave preference to the Pomona site, although he also recognized and commended the offer of the Riverside people. The decision, of course, rested with the Board of Regents, and Pomona was selected as stated above. The Pomona people will give a deed of a suitable tract of land, with water, and furnish $3000 for the erection of station buildings. It is proposed to select the land at once and proceed with the erection of buildings, so that actual operations will begin as soon as the planting season arrives.

There has just been issued from the State printing office a document of 200 pages, which will interest all who desire to keep informed of the progress of agricultural experimentation in this State. It is entitled: "Report on the Agricultural Experiment Stations of the University of California, with Descriptions of the Regions Represented," by E. W. Hilgard, Professor of Agriculture and Director of the Station, and is a part of the combined reports for 1888 and 1889. The document contains detailed statements of the facilities and accomplishments of the Central Station at Berkeley, with engravings of the station building and a diagram of the grounds employed. It contains also detailed descriptions and diagrams of the "outlying stations" as follows:

The Foothill Station, near Jackson, Amador county; the Southern Coast Range Station, near Paso de Robles, San Luis Obispo county, and San Joaquin Valley Station, near Tulare City, Tulare county. There are also three viticultural stations under private auspices, located at Cupertino, Santa Clara county; Mission San Jose, Alameda county, and Fresno, Fresno county, and, including the new station at Pomona, shows that there are now eight stations under the direction of Prof. Hilgard, seven being maintained out of the $15,000 fund from the U. S. Government and the Central Station in part from that fund and in part from the general funds of the University. The report just issued by Prof. Hilgard is a most important contribution to the descriptive literature of the State as well as a record of experimental work accomplished and in progress. It should be read by all and can be had free by application to Prof. Hilgard at Berkeley. At another time we expect to allude more specifically to the contents of the document.

HORSE THIEVES AT THE NORTH.—A dispatch from Spokane Falls says that horse thieves, working in unison in Eastern Washington and Idaho, rendezvoused near Spokane on the last Saturday and Sunday in June, and hastened away with 500 head of horses toward the British Columbia line, through the Flathead Indian reservation. A large number of ranchers was organized for the pursuit of the thieves, but with little hope of success, as they had a good start. This is the largest operation of the kind we ever heard of.

Fruit Notes From Vacaville.

A week's outing in the Vacaville district has enabled one of the PRESS staff to jot down a few notes of fruit affairs which came to his notice. The weather, with the exception of two or three days, has remained cool for the season and the fruit is coming on but not too rapidly for convenience in handling. Most of the growers who have not engaged their crops to the canneries are shipping East. So far, all the cars which have arrived in good condition have brought good prices, and almost invariably the apricots have led the peaches—something unusual.

Up to about a week ago there had been 40 cars shipped from Winters, yielding an income of about $60,000, which as the season has only just commenced, will insure the bringing in of quite a large amount of money for circulation in this part of the country after paying all expenses.

The new Goodell refrigerator car is proving quite a success. One hundred cars are building and will be put in use as soon as they can be delivered.

As a rule the apricot crop is fair and the peach crop rather short. All the smaller apricots are being dried, and some growers are drying all their crops, thinking that the dried fruit will bring more than than the equivalent of prices obtainable for fresh fruit.

Mr. John Dickson now has the largest and best appointed drying floor in operation in this locality. He dries his whole crop of fruit, with the exception of pears. The drying floor proper consists of a piece of ground floored over with redwood boards, laid on scantlings, and surrounded by a fence about eight feet high. Near the middle of this floor are two sulphuring houses, and at one end cutting sheds and a storehouse, the latter being a building 34x60 feet, sheathed up on the inside with matched boards. All the windows are covered with wire netting to keep out all moths and insects which might get into the fruit and injure it.

Running from the cutting sheds to a turntable located between the two sulphuring-houses is an iron railroad track over which are run cars for hauling the trays from the cutting sheds to the sulphuring-houses. The trays are packed on the cars with narrow strips of board between the ends of the trays so that they can be run into the sulphuring-houses car and all. The drying floor will hold 75 tons of green fruit when spread out for drying. We did not take accurate measurements, but think it is about 125x250 feet in area.

Mr. Dickson has no particular time for sulphuring his fruit, but leaves it in the house until the juice appears in the cup-like cavity of the fruit. In the sulphuring houses are two cast-iron pots, one at each end, and into these he drops pieces of red-hot iron and then throws the sulphur on top. This makes a much stronger vapor than by burning the sulphur gradually.

Mr. Dickson does not dry his fruit in the sun to a degree suitable for packing, but when it reaches the right point it is hauled into the storehouse and spread out upon the floor and shoveled over every three or four days until it is suitable for packing.

As has been previously stated in the RURAL, the losses of fruit trees resulting from the unusual winter were large. Nearly all the orders for replacing dead trees so far as given have been for French prunes.

THE CENSUS WORK.—The census enumerators have now about completed their farm-to-farm visit, and all the many figures concerning the farm, its live-stock and the products of its fields and orchards are being concentrated at central office in Washington, D. C. Now come the great sums in addition by which the product of each farm will be added to that of all the rest in the county, and then of the State, and finally of the entire nation. Then comparisons will be made with the figures on the same subject as taken ten years ago, and we shall know what progress has been made and how well this important industry has kept pace with others. The final count will be looked for with interest. The figures for each county and State will be accurate just in the proportion that farmers themselves have helped to make it.

"THE GRANGE WON."—W. M., H. E. Hayes considers that the late contest in Oregon for the office of Governor was capital against labor, and that the Grange won.

Peanut Oil in California.

Well, we declare! After all our warefare against peanut oil as a base substitute for olive oil, and after our persistent berating of European olive oil shippers, who fill their bottles with peanut juice, and Eastern grocers who do the same thing in their cellars, and cover the product with French labels; in spite, also, of our efforts to crush the falsifier with duties and laws against adulteration, the peanut oil man proposes to "carry the war into Africa," and install his peanut bogus right along side of our olive orchards; for we read in a dispatch sent out this very week from Chicago, as follows:

M. Morrez of France, is in this city on his way to Southern California to establish the peanut oil industry. "I am surprised," said Morrez, "so little importance is given to peanut growing in this country. Something like $6,000,000 worth of peanuts is imported into Marseilles annually, to be used in the manufacture of soap. It is valuable for burning, but is used mostly in the composition of soap. In the United States about 3,000,000 bushels of peanuts are raised yearly, which are used for food alone. That is but little part of the industry. Peanut oil is equal to olive or sweet oil, and may be employed wherever the latter can be. A bushel of peanuts subjected to hydraulic pressure will yield a gallon of oil equal to the best oil of olives. I learn peanut oil was used extensively in the South during your late war, in the machine shops, and that its lubricating qualities are as good as whale oil. If the conditions are favorable, I shall establish an industry in Southern California."

There is no doubt room for a great peanut industry in regions of California where soil and climate suits the groveling fruit, and it is possible, too, that peanut growing may yield handy money to those who are now doubtful how to get money from their lands or to others who are waiting for trees to reach bearing age. There is also a field, no doubt, for large quantities of peanut oil. It is a pure and wholesome article, and if people want to put it on their salad or in their frying-pans instead of lard, it is all right enough. There will be, of course, an issue however against putting up and selling peanut oil as olive oil, even if California produces them both. We are laboring toward supplying the whole country with a sure-enough pure olive oil, and trees enough are now being planted to do that. It will not be right nor politic to urge peanut oil as a substance to be sold for olive oil. Still it is quite possible that there may be plenty money in growing peanuts for oil, and if so California will be glad to gather it in.

Honey in Oil-Cans.

Some dealer who is aiming at depressing the price of California honey until he can load himself up with it is telegraphing from New York that California honey is suffering because it is reported that our beemen put up their product in old kerosene-cans. California has always put up the bulk of the product in five-gallon cans, two to the case, and it is an excellent package for wholesale shipment. There is no earthly objection which can be fairly urged against it. The cans are absolutely clear of taste or aroma, or the honey would quickly show it, for it is very quick to take on flavors. If some careless man has filled unclean cans and spoiled his honey, that should not count against the practice in general. Some producers are filthy and careless about everything they do, but there is less of such work among the beekeepers than among any other class of producers. They are by the very nature of their industry forced to be cleanly, and it is a slander for any one to make current rumors that oil cans are spoiling the market for California honey.

There are, however, good reasons perhaps why California producers should adopt different and more characteristic packages and have them contain less bulk. This State does not obtain a fraction of the credit she deserves for honey marketed at the East. Eastern retailers buy our honey in bulk and repack it in small receptacles of their own with some fancy Eastern label on it. If our honey should be better known as such to the consumer, and if Eastern frauds would stop putting up glucose and branding it California honey, our bee-keepers would secure far better returns for their labor.

A MARBLE MONUMENT to Padre Junipero Serra, the founder of the California Missions, is to be erected on the beach at Monterey, through the liberality of Mrs. Leland Stanford.

FLORIST AND GARDENER.

Coco-de-Mer.

[Written for the RURAL PRESS by LORENZO F. YATES, LL.B.]

A recent number of the Melbourne *Argus* gives an interesting account of "one of the world's wonders," as follows:

In a secluded ravine or glen, in a small island that lies in the Indian Ocean, away from the highway of commerce, of travel and of pleasure, and therefore rarely visited, there grows, and has grown these many ages, a wondrous palm tree that may be fittingly ranked among the few wonders of the world. It is difficult to fix the time when the fruit of the Coco-de-Mer palm first began to attract the attention of travelers. Mention appears to have been first made of it by the Portuguese voyagers round the Cape of Good Hope toward India.

At comparatively rare intervals the Coco-de-Mer nut was washed ashore upon the east coast of Madagascar, the east coast of Africa and occasionally as far north as the Maldive Islands. Rarer still, it was found floating at sea. All searches for the tree that bore the strange looking thing having proved unavailing, and as it had never been seen in any other part of the world, it is no wonder that in those ages some queer legends became attached to it and were believed in. The commonest and, perhaps, the most natural one, assigned the habitat of the Coco-de-Mer to the bottom of the sea. It was believed to be the product of a submarine plant, forests of which were thought to be growing at the bottom of the Indian Ocean.



HAULING A BIG REDWOOD LOG TO THE MILL.

somewhere in the region of the equator. The Coco-de-Mer had never been seen, growing on the land, it had always come from, or been met with at sea, and, therefore, it was quite natural to conclude that it was a native of some part of Father Neptune's dominions. It bore a curious resemblance to an overgrown hybrid cocoanut, hence it was called in French, Coco-de-Mer—Anglice, sea cocoanut.

The mystery of ages was solved, however, when Mahe de la Bourdonnais, the Governor of the French Possessions and those parts, discovered the Seychelles Archipelago; but the solution of that mystery only gave rise to another. Here was a group of upward of 20 islands, eleven of which bore a dense vegetation, and yet the Coco-de-Mer grew only upon two of these islands, and those not by any means the largest of the number. Other islands there were within a distance of a dozen miles and several more within 20 miles, and yet this strange plant had elected Isle Praslin and Isle Curense as its domicile and obstinately refused to budge therefrom, leaving out of the question those places beyond the seas in which attempts have been made to naturalize it.

The Coco de-Mer does not take kindly to the soil of any other island in its native archipelago except those of Praslin and Curense, and even respecting those two islands a word of explanation is necessary. They are merely divided by an arm of the sea about 500 yards wide, and the lay of the land and other indications go to prove that at one time the two islands were one. The French in de la Bourdonnais time are said to have found Praslin and Curense nearly covered with Coco-de Mer forests, but the trees now left standing would not cover one square mile; and even those, unique though they be, narrowly escaped falling victims to the ignorance and cupidity of the Goths and vandals who inhabit those parts. Happily, however, the Linnæan Society heard what was going on, and about 12 years ago moved the Secretary of State for the colonies to stay the hand of the destroyer. Fortunately, the greater portion of the ravine in Curieuse land and measures were taken to preserve the old trees and foster the growth of the young plants. The tree above referred to is commonly called the double cocoanut. Its botanical name is *Lodoicea Sechellarum*. It is the only species of its genus. The trunk is nearly cylindrical, scarcely one foot in diameter and attains a hight of nearly one hundred feet. It has a crown of leaves, which are fan-shaped, sometimes twenty feet long and six feet wide. The fruit, which averages 40 pounds in weight, is in the form of a double or sometimes treble nut. They are covered with hard and black shells. As they have a capacity of from six to eight pints, they are used as water vessels, and by slicing in different directions, they are converted into plates, dishes, drinking vessels, etc. The leaf bud is eaten like the cabbage of other palms, and the down from the young leaves is used for stuffing mattresses, pads, cushions, etc. The petioles are converted into baskets and brooms, and the young shoots are pickled to form nuts. It has been recently introduced into Ceylon and other localities, where a few plants may be met with as curiosities. Under garden cultivation the manner of growth from the seed is peculiar, rendering it difficult. A ripe nut falls or is laid upon the ground; in two or three months' time it will germinate and begin to throw root. At the end of a year or so it will throw out a spike, which grows to a hight of 40 to 60 inches and is about 1½ inches in diameter round and sharply pointed at the top. This is the first future leaf. At the end of another year a second spike sprouts and grows close by the side of the first one. This second spike does not sprout from the first one, but comes out of the ground close by the side of it. As the second grows, the first spike gradually and slowly unfolds and expands into a leaf—the shape of the leaf of a fan palm. During these stages they are very susceptible to injury from which they never recover. So at the best they will never become common or even plentiful.

Santa Barbara.

BOOTBLACK LOUIS.—The San Bernardino *Times-Index* of the 1st inst. says: We were shown, this morning, by D. Nelson Sumner, a very handsome Egyptian horse. It resembles the magnolia in shape, although the leaves are of a delicate pink, while its center is yellow. It was grown in the garden of Mr. Parks on the Lugonia Terrace, and is as handsome a specimen as we have ever seen, but is more noted for its beauty than for its fragrance.

PERSONAL.—We were pleased on Tuesday to greet our old friend Dr. E. B. Bowers, who, as is generally known, has been doing valuable public service, during the spring and early summer, as lecturer on California in connection with the "California on Wheels" excursion. Dr. Bowers returns in good health and spirits and more fully convinced that the Pacific Coast, and especially California, is the promised land of industry and prosperity. He returned by the Northern route, and was delighted with the development he saw there, and hopeful for a future market for a good deal of California fruit in that direction.

A CANADIAN RAILWAY TO ALASKA.—The project for a Canadian railway to Alaska is about taking definite shape. Application will be made to Parliament at the next session for the passage of an Act incorporating a company to build such a road. If the Government at Washington is not more careful of our national interests, the Canadians will get away with the bulk of our northern carrying trade.

THE LUMBERMAN.

The Tan-Bark Industry in Mendocino.

E. C. Thompson gives the Ukiah *Press* some interesting points on the tan-bark industry which calls third in the importance of the county lumber coming first and stock raising second. Tan-bark has been cut in the county for many years, but in this immediate section the industry has only begun to develop in the last two years. Last year 50 more than 250 cords were shipped, while this season at least 1,000 cords may be counted upon.

There are two grades of bark, the limb and the bark taken from trees of different age. The trunk bark brings the best price. It costs about $1 per cord to cut and prepare the bark and on an average $3 to haul it to the railroad cars. The present price in San Francisco is $18 per cord. The prices from San Francisco are paying $21 per cord delivered here.

Lands that contain tan bark are rapidly coming to the front in point of interest. In many instances they are in greater demand than redwood lands, because the latter cannot be sold unless near some mill. The difference is that the owner of the redwood forest must wait until a mill approaches him before there is a demand for his timber, while the proprietor of tan bark lands may cut his timber and take it to market. A road even is not necessary in the transportation of tan bark. Mules are employed to a great advantage in bringing the bark to the highways. The industry is found a great relief to the scarcity of hard labor because of its availability. Fully $20,000 will be distributed in this section this season from a source heretofore not utilized.

Redwood Timber.

In the forests of Sonoma, Mendocino and Humboldt counties, in this State, the trees run for lumber average much larger in size than any in the world. These redwoods are not the "big" big trees of California which are in Calaveras, Mariposa, Fresno and Santa Cruz counties, and are of a different variety. But the big redwoods of the northwest coast of the State are valued for lumber, being cut wherever met in the forest at such points as logging camps are located. Trees eight and ten feet in diameter are not at all uncommon, and many are found from 14 to 16 feet. The very largest, when felled, are sawed into logs and the logs split by powder before being hauled to the mill, such sections being too unwieldy to handle readily.

A photo facsimile on this page shows a log hauled on the cars for the Navarro mill, Mendocino county, and will give an idea of the size of some of the timber cut in the woods of that region. Some logs are floated down the river during the rainy season, but a railroad has been built 12 or 15 miles into the timber, and on this logs are brought to the mill, near the coast at a time. The engraving is made direct from a photographic negative, at that at considerable cost. The figures in the picture will give an opportunity for comparison of size of log and men.

A STRANGE SIGHT.—A Finland paper mentions a curious sight in the northern part of that country which serves the people instead of a barometer. The stone, which they call "Lemminki," turns pale, or whitish-gray, when fair weather is approaching; fine weather has the effect of turning it almost white.

TRACK AND FARM.

Match Races.

Charles Marvin has agreed to match his stallion Palo Alto, 2:08¼, against the gray pacing mare Lou, the race to be trotted on the 25th of the present month, probably at Belmont Park. This was one of the greatest champion green horses Charley had during the season, and made the record in a race. He is quite as well as speedy, and hopes to get some of the money that would be handy to have now. While Palo Alto is 15 he has never been driven a mile for a record, and it is claimed that he can beat Lou. The mare seems to pretend to be the best horse, but Palo Alto's admirers are confident they can get a fast mile but may not care to go a fast race. It is a fairly safe bet that Charley Marvin understands to the minute, and he has pocketed the best purse in the State to that agreement. If Palo Alto is in the humor to race as of course every Thoroughbred ought to be, then Palo Alto will undoubtedly the fast mate he is the best of them all.

Stamp is likely to get a match on her hands soon. The same idea prevails about her that was common here about Palo Alto. They don't think she is a race mare. Marvin says if they don't he will trot her against Azmoor, Lou, the champion stallion, and name their own terms as he game as the best of them. If the two meet, it will likely be for a series of races—three at least. The stallion believes these two horses and your wife very well. Each owner was determined that his horse should wind up the season with the purse-gathering record. After matched as to not the mark down from 2:18, and many more that he would not a new record would start and out to have. After many months in 2:11, but the advocates thought that neither the question of superiority, but stood ready to the front to win and put the horse's record at 2:09, where it should stay and is likely to stand for years to come. If the two meet in a match race, the name of the race will be the fastest ever trotted in the world, and if the day should win it would have the trotting horse honored in history as it has never been honored before.

Stable rivalry seems to be the ruling race. No sooner had Sunol, the Palo Alto mare, lowered the mile record that has stood for 14 years than prominent owners wanted a match with her. The Salvator-Tenny match was a great one, and now the owner of Tenny wants to meet Sunol at a mile. It has not been definitely decided, but if the two meet Tenny will get a worse beating at a mile than Salvator gave him at a mile and a quarter. Sunol is the opinion of the California horsemen, and beat any horse that lives for a mile.

Notes at Random.

Marcus Daly has turned the pacer, Mr. Dexter over to B. C. Childs for the season.

The Trotting-horse Breeders' Association offers a free-for-all pacing purse of $1,200.

The Occident Horse-mart has this week a half page out of Salinas, the California record breaker.

Some of the two-year-olds of the Marcus Daly stable, will run on the California tracks this fall.

T. H. Parke has sent the stallion Sam to the Bay District track, to be trained with a view to lowering his record.

The Trotting Horse Breeders' Association held a meeting Tuesday afternoon, and offered the following additional program: Friday, 2:27 class trotting, $1,000; two-in-a purse, $700; 2:20 class trotting, $1,000; 2:40 class trotting, $800; 2:30 class pacing, $800. All these are association purses, entries to close August 1st, and horses to be named ten days before the first advertised day of the meeting.

The first races of the year on the coast, of any importance, took place during the week at Santa Monica. In a special purse for $200, Sable, Williams and Gray Nell started. Sable won in the second, third and fourth heats in 2:30¼, 2:29¼ and 2:30¼. In a free-for-all purse for a purse of $600, Downey, Los Angeles and Brandon started. Downey won, the fastest heat in the race being 2:24¼.

On the Alameda, which arrived last Sunday, are more thoroughbred mares from Australia arrived for L. J. Rose of Los Angeles. This lot, with two stallions is as many head as the first lot. They are Sunstroke, brown mare, by Musket, dam Sylvania by Stockwell; Rose of California, bay filly by Australian, dam Sea Kale, Garland, brown filly by same, dam Flame by Kingfisher; Harmony, bay mare by The Commoner, dam Hurricane by Newminster; Rose and Shamrock, chestnut mare by Lord Bell, dam Annabelle the dam of Pine Needle, other mare was purchased, but died within three days of San Francisco. She was Thormanby Royal, a four-year-old mare by Thormanby, dam Queen's Head by Parmesan. She is one of the first consignment that died at sea. Captain Macey, who bought the mares for Mr. Rose, also purchased two for himself. They are The Pet, brown mare, two years old, by Trentham, dam imported Fleur d'Lys by Oxford, and Wanonga Kate, bay mare, eight years old, by Musket, dam Dundee Lass by Dundee. These mares will be up in the next Australian steamer.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte

LIGHT GRAIN.—Gridley *Herald*, July 3: Harvesting is fairly under way throughout this section. The yield is not what was expected, being from one-third to one-half less than the appearance of the grain justified ranchers in anticipating. The largest so far reported is only 6¼ sacks per acre, and it is being cut upon land that has never heretofore yielded less than 11 sacks when summer-fallowed, as it was this season.

Contra Costa.

GOOD WHEAT.—Martinez *Democrat*, July 2: We have on our table some heads of club wheat from the ranch of Mrs. Rice, near Walnut creek, which are fine samples of that grain. The heads average about 115 kernels each, and are large and well developed. Mr. C. Sharp, who brought them in and who owns the crop, feels highly gratified that the grain is doing so well.

El Dorado.

PANTHER POISONED.—Henry's Diggings cor. *Democrat:* Last Monday night, the 23d, a mountain lion came within 50 yards of Hank Robert's house, and killed and carried off two full grown goats. On his way to the mine next morning he found one of the goats partly eaten. Going home and getting some strychnine, he poisoned the carcass. Wednesday morning he found one of the largest mountain lions ever killed in this part of the county, lying within ten feet of the poisoned meat, cold and stiff.

GETTING A HORSE OUT OF A SHAFT.—I saw in the *Democrat*, in a letter from Diamond Springs, that the Larkin brothers lost a colt by its falling into a shaft, and not being able to get the horse out, they killed him. Never kill an animal for falling in a shaft, unless its bones are broken. Go down in the shaft with a rope and making a halter, fasten it around the head and nose, then go up and turn in a head of water and gradually fill the shaft, pulling on the rope so as to keep the head above water and the horse will come to the top O. K.

Fresno.

THE 76 CANAL.—Fresno, July 2.—The sale of the 76 Land and Water Co. to the Alta Irrigation district was consummated last night at Dinuba. The price paid was $410,000 in bonds of the district, which was recently organized under the Wright Irrigation law. All the water rights heretofore sold by the 76 Co. are to be paid back in full at $5 per acre.

GRAIN PROSPECTS.—To a Fresno *Republican* reporter, C. W. Callahan, Secretary of the Grangers' Business Association, lately said: The county's grain prospect was never better. The rains were late, the weather has kept cool and the result is that the grain is large and full. Fresno will probably harvest 150,000 tons of wheat alone. There is comparatively but little oats in the country, and there is little reason for it, for the soil is rich and the climate exceptionally fine. Of barley there will be about 20,000 tons raised, nearly all of which will be consumed at home. Fresno barley is perfection itself.....Mr. Callahan spoke of Egytian corn, saying that a larger acreage was being planted every year, and that it was rapidly becoming the favorite grain for poultry, although it was excellent for live-stock. There were from 5000 to 10,000 tons planted, and it brought from a few cents to $1.15 per 100 pounds.

Humboldt.

NOMADIC FLOCKS.—Eureka *Times*, June 25: Herbert Richardson, who has been to Oregon with W. T. Olmstead after a band of sheep for Olmstead's range, returned to the city last evening, having left the band at Big Lagoon in charge of Messrs. Olmstead, Ganyard and Bohall. He reports having started from Ellensburg, Oregon, on May 26th, with 2000 sheep, and arriving at Big Lagoon Wednesday with 1755. With the exception of 60 sheep, which can be recovered, the balance were lost. No accidents occurred on the trip, and all are enjoying good health.

Kern.

TURKEYS.—Delano *Courier:* H. A. Lubkin, one of the big ranchers living about 14 miles northeast of Delano, is not only a grain farmer, but in years past, when the wheat crop was short, he has always realized handsome profits from his bands of poultry. Last year he raised a band of several hundred turkeys, and aside from the care of herding them, there was but little expense attached to the business. In the winter he disposed of his stock, realizing on an average $1.35 per turkey. This was after all expenses were paid. This season Mr. L. has a band of 500 turkeys, now about half-grown, from which he expects to receive handsome profits this fall.

ALL FROM ARTESIAN WATER.—On the Morgan ranch, a few miles below the Miramonte postoffice, one of the most beautiful homes is to be seen. Last summer, after crossing several miles of unimproved lands, we were pleased to halt at this cosy home, surrounded by orchard, vineyard and beds of blooming flowers. The artesian well in the dooryard was bubbling over with crystal water, which flowed through the channels about the ranch. On every hand was to be found strong, healthy vegetable growth, and the trees laden with ripening fruit presented a contrast with the arid plains we had just crossed. Water was the whole secret, and a good flowing well can be obtained at 500 feet. This section is noted for its fine, early fruits and for a sample of the same we are indebted to John I. Morgan, who yesterday presented us with a basketful of peaches, pears, figs and apples. The fruit was all fully matured, especially the figs. They were in a good condition, and would bring a handsome price in a city market.

A MONGOLIAN SPUD-SHIPPER.—Bakersfield *Californian*, June 28: Last Saturday a Chinaman sent a carload of potatoes to S. F. The cost of the car was $55, making the freight about 25 cents per 100 lb. At that time potatoes were quoted in that market at $1.60 to $2.25. This is the first venture of the kind that has come under our notice, and how it resulted we have not learned, but the potatoes that grow here, if the right varieties are planted, are not excelled in quality and yield. Moreover, our first crop of potatoes is ready for the market months before that of the coast counties, and our second crop is ready to come into competition with it three months later. The Chinaman referred to will plant his second crop about the first of August. He stated that when he can realize three-fourths of a cent per pound he is satisfied.

Lake.

COUNTY ITEMS.—A number of places have been found in the neighborhood of Kelseyville where gas is flowing freely through the soil to the surface.....Blackberries are growing on red mesa land about two miles from here without irrigation and bearing good ripe fruit..... The Lake county climate is excessively dry in summer, but people think a little irrigation is all that is wanted to make everything grow well and produce large crops. Fruit trees do not suffer even on high mesa land, but small fruits could be greatly helped by the application of water to the soil. It seems now that by boring water for irrigating can be had anywhere in the county.—W. C. C., *Kelseyville.*

Lassen.

EDITORS PRESS:—On my way to Bieber I saw many fine meadows and some fine fields of wheat. I have 70 acres of wheat; 40 acres was sown from the 5th to the 7th of April and the balance later. It is of the White Sonora variety. It is now headed out, and I don't think it could be beat in any country with the same cultivation. All the country wants is men to take hold and cultivate the soil properly and there will be no trouble in raising grain here. There are a few small fields of summer-fallow, sown last fall, which look well. Mr. Bieber has over 500 acres of the best kind of land in this valley which he will sell at 30 per cent less than the value of the land to settlers. ....The town of Bieber was lively to-day and everybody enjoyed the Fourth of July. Any one would hardly think there could be so many people in Big Valley. The RURAL has many friends hereabout. All they lack is money to show their good-will.—H. KELLY, *Adin, July 4th*

ALFALFA.—Susanville *Advocate*, July 3: On the place of G. W. Wright, about seven miles below Susanville, may be seen a sample of what can be done on our sage-brush land with alfalfa. Mr. Wright has 2½ acres, which he put into alfalfa last year, as an experiment, and last week he took off his first crop for this year, amounting to 8½ tons—and two more crops this year to hear from. This land was lightly irrigated the first year, and this year received only the seepage from a ditch run through it. Hutchinson & Leavitt have 20,000 acres of land adjoining this piece, of the same character, under their irrigating system. Mr. Wright is not an expert on alfalfa; he is simply a clear-headed, hard-working farmer, and any man with the same attributes can produce like results.

Monterey.

VOLUNTEER BARLEY.—Suisun *Republican*, July 4: Reed & Frisbie are in the midst of harvesting their large grain crop in the Salinas valley. They will have about 40,000 sacks of barley, 30,000 of which had already been thrashed the middle of last week, and Mr. Frisbie estimates that at least 10,000 more sacks will be gathered. This is not so bad when one takes into consideration that the entire yield was volunteer. The combined harvester cut and thrashed in one day 658 bags of barley.

THE GRAIN HARVEST.—Salinas cor. *Bulletin*, July 4: While thrashing is in progress up the valley, it will be several weeks before we get through or begin around Salinas. The wheat and barley is late. The prospect of wheat sown as late as the 5th of April was never better; barley sown the 15th of April promises a fine yield. Cool weather has added to our yield immensely, and the prediction of your correspondent several weeks ago, as to there being three times the quantity of grain raised around Salinas as last year, is verified. The bean and potato crop, too, promises a yield ahead of former years. Added to this is the superior quality of our grain all over the county. I saw a grain field of 100 acres sown to wheat the 5th of April, that the farmer tells me will yield 20 sacks to the acre, or at least 40 bushels.

Nevada.

GRASSHOPPERS.—Grass Valley *Tidings*, July 4: Farmer Nettleship of Limekiln district mourns the loss of his early grapes, a cloud of grasshoppers having settled on the vineyard some days ago, destroying the buds and everything green as completely as a band of cattle would have done. The late wine grapes were not injured; the buds, stems and embryo grapes being too "tart" for the fastidious hoppers. Mr. Nettleship estimates his loss at $200. The high wind of Tuesday afternoon took along with it the majority of the pests. Down at Iron mountain it is reported that the grasshoppers mowed down all the green grass and stripped oaks and other trees of their leaves.

Orange.

A THRIVING NURSERYMAN.—L. A. *Herald*, July 5: Tim Carroll of Anaheim has sold 300,000 orange trees and 100,000 walnut trees this season. All these have been set in orchard near Anaheim. Tim is a rustler. He has now 360 acres of land, of which more than 100 acres are devoted to nursery. He has of orange and walnut stock 1,000,000 young trees. Of all sorts he has a multitude of young trees in nursery. Mr. Carroll has 10,000 orange and walnut trees set in orchard of his own. West of Anaheim he has 60 acres all set with trees. There is a fine artesian well on this tract.

San Bernardino.

PINK BEANS.—Chino *Champion*, July 4: Bettler & Dunlop are planting pink beans. They will plant 28 acres. Their experience last year was encouraging, in that they obtained two tons to the acre. This year they will be prepared for the early rains, and will not lose any thereby as they did last year. The farmers gain each year from the previous year's experience, both in growing and saving their crops.

CITRUS PLANTING.—The *Record* of July 2d publishes a carefully compiled list of the acreage set to citrus fruits in Ontario this year, footing up 629½ acres. The list includes ten acres in Section 16, Cucamonga, virtually a part of Ontario; 25 acres on the Mountain View tract, and 150 acres estimated under the Pomona water system, but in the Ontario voting precinct. About 45 acres replace grapes and apricots; the rest is newly broken ground. One gratifying feature is that the lots are mostly small; there is very little improvement for speculation. The varieties, in acres, stand about as follows in round numbers: Navels, 465; late varieties (Mediterraneans, Tardiffs, etc.), 100; lemons, 50.

San Diego.

TRACTION ENGINE.—San Jacinto *Register*, July 3: Charlie Chambers has lately purchased a traction engine to be used in connection with his threshing outfit. No horses are used with this machine, as the engine pulls separator, derrick-wagon, cook-house and water-wagon. We hope the engine can be used in hauling gang-plows for plowing purposes, for they are used extensively in the northern part of the State.

San Luis Obispo.

SAMPLE SHEAVES.—Santa Maria *Graphic*, July 3: Col. Ketchum, of Nipomo, showed us a bunch of wild oats measuring eight feet in its stocking feet—that is, it was cut. The colonel had a collection, among which are tame oats six feet three inches long, rye seven feet, and various other kinds of grain all of great length. This collection will be exhibited at the Santa Maria and San Luis Obispo Fairs this fall, also at the Mechanics' Fair in S. F.

Santa Clara.

PEACH, CHERRY AND PRUNE PRICES.—*Mercury*, July 3: Pres. Cushing of the Willows Fruit-Growers' Association, last evening stated that many of the fruit-growers would dry their fruit, in fact more than in any previous year. "The majority of them know that if the driers can pay 2½ cents for prunes there must be something in it. Every grower has to keep a force of men, and instead of laying them off for part of the week they can dry the fruit as fast as it falls from the tree. Taking the hauling into consideration, there is not much difference, and they think they may as well have the profits." "How did you succeed in the cherry shipments?" "We realized in the Chicago markets $2 where we would have got but $1 here. The lowest price was about $1.45 a box, and it ran as high as $2 55. The difference in the cost is only about 40 cents a box, and I guess the highest price in S F. was about 75 cents. This year's shipments of cherries were entirely satisfactory, but then we are fortunate in prices all around this year. Peaches have failed in other sections, and as a result we get two cents a pound. That is not bad, considering that the crop is very good throughout the valley."

A LONG BEET.—San Jose *Times*, July 2: S. Holmes of 356 South Tenth street is proud of "a beet that beats all other beets" heard from this season. It was grown in his garden in this city, was dug up top and all, and measured 11 feet and one inch from the nethermost root to the top of the seed-stalk. Mr. Holmes has it hanging in a shed, and will be pleased to exhibit it as a product of Santa Clara county's soil.

Santa Cruz.

FRUIT-PACKING CO. DISINCORPORATES.—*Pajaronian*, July 3: On Monday last, in the Superior Court of this county, the application of the stockholders of the Watsonville Fruit-packing Co. for disincorporation was heard, and as no objection thereto was made by any person, the application was granted. Pending this action the property had been sold to the Pajaro Valley R. R. Co. The money on hand and derived from the sale of the property has been divided among the stockholders, at the rate of $26.70 per share, the paid-up value of which was $50.

Shasta.

GOOD HAY CROP.—Anderson *Enterprise*, July 3: The hay crop is all harvested, the largest and best ever cut in this valley, and the balers are fast putting it in shape for shipment to points along the California and Oregon road. We have not to chronicle the loss of a single ton of hay in this neighborhood, from unpropitious harvesting weather, the season having been all that could be expected, with no thought of craving a better. The growing season opened up late in the spring, but proved excellent when it did come, with just enough light showers at exactly the right time to do the most good.

Sutter.

AT THE CANNERY.—Yuba City *Farmer*, July 4: The apricot crop in this locality is nearing the close of the season on most varieties except the Moorpark. The cannery here will receive large consignments of this variety from Rancho Chico this week and will run full handed. The roll-book now shows 145 names, which will be increased when the peach season begins. The pack in peaches will commence in about two weeks. Plums and pears will be ready for canning about the first of August and are reported to be plentiful. The new grader is giving entire satisfaction and is a great labor-saving machine. In the canning department, there have been erected three new capping machines which are filling a long-felt want. Each machine is supplied with 12 revolving plates on which the same number of cans are placed. A perpendicular rod is lowered on each can to hold the cap in position, and as the can revolves, the soldering iron quickly solders the cap firmly and smoothly to the can. Each machine is operated by two men, and has a capacity of over 6000 cans per day.

NEW FARMING-MACHINE.—Sutter City *Enterprise:* J. M. Hering has received his patent from Washington for an improved farming machine, which combines digging, subsoiling, pulverizing, planting and harrowing. The machine includes hampers and chests for carrying seed, tools, cooking utensils and provisions, with a suitable frame sustaining a canopy or cover by which it can be converted into a tent, or living house, in which are suspended hammocks for sleeping purposes, the object being to provide a complete farming-machine adapted to large farms where accomodations are distant from the ground to be worked.

Tulare.

MILK FOR THE CHEESE FACTORY.—Visalia *Times*, July 3: S. M. Gilliam, Sec'y of the Visalia Creamery Association, and Geo. A. Parker, a director, were visiting cattle owners last week in an endeavor to secure milk enough to warrant the opening of the creamery. It is estimated that it will require 4000 pounds of milk per day to warrant the commencement of operations. Three-fourths of this amount has been secured, and probably by Saturday next enough will have been pledged. The proposition of the association is to manufacture the milk into cheese at two cents per pound, those furnishing the milk to take the remainder of the money received for the cheese; that is, the association will manufacture the cheese and sell it, and for their labor and trouble will charge two cents per pound, the remainder going to those who furnish the milk. Those who have been manufacturing cheese in this vicinity on a small scale have been enabled to dispose of all they had at ten cents per pound, and it is reasonable to suppose the association can do as well. At this rate, those who supply the creamery with milk will receive about eight cents per gallon.

A RUNAWAY HARVESTER.—Tulare *Register:* The team of 24 horses attached to the combined harvester of Dabney & Henry ran away the other day, and damaged the machine quite seriously. The outfit was working in Mr. Dabney's field in the Artesia neighborhood, when a cog from the main pinion broke out, which caused others to be knocked off. The noise of the breaking cogs frightened the horses and they ran a quarter of a mile. The driver kept his seat, holding himself on with both feet and one hand, while with the other hand he kept the animals straight through the stubble until they were tired out, the wheels sinking into the soft ground and making the pull a hard one. Cogs were broken out of several of the wheels and some other parts of the machine were broken. A runaway team with a combined harvester fastened to them are in a position to do some bad work.

Yolo.

A HORDE OF HOPPERS.—Woodland *Mail*, July 5: Geo. J. Lucas informs us of the descent of a colony of grasshoppers on his alfalfa patch, about three miles west of this city. There are millions of them in the field, and on shaking a bunch of clover, a cloud of the insects rise, and after hopping around, settle down again and proceed to devour the leaves of the plant. From present indications, the grasshoppers will be more numerous than ever, and our farmers fear for the alfalfa-fields and vineyards.

A GREAT HAY BARN.—Chas. Coil has erected one of the largest barns in Yolo county, on his farm near town. Upward of 60,000 feet of lumber was used, and the roof alone cost $1400. The foundation is of brick, and the cost of the building will be about $4500. Mr. Coil will use the barn for the storage of his immense crop of hay.

NEVADA.

RYE.—Reno *Gazette and Stockman:* Uncle Geo. Crum has sent the Board of Trade a fine sample of rye raised on the plains about Battle Mountain without irrigation, which proves

that that cereal will flourish without water. It stands fully six feet high, and the heads are from four to six inches long and well filled with grain.

LOCUSTS, which old settlers believe to be the genuine 17-year kind, are said to have appeared in millions on the east side of Washoe Lake and on the sandy plains near Pyramid Lake.

AFTER THE SPRING ROUND-UP.—Salt Lake *Tribune:* John Tinnin of Wells, Nev., was in the city recently. Regarding the cattle interest in Eastern Nevada, he said that the spring round-up was just over, and they now are able to foot up their losses. These run all the way from 50 to 90 per cent, he not knowing of a single case of less than 50 per cent. Some of the cattlemen lost heavily outside of losing the cattle, through a vain attempt to save them by shipping in hay. He named one lot where the cattle had eaten from four to five dollars' worth each of such hay before dying. California hay cost, shipped into Eastern Nevada, about $15 per ton, making the cost of feeding very heavy. Regarding the cattle interest generally, Mr. Tinnin expressed the opinion that prices would remain low because the great grazing countries of Texas and some other States and Territories are being settled up and the lands fenced so as to deprive range cattle of grazing lands, and this is throwing cattle on the market in large quantities.

OREGON.

IMPROVING THEIR CATTLE.—Prineville *Review:* The cattle-raisers of Eastern Oregon say that the past winter killed off the greater portion of their poor stock—"scrubs"—and that they now have the best stock of their herds left to breed from, and with the introduction of well-bred males they expect to improve their stock and within a few years have a desirable class of stock on the range. Already several of them have bought grades of Herefords, Shorthorns and Angus, and will make further purchases as they are needed. This is certainly a move in the right direction, for it is more profitable to raise good than poor stock, and the cattlemen of the country have learned it is as advantageous to them to breed fine cattle as it is for the sheep or horse-raiser to improve his stock.

INTRODUCING THE COMBINED HARVESTER.—Ashland *Tidings*, June 27: Sylvester Patterson will soon introduce in this valley the latest improved harvester—one of the machines that cut the ripened grain and run it into sacks, all ready to haul to the granary or mill. This machine is in common use on the big ranches in California, but it is something new for Southern Oregon. It is made by Houser & Shippee, at Stockton, Cal., and its cost laid down here is about $1800. Mr. Patterson ordered the machine some months ago, and expects it to arrive in Ashland to-day or to-morrow.

HOPS.—Eugene City *Register:* In an interview with George W. Hubbard, the hop buyer, we learned that there is quite an increase in the acreage of hops in Oregon and Washington this year. He thinks Oregon will produce about 2000 bales more this year than last. The outlook for a good price is favorable at present. He says growers should take great pains in drying their hops if they want to get the highest price. Oregon now has the reputation of shipping to market the best cured hops of any State in the Union. Mr. Hubbard sent several samples to Europe last year, and they were reported the best from America. At the price offered now there is a good profit in hop-raising, and it will pay all to take good care of their yards.

UMATILLA COUNTY SHEEP.—*E. Oregonian:* It is learned from Stock Inspector E. Gilliam that the number of sheep in Umatilla county at present is about 114,000, not counting lambs, making 62,000 less than last fall. About 34,000 were sold, most of which have been taken out of the county. From this estimate it will be seen that the total loss of sheep in Umatilla county during the winter was in the neighborhood of 28,000.

A MARKET FOR OUR AGRICULTURAL IMPLEMENTS.—Spain presents an excellent market for the introduction of American farm implements, so says our Consul at Cadiz. Referring to the statistics of exports from the United States to Spain for the year ending June 30, 1889, we observe that the value of agricultural implements exported amounted to only $7316, of which about one-half applied to mowers and reapers. This was but a fraction of the total exports to all countries. This does not represent the extent to which American implements are used in Spain, for it appears that many of them are obtained through German, French and English sources, which present more favorable conditions of purchase, in which the system of long credits acts an important part in trade.

TREE-FELLING BY DYNAMITE.—Some interesting experiments were made the other day in the vicinity of Copenhagen, with tree-felling for military purposes, by dynamite. The object was to ascertain the saving in time and labor effected by this method and the results were exceedingly satisfactory, far more so than is understood to have been the case elsewhere. Trees of as much as three feet in diameter were brought down in some 20 to 25 minutes, whereas the time occupied by ordinary felling would have been 10 times as much.—*Engineering, London.*

THE STABLE.

The German Coach Horse.

EDITORS PRESS:—It is well known and understood that all the modern breeds of horses trace their origin to the same source, and that the horse was indigenous in not a few countries, and that his progenitor was the little prehistoric "Hippus" seems to be as generally understood.

Hence we must accept, in attempting to write up the German coach horse, that originally he was an evolution from the same common source, and that his present degree of excellence is largely due to natural and arbitrary selection.

This breed of horses, in their Faderland, is claimed to have been greatly improved by the insertion into his system of importations of the largest specimens of the English thoroughbred, the fleet-footed charger of the desert, the Arab, and the freer and more quality-like Yorkshire coachers.

Thus we find they have been founded and built upon a rock, and not upon the sand, and this foundation has given them speed for long distances, and, together with care at the hands of their owners and selection under the arbitrary rule of the Government, has established them with a before unprecedented amount of beauty, spirit, finish, action and size. And according to history we must admit that he has, since the sixteenth century, been a distinct and much-favored breed. Under the reign of Anton Guenther, 1620, the Hanoverian flourished and stood high as a coacher and war horse. In 1660 the Duke of Newcastle, in his work on "The Horse," mentions with much favor the German horse, and before and since this time they have stood in very high favor among the royalty, as from this time they have been much used as princely presents, etc.

All German coaching horses are, whether bred in Oldenburg, Hanover, or any other part of Germany, necessarily one and the same breed. No horse can serve mares in Germany unless he either belongs to the Government or has a certificate of breeding soundness and individual appearance, and this certificate is issued by a Government examining committee, and when a horse has such a certificate he may go anywhere in the Empire and serve. And not only is this so, but it is well known that the Government sends horses out of Oldenburg and Hanover into the Hamburg Marsh countries and other sections, and vice versa, all over the Empire at their will, and always with an object in view, sometimes to carry more bone and substance, and again more quality and spirit. Hence we must infer they are in breeding the same, although their individual appearance from different sections is often quite different, for the same reason that in our own country some climates and soils are adapted to raising coach and road horses, while in others they would be a feeble success, but rearing the draft horse would be their best forte. In some sections in Germany we find these coachers becoming so coarse and drafty as to be really undesirable as coachers in America, while in other sections they furnish as fine and blood-like, strong and active as does the Arab in his native desert, and reared in a land of plenty, and his master a bountiful and judicious feeder, as the Germans notoriously are, he always grows large enough.

The color is mostly bays, browns and blacks. Some few have white in face and white feet. They stand from 160 to 173 centimeters, or from 15⅔ to 16½ hands high, and weigh from 1250 to 1600 pounds at maturity. They mature at a young age, being fit for work at two years, and for breeding purposes when three years old. They trot fast with perfect angles, very regular with high action. They are very stylish and handsome, with sweet, pretty heads, long necks, short backs, with good quarters, the best of feet and finest of hocks.

They have been so carefully bred by the Government that an unsound one is seldom seen. In hardiness no breed can surpass them, and in fertility and prepotency we believe none can equal them.

They are the horse in general use throughout Germany. They are the great plow horse, and the same team goes to the commodious carriage and carries its owner safely and swiftly to market, or over the country, at a cheerful, easy, ten-miles-an-hour gait, and again he goes to the ponderous four-wheeled German sugar-beet wagon, and draws to the factories, going away in a slashing walk, with 5000 kilo—10,000 pounds—on paved roads.

While he is a great domestic, like his master, he is a prodigy in war. These are the cavalry horses of which history tells in the Franco-Prussian war. They were so intelligent, courageous and fleet of foot, that on meeting a French troop of horse, they could charge them, recharge and charge again before the French could turn to action.

The demand for these horses will be best understood when we know the great number of them that are sold every year to France, Italy, Switzerland, Belgium, England, Russia, Austria and South America, running far into the thousands. No horse stands so high in the opinion of the South American as a prepotent sire as the German coach horse, and their history justifies the assumption that in North America they will very soon rank with quite as much favor.

Some one may ask, why have we not known of this splendid breed of horses, here in our own country, before? In reply I can but say: Well, we have known of the German coacher, but heretofore there has been no stud-book for them, outside of the Government certificate, and when a horse belonged to the Government stud, he was so high priced that he could not safely be purchased with the thought of a profit to the importer, and we all know that the American people will accept no horse for breeding purposes unless he has a certificate of authority of breeding; hence they, like the Irish hunter, have heretofore been compelled to seek their market in other lands.

Greeley, Iowa A. B HOLBERT.

PUBLIC AFFAIRS.

A Nationalistic View of Anti-Trust Decisions.

EDITORS PRESS:—In your article headed "The Anti-Trust War," issue June 28th, you refer to the decisions of the New York Supreme Court as being almost a "ringing declaration" that the creature—the corporation or trust—is not greater than its creator, the State.

You also say that "the decision is diametrically opposed to the policy and aims of a trust." For myself I certainly cannot see what in the decision will prevent a new corporation being formed that will buy up all the sugar refineries in the U. S., resulting in a single huge corporation instead of several smaller corporations joined together in a trust controlling the sugar industry of the country.

The decision certainly may prevent monopoly assuming the peculiar form of a trust, but what difference does it make to the people whether a corporation or a trust constitutes the monopoly?

The sugar refineries of this country, if run to their fullest capacity, can make almost as much sugar in one week as can be consumed in two weeks, hence is it not perfectly evident that the owners of the sugar refineries must agree to restrict production—that they must form some sort of a combination to effect this result. If not, a trust, then some other combine. Laws to prevent them performing a simple act of self-preservation will always be futile, and it is most exasperating to see editors of a paper so widely read as yours urging farmers to pin their faith to absurd anti-trust laws which will have no more effect than the Pope's famous bull against the comet.

There is but one remedy for trusts and monopolies, and that is let the Government nationalize them—let Uncle Sam run the sugar business instead of Claus Spreckels.

Until we resolve on this course, we may rest assured that a sugar ring will always dictate to us how much sugar we shall consume and how much we shall pay for the privilege. The Russians will be under a political despotism as long as they give their political destinies into the hands of a political despot—the Czar. The Americans will remain under an industrial despotism as long as they leave their industries to be managed by the modern American Czars of Industry—the Armours, Spreckels, Rockefellers and Vanderbilts. We wonder at the Russians cringing under their political despot, yet we ourselves fawn at the feet of despots who are riveting a chain of industrial slavery more galling than history has yet recorded.

Our forefathers were most cautious in framing our constitution to balance political power so that no one branch of the Government should be able to preponderate. Little did they dream that a power outside of any that they were creating would arise that would dwarf all their political constitutions—the money power. The almighty dollar is king—who dare his power gainsay?

The creature is greater than the creator—decision or no decision.

Two corporations were formed in New York last week of fifty millions capital each. Certainly the decision does not prevent the formation of corporations of such immense capitals, and every Californian knows that a fifty-million dollar corporation can vote pretty often, law or no law. We have but one course open to us. We must nationalize industry. We must come to this decision sooner or later and all this fighting trusts is so much wasted time.

H. G. WILSHIRE,
Pres. Farmers' National Club of Anaheim.
Fullerton, Cal.

MINERAL MATTERS IN COTTON.—Dr. Bowman states that the mineral matters in cotton amount to from 1 to 1.5 per cent of the weight of the fiber. Carbonate of potassium is the chief constituent. There are other salts and phosphates of magnesia and lime, and an amount of peroxide of iron, varying from three to six per cent of the quantity of inorganic matter. The iron is highest in Egyptian cotton. Alumina is also reported as constituting 7.9 per cent in rough Peruvian cotton. This mineral matter is regarded as an integral part of the fiber. If, as Dr. Bowman says, "It is impossible by any means at our command to separate or remove these mineral constituents from the fiber," dyers and printers would be in difficulties; but surely they are nearly all removed in ordinary bleaching operations.—*Textile Recorder, Eng.*

FORESTRY.

The Redwood Forest.

In size of individual specimens, the redwood (*Sequoia sempervirens*) ranks next to its relative, the big tree of the Sierra Nevada (*Sequoia gigantea*) and the eucalyptus of Australia; but if we take the average size of the trees and the density and extent of the forest into consideration, the redwood is the grandest of the world's forest trees. It belongs to the Coast Range of Northern California. A few straggling groves only are to be found below Monterey bay, and it does not extend far into Oregon. The largest body commences at the mouth of Russian river and extends into Oregon. Another large forest lies south of San Francisco, in Santa Cruz county. The widest portion of the great or northern body of redwood timber lies in Mendocino county, between Ukiah and the ocean. Here it is by air-line 25 miles wide—a vast, unbroken forest with branches extending inward up the canyons. The peculiarity of the redwood is its love of moisture, which means here fog. The fog banks rise from the Pacific and flow inland like a great level sea of vapor. The lower mountains next the coast are enveloped, and farther on it fills the canyons, leaving the high mountains to rise like islands out of it. Still farther inland only the lower portions of the canyons are filled with fog. At times the sea of fog will rise so high that it engulfs nearly the whole section back to the high dividing range of mountains which is the watershed between the streams running directly into the ocean and those which flow into the Russian and Eel rivers, which extend for a long distance parallel to the coast line. Then the fog goes pouring through the passes in actual rivers of vapor, which run down the canyons toward the interior. Strangely enough, it always returns as it goes.

Now, with this sea of fog in mind one can locate the redwood belt most accurately. Near the coast on the lower mountains, and everywhere, the densest forest is almost exclusively of redwood. Farther inward sweeps the same dense forest on the lower mountains and in the canyons at the same hight. Redwood forest is still on all the mountains, but of smaller trees, and the greater the elevation the more largely it is mixed with Douglas spruce (Pseudotsuga taxifolia) and the tan bark oak (Quercus densiflora). Still farther inland near the watershed spoken of before, redwood only grows in canyons, and the mountains are either open grazing land, covered with oak and fir, or with that dense low growth known as chemisal (Adenostoma fasciclaris). Over the watershed, down those canyons where the fog pours over, there still are groves of redwood, well confined to the moist banks close to the courses of the streams; while up the broad canyons of Eel and Russian rivers the fogs roll and nourish the life of the grandest of all of the redwoods till they are held back by the heat of the interior.

The redwood is not only a lover of moisture, but, to an extent hardly to be believed unless seen, a condenser and conserver of moisture. The tops reach high into the sea of vapor, and a constant precipitation from them like rain takes place. Last summer I was on the coast during a foggy time, and I remember that while the roads were dry and dusty, in the clearings under the redwoods the water had been precipitated till it stood in puddles and formed mud holes. This abundance of moisture causes the densest of undergrowth, which only continual fires make passable. Hazels, huckleberries, various ceanothuses, ferns of large size in the greatest profusion, with large bushes of Rhododendrons and numerous other plants, make the forest floor a perfect tangle in the moister portions. The list of herbaceous plants here is not large, but they are delicate and beautiful. The glossy leaves of Vancouveria hexandra form dense masses; an Orchid, Goodyera Menzieger, is common, and in the spring Trillium ovatum and the Erythroniums are plentiful, and so is the lovely Clintonia.

Of small ferns, only the beautiful Adiantum pedatum, the Maiden-hair, is common; but there are several species of Aspidium and the Woodwardia, and Brake is everywhere, making in the cleared forest a solid mass four or five feet high. I have seen acres of the Brake seven or eight feet high, where a man could only crawl through the tunnel-like paths. Every year or two forest fires sweep through this forest tangle, but it springs up again with renewed vigor. The redwood, unless very young, is not injured by fire. Its thick bark protects it, and often trees will be seen which had every limb stripped by the fire, putting out a mass of foliage from top to bottom. No name could be more appropriate than sempervirens, for it possesses wonderful vitality. A tree cut throws up hundreds of strong sprouts, and a stump is only killed by repeated burning. Fallen trees will often grow along the whole length of the stems, and throw up sprouts from the upturned roots, and I have seen sprouts six or eight feet high from logs. The commonest care would ensure the perpetuity of these grandest of forests.—*Carl Purdy, Ukiah, Cal., in Garden and Forest.*

WELL WORTH READING.—An essay on the training of the young, by Sister Cook of McMinnville, may be found in our "Home Circle," and will repay you for perusal.

STATE AND COUNTY.

Feather River Fruit Lands.

[Written for the RURAL PRESS by J. C. H.]

A RURAL representative visited the new fruit belt lying adjacent to the Feather river, that has attracted more than ordinary interest during the last year, from the fact that a number of our leading orchardists and nurserymen had purchased large tracts of land in this section and planted extensive orchards and vineyards, among whom were A. T. Hatch, John Rock, C. W. Reed and Robt. Williamson of the W. R. Strong Co. of Sacramento. In company with C. W. Reed, the writer made an extended and thorough examination of this rich and productive portion of our State last week.

Arriving at Gridley at 6 o'clock P. M., a team was awaiting to convey the company to the Rio Bonito, three miles distant. The land in and about Gridley is very fertile, and has gained fame as a productive wheat district. It is rolling tableland dotted with large oaks from Gridley to the Rio Bonito, lying along the west side of the Feather river. During this short ride there were two combined harvesters manufactured by the Stockton Combined Harvester and Agricultural Works, seen at work in fields of wheat that were yielding a fair crop, as per our estimate equal to 12 sacks to the acre.

The Rio Bonito lands along the Feather river extend from one-half a mile to two miles wide, a distance of ten miles or more. For 30 years it has been devoted to raising grain principally, with small orchards and vineyards planted for family use. The first and original settlers had a full realization of the productiveness of this land, of the exuberant growth of fruits, cereals and vegetables, and also of the favorable climatic influences that made this locality so desirable as a place to live, and seemed contented in their Silurian existence.

During the years 1888 and 1889 a number of our sagacious and experienced fruit-growers had their attention called to this locality, and after a full and careful investigation came to the conclusion that this section was especially adapted for growing fruits of the best quality, and that the heavy precipitation of water and sheltered location would make this section one of the earliest in the State to ripen fruit and no need for irrigation. A succinct description of a few farms and colonies may enable our readers to form a just conception of a locality and section that will contain perhaps the largest body of continuous orchard and vineyard, in connection with citrus fruits, of any place on the Pacific Coast or in the world.

The Farm of C. W. Reed,

Of the well-known firm of Reed & Van Gelder, nurserymen, is located on the Rio Bonito, about one mile west of the Feather river, and contains 676 acres, 450 acres of which is a deep, black, sandy loam or river-bottom land and the balance a reddish clayey soil and upland with a gradual slope toward the river. This whole tract, except 50 acres, has been planted this year to orchard and vineyard in proportion as follows: 3000 apricots, 11,500 peaches, 3500 pears, 3000 almonds, 4000 French prunes, 1000 plum trees, two acres of orange trees, rows of Adriatic figs, 32,000 rooted grape vines of the table varieties, a few palms and ornamental trees. The growth in young trees has been far beyond the usual advancement, and a large number of these budded yearling trees are now over five feet high, with large dark leaves and a most vigorous appearance.

This tract was covered with great oak trees which have been dug out except one lone gigantic sentinel standing at the head of the main avenue and a few giants standing near the out buildings, one of which was measured two feet from the ground and found to be 27 feet in circumference. Three hundred acres of this orchard was planted with canteloupes this season and active preparations were being made to ship the first carload to New York on the 15th of July. Four acres of alfalfa sowed in March had yielded 14 loads of hay and was now over 30 inches in hight. A small patch of popcorn planted by Master Reed was well stocked with ears of corn and stalks eight feet high. The residence, out buildings and piles of grain-raising machinery are forcible reminders of a condemned system of agriculture for this section, while the disc harrows and implements for destroying foul vegetation are the chief factors in contending with the weeds which grow in immense proportions and prodigious height. Mr. Reed looks upon this locality as an especially favored section for growing fruit and has an ambition to make this farm a model fruit orchard.

The Hatch and Rock Orchards.

The county road, which is to be widened, is the dividing line between this farm and the great orchard belonging to A. T. Hatch, ex president of the State Board of Trade, and John Rock, the veteran nurseryman and manager of the California Nursery Co. at Niles. Feather river is its eastern boundary, and it extends along the valley about two miles, containing 2200 acres of land, 1800 of which are in orchard, the largest portion being planted in 1889. There are 40 acres of orange trees planted and the balance divided in about equal proportions in almond, peach, French prune, pear and apple trees. The trees that were planted in 1889 have made a remarkable growth, some that we measured being over eight feet high and a stretch across the top of over six feet. The trees that were planted this season in some portions of this rich bottom land look like young saplings. During the last two months Mr. Rock has had from one to two men going through this orchard heading it back, as the growth was so rapid that the woody fiber would hardly sustain the weight and consequently the end of the limbs become bent and unsymmetrical. This orchard is arranged in an artistic manner with palms and ornamental trees skirting the avenues, while the great oak trees along the bank of the Feather river make a contrast that is picturesque and attractive. We measured the stump of one of these giant oaks and found it to be over ten feet in diameter.

The character of this soil is such that it can be worked dry or soon after a heavy fall of rain. It certainly shows thorough cultivation, and these great enterprises from center to circumference have been commended as the result of skilled hands, sagacious management and superior resources.

Mr. Rock and Mr. Hatch are of the opinion that in soil, climate and rainfall, in a harmonious combination and environments, this is one of the most favored localities for growing fruit in quality and commercial value on the Pacific Coast.

W. R. Strong Co.'s Orchards.

Directly opposite, on the east side of the Feather river, is the well-known "Onyett ranch," four miles west from Palermo, containing 677 acres, which was purchased on the first day of February, 1890, by the W. R. Strong Co. of Sacramento. Mr. Robt. Williamson, the experienced nurseryman of this firm, is the present manager, and under whose direction it has been transformed from a grain-growing and stock ranch to what promises to be one of the great fruit orchards of California. In the character of land, it may be classed as follows, viz: 360 acres of sediment bottom land lying along the Feather river; 140 acres of table or slightly elevated bottom land, and 177 acres of reddish clay and adobe soil. Work of reclamation was commenced on the 5th day of March, and, owing to the heavy rains, the planting of trees was continued until the 12th day of May. A combination of circumstances, of which an unexpired lease was one, there have been only 140 acres set in deciduous fruits and 60 acres in table grapes. As showing the prolific character of the soil, one of the workmen was cultivating a fine patch of corn that had been planted after the lessee had cut a crop of hay, and adjacent thereto was a block of potatoes that yielded, so far as dug, over 100 sacks to the acre. The stupendous oaks that are standing are indisputable evidence of the quality of production of this locality. It was midday when we measured the shadow of one of these giants and found its approximate breadth 126 feet in diameter one way and 102 feet at right angles across. From Mr. Williamson we learned that three miles above there were cherry and peach trees 38 years old, in a healthy condition, apricot trees 2½ feet in diameter two feet from the ground and over 40 feet across the top of spreading branches. In the front yard of this farm, near the quaint dwelling, stand two large apricot trees from which ripe fruit was picked on the 12th day of June this season.

Other Improvements.

The promise of these embryo orchards has stimulated investments and turned the attention of capitalists to purchase land with a view to grow fruit for the Eastern market. Several dilapidated ranches have been bonded, and it is currently reported that Mr. H. W. Meek of Alameda has purchased 1000 acres adjacent to the orchard of Messrs. Rock & Hatch.

Palermo.

The citrus and deciduous fruit trees in and about Palermo are in a very flourishing condition. The irrigation system has been enlarged, mains and ditches extended, and an abundance of water for all purposes secured. Additional storage dams have been built on the adjacent hills, and a pressure obtained that makes it possible to throw water 150 feet high in the town of Palermo. We rode out among the orange groves and fruit orchards in the colony proper, and found by personal examination and learned from expert fruit growers that the orange trees had made an extraordinary growth and far beyond their expectations. This being a dry red soil, it was thought incapable of growing deciduous fruits without irrigation. In the immediate vicinity there are several peach, apricot and olive orchards two years old with large, fine, vigorous trees, some of which, by actual measurement, were over six feet high, and these trees have been raised without one drop of water by irrigation. The weather has been quite cool and pleasant in Palermo this season, caused no doubt by the snow on the mountains, which can be distinctly seen. The thermometer marked 92 degrees in the shade on the day we visited Palermo.

A fine Congregational church and one fine residence has just been completed, and it is expected that Hearst & Taylor's $12,000 house would be finished by August 1st of this year. The Pacific Improvement Co. has set out ornamental trees on a number of the main avenues (a large proportion of which are the Texas umbrella tree) presenting a very attractive appearance. Preparations are being made by residents and property holders to plant largely in citrus fruits the coming winter and spring.

Thermalito.

This thriving and pioneer colony is situated on the north side of Feather river, on the first bench of foothills opposite Oroville. It was selected for its beauty of location, its fertility of soil and its especial adaptation for citrus culture, as its name indicates it being in the thermal belt at an elevation that avoids several degrees of frost in comparison with the climate of Oroville and the bottom lands along the Feather river. Of the 8000 acres set apart for colony purposes, 2000 acres have been sold in tracts from 2 to 20 acres, 1000 acres of which has been planted chiefly in orange trees. Twelve miles of avennes and streets bordered with palms and ornamental trees have been laid out and mostly graded. Water mains and open ditches have been placed and a full supply of water from the Feather river and aqueducts is assured for 50 years. The Thermalito Colony Co. have granted a subsidy to the Butte County Street Railway Company to secure a street railway through this colony from Oroville.

The premiums secured by Thermalito fruit of the northern citrus fairs of the last two years show the adaptation of the locality to such growths, and it is established that the experimental stage has passed in growing citrus fruits in this section and the patient and persistent efforts of the promoters of this great enterprise will reap a rich reward.

Colmena Colony.

This thriving colony, a map of which with a full description was published in the RURAL in 1888, is advanced in material prosperity beyond the most sanguine expectation of the promoters. It is situated on the railroad, four miles below Marysville, and promises to become one of the favored citrus belts of this State. It has been demonstrated that the facilities for irrigation by raising water by pumping will not be a burdensome expense. Two pumps were in operation and the orange trees appeared to be in a very thriving and vigorous condition. We were informed by Mr. Abbott, one of the principal owners, that they expected a number of settlers from the East this season, who had purchased 20-acre tracts.

San Bernardino County.

[Written for the PRESS by JAMES H. CROSSMAN.]

San Bernardino is the banner county of our State in area, if not in population and taxable property. It has within its boundaries all the elements of prosperity in great abundance. Its mineral and agricultural resources are probably unsurpassed by any county in our State. The division line is boldly and distinctly defined by that mountain chain known as the San Bernardino range. That portion best adapted to agricultural pursuits lies to the south, which is not void of mineral wealth, but the mineral region proper that forms the metallic domain of this county lies to the north of this mountain range. The northerly boundary of San Bernardino county is Inyo county, with the State of Nevada on the northeast, while the Colorado river which divides the State from the Territory of Arizona, forms its Eastern boundary. It is bounded on the south by San Diego county, while Los Angeles and Kern lie to the west. It contains within these boundary lines 23,476 square miles. Much of the largest portion of this area lies north and east of the San Bernardino range, of which there are of mountains and agricultural lands 6000 square miles, and of the so called "desert land" we find 17,476 square miles, a large portion of which is susceptible of cultivation, providing storage reservoirs, and artesian water can be obtained.

The Valley of San Bernardino,

Upon which Dame Nature has with such a liberal hand bestowed her bounteous gifts and blandest smiles, is already noted far and wide for its fertility of soil and picturesque landscape. It is situated directly east of the city of Los Angeles and about 50 miles south of west from the nearest point to the Pacific seaboard. The valley proper has a length east and west of about 60 miles, with an average width of 15 miles. We find here a varied combination of both soil and climate. It is here that the orange attains a greater degree of perfection than in any other locality on the Pacific Coast, as can also be said of all the varieties of deciduous and citrus fruits that are adapted to a semi-tropical clime. Clover, alfalfa, barley, wheat, oats, as well as every vegetable known to man, yield abundant crops of a superior quality. Walnuts, almonds, chestnuts, filberts, peanuts and pecans are also products of this favored soil, while the raisins grown beneath the benificent rays of the semi-tropical sun have a national reputation. It is the home of the grape. The wine manufactured in this county is highly esteemed and commands a good price both at home and abroad.

Cities and Towns.

Outside of the city of San Bernardino are many beautiful and attractive suburban towns. The most prominent are Redlands, Lugonia, Riverside, Gladysta, Crafton, Banning, Mentone, Highland, Harlem, Old San Bernardino, Sunny Slope, Colton, Etiwanda, Rialto, Urbita, Cucamonga, Beaumont, Ontario, Terracina, Mound City, Chino, Rincon, South Riverside, East Riverside and Hermosa.

The climate in the valley is mild and equable, the thermometer seldom reaching the freezing point. About 17 inches of rain is the average.

Artesian Water

Can be obtained in many places both north and south of the San Bernardino range in both desert and valley. In the latter, 121 artesian wells alone furnish 13,000,000 gallons every 24 hours, while the combined annual flow is several billions. In San Bernardino and the adjoining valley over 400 of these streams are unceasingly contributing their quota of living water pure and crystalline. The pipes are from 2 to 12 inches in diameter; 300 wells are within the city limits. The principal source of supply to the Gage canal and irrigation system is drawn from this source. In addition to the supply from creeks and wells, reservoirs for the purpose of storing water have been built in the mountains. The lake formed by the Bear Valley dam makes the largest storing reservoir in State for irrigation purposes. We have taken the liberty of publishing the following description of this dam written by Elson D. Hall for the San Bernardino Board of Trade and published by that deserving institution illustrative of the resources of the county, at the same time acknowledging our obligations to Mr. J. C. Scott, secretary of that institution, for information and favors extended.

The Bear Valley Dam

Is located at the outlet of the Bear Valley into Bear creek, which empties into the Santa Ana about five miles below, and is one of the most favorable locations that could have been selected. The valley is surrounded by mountains, and has no other outlet but this, which here is very narrow with precipitous rocky sides. Into the solid rocks of this gorge the dam is abutted, and is built on a curve, arching inward, forming the arc of a circle, with a diameter of 345 feet. Its dimensions are: On top, 300 feet from abutments, 60 feet high from the bedrock of the creek in the highest point, and it conforms to the mountain slope on either side. Its base is 20 feet wide, and from this it slopes to three feet wide at the top. Its average co-efficient of safety is 25, and it would stand twenty times its present pressure. The whole is built of vast granite blocks which were quarried near the margin of the lake and floated to the wall on scows, while a derrick built on a floating raft took them and placed them in position. The rocks were laid in Portland cement and all the interstices were filled with beton. The cement had to be hauled in wagons from Colton by way of the Cajon Pass and Mojave Desert, and thence down the valley to the dam, a distance of 100 miles. A four-horse team hauled eight barrels and it took ten days to make a round trip. Sixteen hundred barrels of cement were put into the dam at a cost of $13 per barrel, including the freightage.

The engineer was F. E. Brown of Redlands. The State Engineer of California has pronounced the work not only efficient but a remarkable piece of engineering.

The lake formed by the dam extends back into Bear valley over five miles, with an average width of nearly a mile, and a depth of 12 feet, and contains the enormous amount of 8,000,000,000 gallons. To supply this the valley furnishes over 60 square miles of drainage area, on which falls three times the amount of water which the lower valleys receive. The dam stands 6400 feet above sea level. The quantity of water held in reserve now is sufficient to irrigate 50,000 acres of land, and to supply a population of 500,000 with water for domestic purposes. Much water still goes to waste in Bear valley and elsewhere in the mountains. The capacity of this reservoir will be enlarged. Other dams will be built. Nowhere else in Southern California does so much rain and snow fall as on the San Bernardino mountains. The unfailing creek and rivers, the large number of flowing artesian wells, and the limitless supply of water in the lofty mountain valleys, which may be had for the expense of storage reservoirs, unite to make San Bernardino the best watered county in Southern California, we might almost say in the State.

The waters from Bear valley and other supplies in the mountains find their way by natural channels to the plains. At the mouth of the canyons, stone-lined ditches, flumes, and cement pipes convey the supply to the cultivated tracts. The best method of irrigating is to have a distributing reservoir into which the stream can run continuously, and be drawn upon as needed. Fruit lands need irrigating only about once in four to six weeks. After the ground is thoroughly soaked, two or three days are allowed to elapse before it is gone over with a horse cultivator. The surface of the ground is thus prevented from baking, and the moisture is retained for several weeks.

Transportation Facilities.

Two transcontinental railroads pass through the county, which, with the advent of the extension of the Utah Southern (now in process of construction at least as far as Pioche in Nevada) through the heart of the desert mineral region to some point on the Atlantic & Pacific R. R. or to tide water, would make three roads. These, with the California Central and the San Bernardino Valley R. R. now building, will make San Bernardino a railroad center of great importance. At date, San Bernardino is also the banner railroad county of the State, at least so far as mileage and county assessments are concerned. There are 417 miles of standard-gauge road and 321 miles of motor and narrow-gauge, with 21 miles of electric roads

within its boundaries. These several companies pay assessments on $4,991,250, the value of the available railroad property in the State being $26,000,000.

Though the metallic domain proper lies to the north of the San Bernardino range, its valley region is not devoid of mineral wealth. The ores of tin of great value and immense quantity occur in the Temescal range of mountains, on the San Jacinto ranch; there are also mineral paint, gypsum, bituminous rock and coal measures. There has also been found a stone suitable for macadamizing streets. The manufacture of tiles and brick from a superior quality of fire-clay is an important and a growing industry.

Statistical.

For the following statistical data I am also indebted to I. C. Scott, Esq., Secretary of the Board of Trade of San Bernardino, and to Mr. Hale.

The tax levy for the year 1890 is $1 50 on the $100. The county is free from debt.

Acreage under cultivation for the year 1889, 64,410. The principal products were as follows:

	Value
310,000 boxes oranges	$744 000
4 50 boxes lemons and limes	17,000
325,000 boxes raisins	546,250
650 tons dried fruit	143,000
40,000 cases canned goods	16 ,000
90,000 lbs. English walnuts and almonds	6,750
345,000 lbs. comb and extracted honey	23,800
240,000 gallons wines and brandy	62,000
225,000 centals barley	146,750
Wheat, oats, hay, and other products	100,000
Total	$1,949.050
Minerals	1,350,000
Grand total	$3,299,050

Mr. Scott also states in his report to the Board of Trade for the fiscal year ending December, 1889, that the earnings of the county will average more than $100 to each man, woman and child in the county.

The above statistics, which can be relied upon as correct, show that San Bernardino county, taken from a financial standpoint, is now the leading county of the southern portion of the State. If she can do this with her paucity of inhabitants and undeveloped resources, what can she do with her plans for irrigation works completed, unimproved lands under cultivation and her desert regions pouring forth their treasures of mineral and metallic wealth.

Desirable New-Comers to Merced County.

WASHINGTON, July 7.—United States Consul Walter E. Gardner at Rotterdam, sends the following interesting report to the State Department on emigration to this Government. It is important in itself and significant as indicating the kind of people California will receive from Holland:

To-day there sailed from this port by the Netherlands Co.'s steamship Spaarndam a colony of 65 Hollanders who are to make for themselves new homes in California. These have been preceded by a smaller colony which sailed from Rotterdam in autumn last year. They will be followed by another colony, already partly made up, to sail in September next, and doubtless, also, by other future colonists. Quite unlike most emigrants from Continental ports to America, these people are comparatively wealthy. They sail for New York as first-class cabin passengers. They travel westward from New York by specially chartered Pullman cars. Each adult male and each of several adult females in the colony leaving to day has already made cash investments ranging from $3000 (the lowest) to $10,000 (the highest), in partial payment for lands, houses, barns, furniture, agriculture implements, horses and cattle, of which the buyers will assume immediate ownership upon arrival at their destination. Among the various household effects certified through this office are pianos, libraries, paintings, silverware and other certain evidences of moderate wealth.

The movement has its origin with the Holland-California Land Company, incorporated under the laws of the State of California. Included in the official Board of the company are some of the strong business men of Rotterdam, while its Vice-President and California Managing Director is W. A. Nygh of San Francisco. The company is the owner of an abundantly irrigated area of land in Merced county, Cal., which is divided into 20-acre tracts. Many are already under cultivation, the products being alfalfa, grape vines and fruit orchards. These cultivated lands are sold to the Dutch immigrants at $175 per acre and prior to arrival of new owners, each equipped, as above indicated and according to the plans previously agreed upon, with all the paraphernalia of a complete prosperous country home. The city and center of this New Holland of the New World is to be called "Rotterdam," and among other characteristic features is a representative Dutch dairy.

Teachers are employed by the company to instruct the colonists in such modifications of Holland agricultural methods as climate and other conditions in California render necessary, and a company hotel has been or is about to be opened for young men colonists without families.

The enterprise thus briefly outlined has attained among the ultra-conservative Dutch, considerable and widespread popularity. For example, the Netherlands cities and villages contributing members to the colony sailing to-day are Rotterdam, Dordrecht, Giesendam, Amsterdam, Delft, Bussum, The Hague, Nymegan, Araham, Oosterbook and Gouda.

Irrespective of the business merit or lack of it in this company's scheme there is no question whatever that these Dutch emigrants to Merced county, California, are physically, materially, mentally and morally a strikingly superior class.

Growing out of the movement above reported and related to it is to be noted also the recent organization of the Holland-California Trading Company, which now has a depot in this city exclusively for the sale in Holland of California fruit and wines.

ENTOMOLOGICAL.

Another Source of Danger to California Fruit-Growers.

EDITORS PRESS:—I procured from Sresovich & Co., 505 and 507 Sansome St., 13 barrels of Tahiti rotten oranges for seed, and on opening the barrels I found the fruit had been very badly infected with the purple scale, *Mytilaspis Citricola*. Is this not a danger which should be controlled or prohibited by the fruit-growers of this State? Are we to be ruled and ruined by the selfish greed of a few importers of fruit and fruit trees and stand by and take the disease without being able to administer a dose of medicine to alleviate our sufferings?

The Horticultural Commissioners of Los Angeles Co. have endeavored to prohibit the importation of Florida trees infected with purple and other scale pests, but claim they are powerless in the matter as by doing so they conflict with the Inter state Commerce law. That being the case, why not the fruit-growers combine and have a plank embodied in the platforms of the political parties that the members of Congress from this State shall use every means in their power to have that law repealed, or a clause inserted, giving the citizens of each State, through the proper officers the right to protect themselves against the importation of contagious diseases? Those rotten oranges for seed have been sent to different localities and no doubt the marketable fruit has been sent all over the Pacific Coast, which in my opinion is cause for alarm. True, the climate and locality may not be suitable for the reproduction of the pests in all cases, but I find where the citrus family of trees does well, the insect pests infesting that class of trees will also do well; consequently, I think some steps ought to be taken to prevent this wholesale importation of injurious pests, and not wait until the whole fruit industry is paralyzed. JOHN BURR,

Hort. Inspector for San Fernando Dist., Los Angeles Co.

Progress in Los Angeles County.

The Los Angeles County Board of Horticultural Commissioners recently presented the following report to the Board of Supervisors:

In the matter of imported orange stock from Florida, Mr. Mitchell, by instruction of this commission, has given his personal attention to every detail and enforced a strict quarantine against every car received, the contents in each instance being found infected with insect pests. The quarantine was only raised after the trees were thoroughly disinfected, remained intact for two weeks, again inspected, and found free from insect pests.

With the exception of one car, now presumably en route, there will be no further receipts of Florida stock until next fall.

With your kind approval, we requested Prof. Coquillette, United States entomologist, to make a special inspection of Florida trees that had been planted out one and two years in Pomona, Riverside and other localities, and report to us, if, in his opinion, Florida insect pests will flourish in this climate.

As the result of his observations and interviews with other parties, Prof. Coquillette gives it as his candid opinion that were any of the Florida scales to be introduced into a large, growing orange tree where they would be in a great measure protected from the direct rays of the sun, that they would then continue to live and multiply in any portion of Southern California where orange trees can be successfully grown, an opinion concurred in by Dr. Claflin of Riverside, who spent several months in Florida last winter investigating the scale insects there.

It is the sense of this commission that the insects being introduced into the county on Florida trees are dangerous and injurious to the fruit interests of the county, and we feel justified in the vigorous measures we have taken to prevent the spread of the pests; and we deem it of the utmost importance that in the future the greatest care should be exercised to prevent the introduction of the pests into the county.

We take great pleasure in rendering to you a report of our personal inspection of the orange orchards in Alhambra, San Gabriel, Lamanda Park and Duarte during the past month. The condition of the orchards in these localities, and all others in the San Gabriel valley during the last three or four years, has been lamentable and alarming on account of the presence of the red scale insect.

As the result of our inspection, we can report that throughout this valley the red scale has become almost annihilated, probably 95 per cent being destroyed by some agency the origin of which cannot as yet be determined. As the result of this blessing, orange-growing has taken a new impetus, and the growers are in a happy and hopeful mood.

We found the larvæ of the twice-stabbed lady-bird and the lace-wing fly in vast numbers—greater than ever before.

Both of these parasites are known to prey upon the red scale, although not confining themselves entirely to this means of sustenance; still, appearing in such numbers, we naturally conclude that they have very materially aided in reducing the red scale insect.

The months of July and August will determine as to the permanency of the disappearance of this pest, and until such time, on account of the danger of destroying existing parasites of the white and red scale, this commission deems it their duty not to order spraying of orchards in the San Gabriel valley.

Outside this district there are localities where disinfection can be pursued by the fruit-grower without detriment, as parasites of the prevailing pests are not present in sufficient numbers as yet to accomplish desirable results.

We, however, feel that grave mistakes have been made in spraying, and advise in all cases where it is possible that the gas treatment of infected trees be used. This treatment, when intelligently applied, will bring the best results with less expense to the orchardist.

We also desire to report that the *vedalia cardinalis* is present in sufficient numbers in the county to quiet all fears as to the reappearance of the white scale in quantities injurious to fruit trees.

The number of inspectors has been reduced to four, each one of whom at present is doing necessary and effective work. We have in contemplation a still further reduction of this force, with a view of giving more of our personal attention to inspections, that we may act more intelligently and promptly. Respectfully submitted,

A. F. KERCHEVAL, President,
GEORGE J. MITCHELL,
F. EDWARD GRAY.
County Horticultural Commission.

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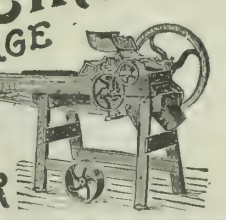
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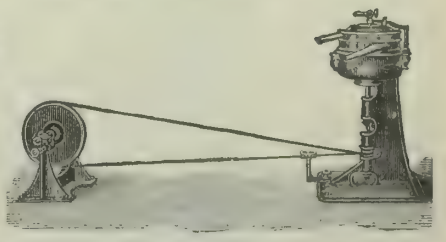
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SWINE YARD.

Condensed Statement on Hog-Raising.

Thos. Convey, in a Wisconsin Farmers' Institute, made the following instructive talk:

Give the pig a good start. Few feeders recognize the necessity of giving the young pig a good start. If through want of proper judgment, or want of care in changing it from the milk of the sow to other food, liquid or solid, it suffers from impaired digestion or defective nutrition, it may get a setback from which it will never fully recover.

Food of Support and Production—The principal part of our hog crop is marketed when they are about 18 months old. The average weight at that age could be easily attained by a pig nine months old, the amount of food consumed by the former being nearly twice as much as that eaten by the latter, the younger pig receiving more during the early and the older requiring more during the latter part of its existence. A certain amount of food is required to keep an animal in its present condition. This is termed the food of support. All food given in excess of the food of support is termed the food of production, and in feeding should go to increase the weight. The food of support constitutes about seven-tenths of a full ration, but the food of support for a restless, irritable hog may very nearly approach the food of production for a well-fed hog, the cravings of the appetite of the former causing him to take a needless amount of exercise, and all muscular exercise is at the expense of food. The poor hog also becomes the prey of internal parasites. When placed upon full feed, as he must be to prepare him for market, he overeats, there is over-distention of the stomach, causing comparative inaction of that organ, and he can only digest and assimilate a portion of the food he consumes.

Points in Favor of Early Maturity.—The younger hog is converted into a more edible product, commands a better price, is generally ready for a better market, gives quicker returns and requires less attendance. He can be fed when on pasture, the droppings are not wasted, and food is not expended in keeping up animal heat during the entire winter months.

About the only argument that can be made in favor of keeping the older hog is because our daddies did it. Profitable hog feeders for market is not possible after the first year. You not only have to provide for additional growth, but also for organic waste in the growth, already secured, as mutability is one of the inexorable laws of nature. This waste is preammably greater in a large animal than in a small one.

Feeding to Produce Gain.—Repeated experiments have demonstrated beyond a doubt that the most profitable feeding is during the early period of an animal's existence. This is especially true of the hog. The modern hog, with liberal feeding, will reach maturity in about two years.

Prof. Sanborn of Missouri, in more than 100 feeding tests, determined that to make a certain amount of gain, pigs weighing 220 pounds required 18 per cent more food, pigs weighing 270 pounds required 78 per cent more food than pigs weighing 70 pounds.

Prof. Hunt of Illinois determined, by actual experiment, "that the gain for the amount of food consumed decreased during fattening; also, that an insufficient food supply for two weeks caused a considerable loss in feeding thereafter."

Feed Young Animals: Chemistry informs us that the younger animal utilizes more of the elements contained in the food than the older animal does.

Prof. Henry says of feeding cattle: "You cannot be too careful about putting your feed and money into young cattle and avoiding old ones." This is more applicable to hogs than cattle, as the hog reaches maturity in about one-half the time cattle do.

Peas and Oats—Peas and oats sown together are a very valuable crop. They can be sown at the rate of one bushel of peas and one and one-half bushels of oats per acre. This crop can be cut with the binder and thrashed as readily as oats alone. Care should be taken not to sow on ground where oats lodge. They should be sown early. I raised last year 40 bushels per acre, weighing 44 pounds per bushel. When ground, they are a good substitute for bran and shorts, but may be fed whole to hogs. The object of improved agriculture is to obtain the largest amount of nutritious and life-sustaining substances from the smallest possible space. This, to a considerable extent, is secured by retaining and increasing the fertility of the soil, and by skillful feeding; but the customary way of hog feeding is as great a robber of fertility as the much condemned wheat raising. Grain and milk are largely fed to hogs in pens, without regard to saving manure, for it is leached out and washed away, and only a small portion of the least valuable part returned to the soil. Added to this is the loss occasioned by washing away of the surface soil in corn. A good clover pasture will produce more growth than three bushels when corn is fed exclusively. All foods consist of certain elements. All farm animals consist of about the same combination of food elements. The right combination of nutriments to promote the most successful growth of an animal is not found in a single article of food. The different articles of food are generally divided into two classes: First—Proteine foods, also termed flesh-formers. Second—Carbohydrates, also termed fat-formers. Clover, oats, peas, beans, bran, shorts, skim milk and buttermilk belong to the first class, as they are rich in bone and muscle forming elements. Corn, barley, whey, roots and acorns belong to the second class, as they are rich in heat and fat-producing elements.

What and How to Feed.—Corn should never be fed as an exclusive ration except at the close of the fattening period, and then only for a limited time. Whey should always be fed sweet, as the small amount of solids it contains consists mainly of sugar of milk. In souring the milk sugar is converted into an acid, and has little or no value as a food. Whey should always be supplemented by a nitrogenous food. It should be fed as fresh as possible, and can be very profitably fed with corn. Skim-milk should always be fed sweet. Sour feed of any kind is of questionable value; a slight degree of acidity may not be injurious in some kinds of food, but this does not apply to feeding skim-milk and whey.

Give a Proteine Ration.—Pigs usually receive a ration too rich in carbohydrates and deficient in proteine. The necessity of giving a nitrogenous or proteine food cannot be overestimated, especially to young pigs, as they require twice as much nitrogen as old hogs; feeding proteine foods alone, as they are constipating and, except clover, costly. An experiment has demonstrated that one bushel of corn will make as much pork as three bushels of oats; yet good oats are an excellent hog food, being rich in nitrogen and the ash that is necessary for the formation of bone.

Give a Balanced Ration.—The advantages of giving a properly balanced ration, suited to the age of the pig, are: You secure greater growth with a given amount of food, and you obtain also a better quality of meat. There is a more perfect growth of bone, and greater muscular development, both being promoted by a moderate amount of exercise. A high degree of muscularity indicates a condition of the system the least liable to disease, also the most perfect condition for breeding animals. Prof. Henry says that pigs should not be confined to close quarters for more than 60 days. This is certainly long enough.

Cooking food: While I am satisfied that the tests carried on by our experiment station prove that giving hogs cooked food exclusively does not pay, yet I believe for fall feeding, where hogs are taken off the pasture, it is very advantageous to feed once a day on cooked food. For this purpose roots, cooked about the same as for table use, should be mixed with ground oats, rye or other nitrogenous food. Sugar beets are very valuable for fall feeding, but turnips, raw or cooked, are better for winter feeding as they are better keepers.

The Right Kind of Food: Another essential of successful hog-breeding is to give the right kind of food. All the substances that enter into the make-up of an animal are derived from its food. No single article of food is capable of supporting a healthy hog, except for a limited period. Grass, especially clover, is one of the best of hog foods, but it is too bulky for the stomach of a hog to produce the best results. It should always be supplemented with grain. One bushel of corn fed to a hog when it has access to fields where the land is rolling, this being augmented by observing a suitable rotation with grass.

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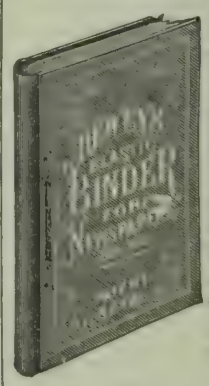
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If your Druggist does not keep it, we will send direct, postpaid, on receipt of price.

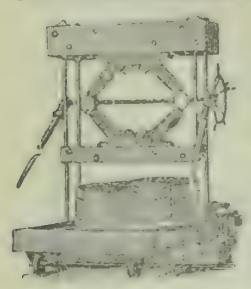
COMPOUND SULPHUR POWDER is $1 per bottle, 6 for $5. Small bottles, 25c.

THE C. C. LINIMENT CO.,

No. 12 Bush St., Junction of Market, - San Francisco, Cal.

W. H. BONE, General Manager.

FOR SALE BY ALL DRUGGISTS.



WORTH'S

PATENT

Combined Screw and Toggle Lever

WINE, CIDER

— AND —

OLIVE PRESS

The press is satisfactory in every way and every one who has seen it work thinks it ahead of any press yet in use.—KATE F. WARFIELD, Glen Ellen, Sonoma county.

It works most admirably.—J. H. DRUMMOND, Glen Ellen.

The vintage is over; have used your press, to press about 800 tons of grapes, with entire satisfaction. It works well and is easy to operate.—L. DE TURK, Santa Rosa.

The wine press was used during the vintage and gives satisfaction. GEO. WEST, El Vino Vineyard, Stockton.

The wine press has accomplished all you claimed for it and, in fact, more.—R. J. NORTHAM, President Golden Belt Wine Co., Anaheim.

I find it so entirely satisfactory that I take pleasure in commending it to the public.—ELI T. SHEPPARD, Glen Ellen.

A child can move it from one end of the winery to the other. Has given me perfect satisfaction.—J. B. J. PORTAL, San Jose, Cal.

Although I have at present only ten acres of vines, would not part with the press at any price.—WILLIAM PFEFFER, Gubserville, Cal.

Is the quickest, most powerful and easiest to handle of any wine press I ever saw, and undoubtedly the best press in the market.—JOSEPH WALKER, Windsor, Cal.

We regard the wine press as superior to any other press we know of; in point of simplicity, efficiency and economy of labor, in our opinion it has no equal.—P. & J. J. GOBBI, Healdsburg.

I am very well satisfied with the toggle lever and screw wine press. It has worked well during the season.—WM. ALLEN, Mountain View Wine Co., San Gabriel, Los Angeles Co., Cal.

The Wine Press gives satisfaction; it works well and is easy to operate.—W. METZGER, Santa Rosa.

Have much pleasure in stating that the press has given every satisfaction.—J. LAWRENCE WATSON, Glen Ellen, Sonoma county.

W. H. WORTH.

Petaluma Foundry and Machine Works, P. O. Box 288.

Petaluma, Sonoma County, Cal.

J. M. WELSH, President. M. D. BAKER, Secretary.

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Fire Insurance Company

OF CALIFORNIA.

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GENERAL AGENT.

Head Office, STOCKTON, CAL.

AGENTS WANTED EVERYWHERE Something new. The Smith Patent Improved Combined Kitchen Utensil consists of a can for baking powder, cream tartar, spices, etc.; a measure for sugar, flour, cornstarch, farina, rice, etc.; a grater for nutmegs, cheese, bread, potatoes, squash, lemon or orange rind; a dredge for spices, sugar, flour, pepper and salt; a biscuit, cake or cookey cutter; a doughnut cutter, a patty or tart cutter; also a nutmeg, stick cinnamon and mace holder. It is the handiest and most practical utensil that has ever been seen. Calculated to lessen the burden of the practical house wife. By mail, 50 cts. SMITH MFG. CO., Alameda, Cal. To any body sending us the correct solution to the following problem we will send a Utensil free: A liquor merchant has a barrel of whisky, but he only has a 5-gallon and a 3-gallon measure, and he wants to measure off 4 gallons. How is he going to do it? We, however, limit the amount of Utensils to 4 for each town for the correct solution. Those who are too late will not be answered.



JOHN G. ILS & CO.,

MANUFACTURERS OF

FRENCH COOKING RANGES

TINWARE.

Kitchen and Bakery Outfits, Grate Bars, Bake Ovens and Furnace Castings.

814 & 816 Kearny St., S. F.

Prop's Jackson Foundry.

INVENTORS on the Pacific Coast should secure their Patents through Dewey & Co.'s Mining and Scientific Press Patent Agency, No. 220 Market St., S. F.

SANTA CRUZ! SANTA CRUZ! SANTA CRUZ!

THE MOST DELIGHTFUL SEASIDE RESORT OF THE WORLD!

SURFSIDE!

Is the most beautiful tract of land in Santa Cruz. It commands charming views of the whole of Monterey bay, of the Pacific ocean and of the Santa Cruz mountains. It lies on a handsome, elevated plateau, fronts on the famous Cliff Drive, at the wildest and most picturesque part of the bay shore, and adjoins Garfield Park, where the Christian Church of California is now erecting a $15,000 tabernacle and where thousands of people will summer annually from this year on.

LOTS, 50x125, $200 TO $400,

Fronting wide and beautiful avenues, on easy terms.

Maps of Santa Cruz and Surfside, price lists and descriptive matter mailed free to any address.

CARNALL-FITZHUGH-HOPKINS CO.,

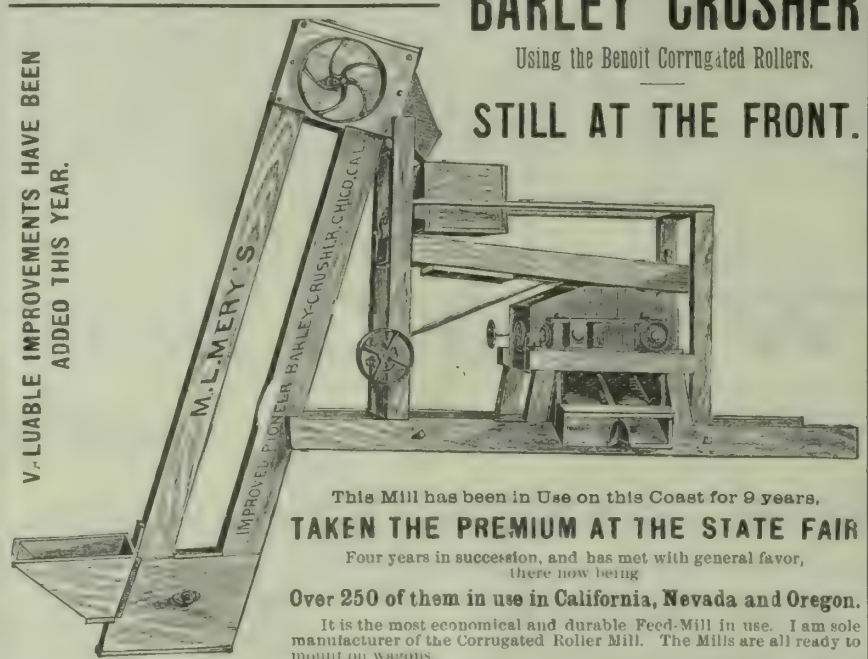
E. A. CRENNAN, Resident Manager, 624 MARKET ST., San Francisco.

127 Pacific Avenue, Santa Cruz.

MERY'S IMPROVED PIONEER BARLEY CRUSHER

Using the Benoit Corrugated Rollers.

STILL AT THE FRONT.



VALUABLE IMPROVEMENTS HAVE BEEN ADDED THIS YEAR.

This Mill has been in Use on this Coast for 9 years.

TAKEN THE PREMIUM AT THE STATE FAIR

Four years in succession, and has met with general favor, there now being

Over 250 of them in use in California, Nevada and Oregon.

It is the most economical and durable Feed-Mill in use. I am sole manufacturer of the Corrugated Roller Mill. The Mills are all ready to mount on wagons.

GRAINLAND, BUTTE CO., CAL., June 9, 1887.

Mr. M. L. Mery—DEAR SIR: We have used one No. 2 Roller Barley Crusher now for eight years and have used it steady during that time, have crushed 16 tons a day and the Crusher is as good to-day as when it came out of your shop. I am satisfied that it is the best mill made. You may reconstruct this testimonial to the best advantage for you and sign our names, for you cannot overrate the merits of your mill. F. E. REAM, JOHN P. SUTTON.

DURHAM, May 21, 1887.

Mr. M. L. Mery—DEAR SIR: In reply to yours of the 19th, would say that I crushed from two to two and a half tons per hour, but could crush three and a half tons if my elevators were large enough to carry the barley from the machine. The No. 1 machine I used at Gridley was run on a sack a minute, but if we got behind we could run through five tons an hour, and do good work. The machine I use here is a No. 2. Yours, WM. M. TAYLOR.

I thank the public for their kind patronage received thus far, and hope for a continuance of the same.

M. L. MERY, Chico Iron Works, Chico, Cal.

HAND STEMMER.

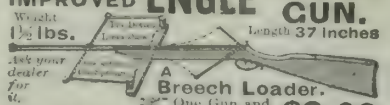


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FRESNO AGRICULTURAL WORKS, FRESNO, CAL.

THE IMPROVED **ENGLE** SPRING GUN.

Weight 6½ lbs. Length 37 inches



Ask your dealer for it.

A Breech Loader.

One Gun and **$2.00**

50 Buck Shot, prepaid, on receipt of

Steel Barrels and Springs. No Reports. No Explosion.

ENGLE SPRING GUN CO., Hazleton, Pa.

J. F. HOUGHTON, President, J. L. N. SHEPARD, Vice-Pres. CHAS. R. STORY, Sec'y, R. H. MAGILL, Gen. Ag't.

Home Mutual Insurance Company,

216 Sansome Street, San Francisco.

INCORPORATED A. D. 1864.

Losses Paid Since Organization	$3,033,420 31
Assets, January 1, 1890	821,517 09
Capital, Paid Up in Gold	300,000 00
NET SURPLUS over everything	244,384 14

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Cushing's Manual.—Revised Edition, with Additions and Corrections. No one who wishes to take part in the proceedings of any organized body can afford to do without the help of this little volume; knowledge of its contents alone is a valuable education, and the price is so moderate that no one need deprive himself of its teachings. Also containing the Constitution of the United States and Declaration of Independence. Containing 200 pages.



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Wilford's Original Dialogues and Speeches for Young Folks.—Being by far the most complete of its kind ever issued. This work supplies that palpable need, which has so long been evident in books of this class, that of *Dialogues* and *Speeches* adapted to the natures of children. This work contains **19 Original Dialogues** and 53 Speeches, especially adapted for children between the ages of 5 and 12 years. 160 pages.



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Brudder Gardner's Stump Speeches and Comic Lectures. Containing the best hits of the leading Negro delineators of the present day, comprising the most amusing and side-splitting contribution of oratorical effusions which have ever been produced to the public. The newest and best book of Negro comicalities published. 160 pages. Bound in illuminated paper covers. Price.....25 cts.



Burdett's New Comic Recitations and Humorous Readings. A new volume of comic and humorous selections, compiled by the celebrated humorist, James S. Burdett many of which have never before been published in book form. In addition to the new and original pieces here contained, this book has the advantage of *bringing together into one volume* all of the very best selections of a comic nature which have hitherto attained a wide popularity through the public representations of the most renowned humorists of the day. It is the newest, handsomest and choicest book of its kind. Price.....25 cts.



The Candy Maker. A Practical Guide to the Manufacture of the various kinds of Plain and Fancy Candy. The fullest directions are given for getting up the most exquisitely beautiful looking candies, as well as the most alluring to the palate; while equal attention is given to all the plainer kinds, so universally liked by the "little ones." Every Direction, every Recipe, every Concoction of which Sugar, Spice and Essence are the ingredients, is given in such a plain way that a child can understand them. Large 12mo. Price..... 50 cts.



Wilson's Ball-Room Guide and Call-Book.—The most complete published, containing full and requisite information for the giving of Receptions, Parties, Balls, etc., with clear directions for calling out the figures of every dance together with thirty-eight pages of the latest and most fashionable copyright music, and containing nearly one hundred figures for the "German." Bound in illuminated board cover, with



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Dunbar's Complete Hand-Book of Etiquette.—This work presents, in a clear and intelligible manner, the whole art and philosophy of Etiquette. Among the contents are: Bodily Deportment, Speak Grammatically, Self-respect, Pedantry, Social Characters, Traveling, Useful Hints on Conversation, Forms of Invitation, Letters of Introduction, Bridal Etiquette, Ball-room Etiquette, etc., etc. Bound in Boards, cloth back. Price.....50 cts.



Carpenter's Manual.—Instructs in the use of tools and the various operations of the trade, including drawing for carpenters, forms of contracts, specifications, etc., with plain instructions for beginners, and full glossary of terms used in the trade. Also gives plans and specifications for building a number of frame houses. Illustrated. Price.....50 cts.



Jenny June's Practical Cook Book.—An established favorite in thousands of families. The recipes in it are all the result of practical experience, and there is beside a useful chapter of recipes for dishes of Hebrew families. Containing 1,200 choice and carefully tested receipts, embracing all the popular dishes and the best results of modern science reduced to a simple and practical form. Cloth, $1.00. Illustrated.



¡Habla V. Espanol?

Spanish at a Glance. A new system arranged for self-tuition, being the easiest method of acquiring a thorough knowledge of the Spanish language ever published.

Bound in paper cover, Price ..... 25 cts.

A portion of the above works will be sent from our office direct, while some will be ordered from other publishing houses, requiring some two weeks longer time. N. B. The above prices include the prepayment of postage by us.

Address. DEWEY & CO.,

220 Market St., San Francisco, Cal.

A New Early Yellow Freestone.

EDITORS PRESS:—I send you a new seedling peach, it having fruited this year for the first time, and as yet I have not given it a name. This peach is a seedling of the Foster. A clean, free stone, dry, yellow flesh, a beautiful red cheek on a yellow ground, and ripens two weeks ahead of Foster or Early Crawford, and in ripening follows close after Parsons' Early or Hind's Surprise. I consider this the most valuable acquisition to the peach family that we have had for years as its early ripening makes it valuable to ship East, and for drying it will come in ahead of Foster, thus prolonging the time of drying two weeks.

The prospect for fruit and raisins in Tulare and Fresno counties is fair, and the prices good. French prune orchards that have been planted around here are yielding far beyond the expectations of us all. Plenty of five and six year old trees this season will produce 500 lbs. of green fruit, and at the present prices two acres will net more money than 160 acres in wheat. The young vineyards and orchards are doing well, and no loss of trees on account of heavy rains last winter. J. H. THOMAS.

Visalia.

[This may prove what peach-growers have been so long waiting for—a good-sized yellow peach coming before Crawford's Early. Mr. Thomas's description of the fruit is borne out by the sample he sends. Judging by the single fruit sent us, we conclude the seedling is much inferior to Foster in quality and somewhat smaller—but for a yellow peach two weeks ahead of Foster, if it proves to be reliable for that, it certainly has a great future. —EDS. PRESS.

CATTLE FROM CALIFORNIA.—According to the *Oregonian*, Mr. E. May of the American Dressed Meat Company, who has been buying fat cattle in California for some weeks, returned yesterday, and says there will be no more cattle brought from California this season. The company now have 900 head of fine cattle running on their meadows at Troutdale, and will be able to secure future supplies from the ranges of Oregon and Idaho. Well on toward half a million of dollars has been sent from Oregon into California for beef cattle this spring. This, says the *Oregonian*, is too bad, and Oregon farmers should take steps to see that it does not occur again.

J. J. HARSHMAN & Co. are to start a creamery presently at Downey—so says the *Champion*.

Improving the Rivers.

Under an Act of the last Legislature C. E. Grunsky, J. J. Crawford and C. F. Reed were appointed a commission to examine the San Joaquin and Sacramento and the bay and report upon the present conditions. These gentlemen planned a trip along the river so that they could meet and hear statements from interested parties at different points. They started out northward from Sacramento on Tuesday of this week. The following itinerary may enable some of our river readers to meet the commission at the following points:

Friday, July 11th. Marysville to Chico, 5:10 P. M; Saturday, July 12th, Chico to Red Bluff, 3:15 A. M.; Sunday, July 13th, Red Bluff to Orland and to Sacramento river at Swift's Point, 9:30 A. M; Monday, July 14th, down Sacramento river; Tuesday, July 15th, to Stockton; Wednesday, July 16th, up San Joaquin river.

It would certainly be desirable for river-side residents and owners to meet the commission and give them the results of their long experience and observation.

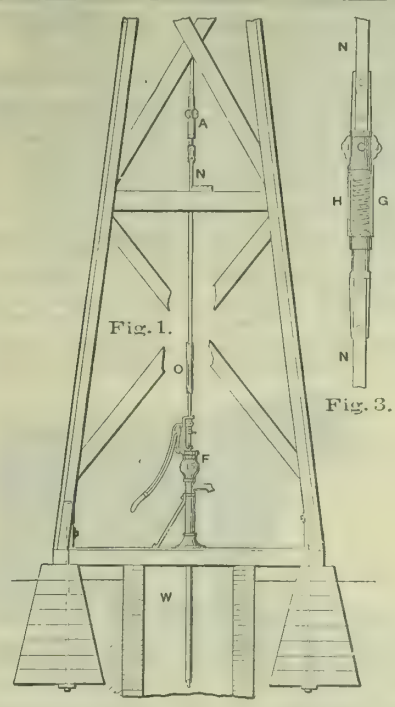


Fig. 1.

Fig. 3.

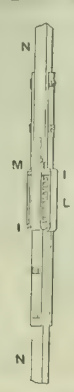


Fig. 4.

Fig. 2.

Cushion Springs for Windmills.

We illustrate herewith the I. X. L. cushion spring for windmill pump rods. By its use a uniform strain is produced on the mill and pump, both on the up and down strokes (as the spring is double acting) thus preventing sudden jar, and adding very materially to the life of both mill and pump. It will often prevent damage to mill and pump in case of pump becoming inoperative by freezing up or from any cause. Fig. 3 represents the covered and fig. 4 open pattern. Figs. 1 and 2 show the lower portion of a windmill tower and the application of the spring to the pumprod N. The spring can be adjusted to any tension desired, and the attachment made to the pumprod, by anyone in 30 minutes time. For full particulars address the U. S. Wind Engine & Pump Co., Batavia, Illinois, who also make the Halladay Standard pumping and geared windmills, U. S. Solid Wheel and Standard vaneless pumping windmills, pumps, tanks, tank heaters, corn shellers, feed grinders, stalk cutters, standard horse haying tools, etc.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING JULY 1, 1890.

431,159 —OVEN DOOR—P. Abrahamson, S. F.

431,202.—SWINGING WINDOW—G. D. Crocker, Oakland, Cal.

431,162.—DAMPER FOR STEAM BOILERS—Geo. Cunningham, S. F.

431,259 —RAILWAY SPIKE—S. Emrick, S. F.

431,164.—ELEVATOR—F. Gutzkow, S. F.

431,165. — CAN PRINTING DEVICE — Chas. R. Hay, S. F.

431,476.—CLIP FOR WIRE ROPE WAYS—B. McIntyre, S. F.

431,483.—GANG EDGER—A. E. Roe, S. F.

431,198. — SHINGLE CUTTER — H. O. Strand, Montisano, Wash.

431,176.—FRUIT-GRADER — Geo. W. Thissell, Pleasant Valley, Cal.

431,303.—AUTOMATIC AIR BRAKE—G. B. Williams, Portland, Or.

431,304 —RELEASING ATTACHMENT FOR AIR BRAKE—G. B. Williams, Portland, Or.

The following brief list by telegraph, for July 8, will appear more complete on receipt of mail advices:

California—William Brooks, Oakland, broiler or toaster; Cornelius Butterbaugh, Los Angeles, car track; Frank M. Dreibelbis, Los Angeles, detractable horse-foot pad; Frank Koritick, S. F., combination tool; Florence E. Monteverde, S. F., pump distributor; Samuel S. Richardson, Happy Camp, damper; Charles T. Stanford, S. F., device for oper ting elevator hatchway gates; James M. Thorpe, Santa Rosa, adjustable axle nut; Frederick B. West, S. F., cable sheave.

Oregon—George B. Williams, Portland, automatic air-brake.

Washington—William J. Burke, Seattle, headlight fo locomotives.

Arizona—Thomas J. Thorp, assignor of one-half to D. J. Brennan, Flagstaff, horse-collar; Thomas J. Thorp, assignor of one-half to D. S. Brennan, Flagstaff, running gear for wagons.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

The Freeman Feed-Cutter.

The S. Freeman & Sons' Mfg. Co. of Racine, Wis., have just issued their catalogue for 1890, a large and fine publication. It will be mailed free of charge to any address.

The No. 16 Freeman feed-cutter is claimed to be adapted to the use of stock-raisers feeding 80 or more head of stock, and is especially adapted for cutting ensilage. The Freeman power cutter is also made in two larger and four smaller sizes than this one, besides a full line of all sizes of hand cutters.

The catalogue referred to is made all the more valuable by having added to it an ensilage treatise, containing many very useful suggestions as to the location and building of silos and the handling and care of ensilage. Send for it.

1890—THE STATE FAIR—1890

OF 1890 AT

SACRAMENTO,

SEPTEMBER 8th TO 20th INCLUSIVE.

CALIFORNIA'S ANNUAL EVENT!

Showing Progress Made in Agricultural, Mechanical and Industrial Arts.

LIBERATI'S FAMOUS MILITARY BAND OF FIFTY SELECTED ARTISTS AND DISTINGUISHED VOCALISTS

Will give a Grand Musical Concert at the Pavillion each evening from September 15th to 20th.

THE COUNTY EXHIBITS made at these exhibitions have attracted more attention to localities represented than any other form of advertising advanced.

EVERY COUNTY IN THIS STATE should have an exhibit. Begin with harvest and secure samples of your products. The money premiums will almost pay the entire cost of your exhibit.

NEW-COMERS ARE AWAITING to view the products of the State before locating. Hence it behooves every county to be up and stirring.

IT IS AT THESE EXHIBITIONS the Manufacturer meets the Merchants of the interior.

IT IS AT THESE EXHIBITIONS the Merchant views progression made in all mechanical and industrial callings. Hence it behooves the Manufacturer to be up and stirring.

AT THESE ANNUAL EXHIBITIONS the visitor may combine business with pleasure, as the Board of Dirrctors provides for all kinds of recreative amusement in the varied program of events.

THE CONTESTS OF SPEED showing advancement made in the breeding o high-class horses, will be a feature.

THE GRAND PARADES OF LIVE-STOCK will embrace the various classes of horses, and all the improved breeds of cattle.

OPEN-AIR AMUSEMENTS FOR THE DAY and MUSICAL CONCERTS FOR THE EVENING will afford ample entertainment for all who visit the State Fair.

Every attention will be rendered exhibitors by the Board of Directors.

Premium lists are now ready, and will be furnished upon application to the Secretary, who will also furnish other necessary information that may be desired. Apply at once for space.

Remember, the Southern Pacific Company TRANSPORTS ALL EXHIBITS FREE OF CHARGE to and from the Fair, and gives EXCURSION RATES TO ALL THAT ATTEND.

CHRISTOPHER GREEN, President.

EDWIN F. SMITH, Secretary.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

EL ROBLAR RANCHO, Los Alamos, Santa Barbara Co., Cal., Francis T. Underhill, proprietor, importer and breeder of thoroughbred Hereford Cattle. Information by mail. C F. Swan, manager.

JERSEY BULL No. 468 P. C. J. C. C. for sale cheap. A fine four-year-old animal. Address Dellwood Poultry Yards, Napa, Cal.

IMPORTED REGISTERED CLYDESDALE Horses and Holstein Friesian Cattle from the most noted families. H. P. Mohr, Mt. Eden, Alameda Co., Cal. Visitors welcome. Correspondence solicited.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

CHARLES E HUMBERT, Cloverdale, Cal., Importer and Breeder of Recorded Holstein-Friesian Cattle. Catalogues on application.

WILD FLOWER STOCK FARM, Fresno Co. A. Heilbron & Bro., Props., Sac. Breeders of thoroughbred strains and Cruikshank Shorthorns; also Registered Herefords; a fine lot of young bulls in each herd for sale.

PERCHERON HORSES.—Pure bred horses and mares, all ages, and guaranteed breeders, for sale at my ranch near Lakeport, Lake Co., Cal. New catalogue now ready. Wm. B. Collier.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. None better.

REGISTERED HOLSTEIN CATTLE. Also best thoroughbred Poultry and Eggs. Address Hibbard & Ellis, Santa Rosa Breeding Association, Cal.

P. H. MURPHY, Perkins, Sac. Co., Cal., Breeder of Recorded Shorthorn Cattle and Poland China Hogs.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

P. PETERSEN, Sites, Colusa Co., Importer & Breeder of registered Shorthorn Cattle. Young bulls for sale.

JOHN LYNCH, Petaluma, breeder of thoroughbred Shorthorns Young stock for sale.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

M. D. HOPKINS, Petaluma, importer and dealer in Eastern registered Shorthorns, Red Polled Cattle, Holsteins, Devons and Shropshire Sheep.

GEO. B. POLHEMUS, Coyote, Cal. Holstein-Friesian cattle, comprising males and females on advanced register. First premium in great milking test at State Fair, 1889, was won by a member of this herd.

PETER SAXE & SON, Lick House, San Francisco, Cal Importers and Breeders, for past 18 years, of every variety of Cattle, Horses, Sheep and Hogs.

GEO. BEMENT & SON, Maple Grove Farm, Oakland P. O., breeders of Ayrshire Cattle & Essex Swine.

HENRY HAMILTON, Westley, Cal., breeder of Kentucky Jacks and Jennies, Draft Horses and Holstein Cattle. Jacks, Horses and Mules for sale.

POULTRY.

CHAS. R. HARKER, Santa Clara, Calif. White Plymouth Rocks, exclusively. None better anywhere, East or West. If you want the latest and best improvement in poultry, get *genuine* White Plymouth Rocks. Write for prices. Eggs, $3 per 13; packed to go safely any distance.

JOHN McFARLING, 706 Twelfth St., Oakland, Cal., Importer and Breeder of Choice Poultry. Send for Circular. Thoroughbred Berkshire Pigs.

R. G. HEAD, Napa, Cal., breeder of the choicest varieties of Poultry. Each variety a specialty. Send for new Catalogue.

RED CAPS, BUFF COCHINS, W. & B. Leghorns. E. F. Musson, Fitchbourgh, San Leandro, Cal.

CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

DELLWOOD POULTRY YARDS, Napa, Calif. Thoroughbred Fowls and Eggs for Hatching. Light Brahmas, Langshans, Plymouth Rocks, Brown, Black and White Leghorns, $2 00; Houdans and Buff Cochins, $2 50; Minorcas and Scanish, $3.00 per 13. Genuine Imperial Pekin Ducks' Eggs, $1.50 per 11.

O. J. ALBEE, Lawrence, Cal. Pure bred poultry.

SHEEP AND GOATS.

KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

L. U. SHIPPEE, Stockton, Cal., importer and breeder of Spanish Merino Sheep, Durham Cattle, Jacks and Jennys & Berkshire Swine high graded rams for sale

E. W. WOOLSEY & SON, Fulton, Cal., importers & breeders Spanish Merino Sheep; ewes & rams for sale.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Cross-bred Merino and Shropshire Sheep. Rams for sale.

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ANDREW SMITH, Redwood City, Cal.; see adv't.

SWINE.

JOSEPH MELVIN, Davisville, Cal., Breeder of Poland-China Hogs.

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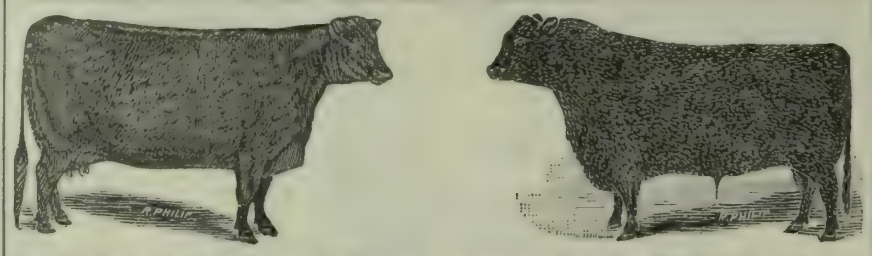
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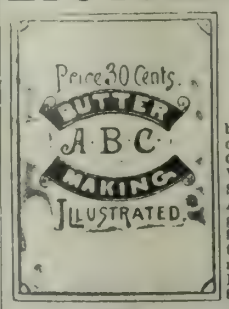
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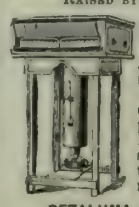
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 9, 1890.

Now that the midsummer holidays have passed, trade in farm products is expected to be resumed with increased vigor. Already there is an appreciation in some kinds of fruits and also in wheat and barley. The higher prices ruling abroad for wheat have favorably affected our market for the cereal. The following is to-day's cablegram:

LIVERPOOL, July 9.—Wheat—Firmer. California spot lots, 7s to 7s 2½d; off coast, 37s 6d; just shipped, 37s; nearly due, 37s 6d; cargoes off coast, quiet but firm; on passage, demand for cargoes near at hand, while there is no inquiry for more distant periods of delivery; English and French country markets, dearer; wheat and flour in Paris, quiet; weather in England, showery.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	July.	Aug.	Sept.	Oct	Nov.	Dec.
Thursday	7s 1d	7s 0½d	7s 0½d	7s 0d	7s 0d	7s 0d
Friday	....	....	....	....	....	....
Saturday	7s 1½d	7s 0½d	7s 0d	7s 0½d	7s 0d	7s 0½d
Monday	7s 2d	7s 0d	7s 0½d	7s 1d	7s 1d	7s 1½d
Tuesday	7s 1d	7s 1d	7s 0½d	7s 0d	7s 1½d	7s 1½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N D.	Market.
Thursday	38s 6d	38s 0d	38s 6d	quiet.
Friday	....	....	....	....
Saturday	38s 6d	38s 0d	38s 6d	Advancing
Monday	38s 6d	38s 0d	38s 6d	Stronger.
Tuesday	38s 6d	38s 0d	37s 6d	Firmer.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York for the past week:

Day.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday	93½	92½	90½	91	91½	94½
Friday	....	....	....	....	....	....
Saturday	....	....	....	....	....	....
Monday	92½	92½	91½	....	....	95½
Tuesday	92½	92½	92½	92½	92½	96½

The closing prices for wheat have been as follows at Chicago for the past week:

Day.	July.	Aug.	Sept.	Oct.
Thursday	....	87½	88½	....
Friday	....	....	....	....
Saturday	....	....	....	....
Monday	....	90½	90½	....
Tuesday	....	89½	90½	....

NEW YORK, July 9.—Wheat—98⅜c for cash, 95c for July, 94¾c for August, 94⅝c for September, 95c for October, and 96¼c for December.

CHICAGO, July 9.—Wheat—89⅛c for August and 90c for September.

Foreign Grain Review.

LONDON, July 7.—The *Mark Lane Express* says: Downpours of rains and cold weather have seriously lessened the prospects and caused a hardening of rates. Foreign wheat is firm. The news from India causes depression on the Exchange. A deficiency is expected of 2,000,000 quarters. Official estimates place the deficiency at 500,000 quarters. Oats 6d. dearer, especially American. Round maize slightly improved and was in request. At to-day's market Russian wheat was 3d. dearer. English, California, Australian and Chilean were 1d. dearer and Indian, Argentine and American Red 6d. dearer. Flour was 6d. dearer and maize 3d. cheaper.

The European Crop Outlook.

ST. PETERSBURG, July 8.—An official report says: At the beginning of June the winter and summer crops in Western and Southern European Russia were very good in some districts, good in others, but in the Eastern provinces the crops were less satisfactory. It is expected a large quantity will be available for export. An increased demand is expected in view of the bad Indian harvest and unfavorable outlook for American winter wheat.

Steamer communication has been opened via Aral sea between Charojui, on the Amu Daria, and Kasanlik, on the Sir-Daria.

PARIS, July 8.—At a meeting of the Cabinet, the Minister of Agriculture stated that storms had seriously damaged crops around Paris. In the other parts of France the crop prospects were favorable.

The Kansas Wheat Crop.

KANSAS CITY, July 3.—The new wheat crop of Kansas is rapidly coming into the local market. Dealers pronounce the grain first-class. The weather has never been more favorable for harvesting and thrashing.

Eastern Wool Markets.

NEW YORK, July 3.—*Bradstreet's* says: Business is very dull in all the wool markets. Stocks on seaboard are small and prices would advance if the demand were at all active. Few manufacturers, if any, however, are buying except for their present wants.

PHILADELPHIA, July 3.—Wool is nominal and unchanged.

Southern Dakota Crops.

HURON, S. D., July 6.—The crops throughout South Dakota have made more rapid growth during the past week than ever before known in the State. Reports from all parts of the State, received at the United States Signal office last evening, indicate a splendid outlook.

The Russian Harvest.

ST. PETERSBURG, July 7.—The prospects for the harvest throughout Russia are good. In the Baltic provinces it is exceptionally good.

Hops East.

NEW YORK, July 2.—Some interesting facts have been obtained from various sources concerning the outlook of the hop crop. The acreage of this State is largely reduced, but the crop is in good condition, the early varieties especially. Occasional contracts have been made at 16 cents. One grower in Madison county is reported as still holding his entire crop of 1889 at 25 cents. A few others have unsold crops. Cable reports are to the effect that there is wet and cold weather in England, with an increase of vermin and mold in some sections. The California crop of 1889 is quoted at 18 to 20 cents, the crop of 1888 at 12 to 15 cents, and the crop of Washington about the same.

NEW YORK, July 7.—Hops sparingly offered. Good to choice State and Pacific Coast, 18@20c, with 21c for strictly fancy; other grades as before.

Los Angeles Fruit Market.

LOS ANGELES, July 4.—There seems to be a general boom in Southern California products at present. A San Francisco firm has ordered 2000 cases of figs of 24 boxes to the case. There is also a great demand for California honey at present, owing to the failure of the Eastern crop. It is now bringing 1¼c more a pound than Eastern honey.

There is a representative of a New York firm in this city at present to estimate on what the crop of French prunes will be. His firm stands ready to take the entire crop. The raisin crop in this section will be immense this year. While the raisin crop has by no means yet matured, plenty of buyers have already offered themselves.

Growers of soft-shell walnuts in Santa Ana valley have made a combination to dispose of the crop. It is expected that by the formation of this agricultural trust the producers will realize a better figure for their stuff than they would as individuals. In fact, it is said that they have already been offered 1¾c a pound more for nuts than was paid last year. Growers in the combination are jubilant over the results that have thus far been attained.

The entire Lima bean crop has already been sold.

Local Markets.

BARLEY

	Buyer Season. H.	L.	*Buyer 1890. H.	L.	Buyer 1890. H	L
Thursday	116⅜	116	110	110	110⅝	110⅛
Friday	....	....	....	....	....	....
Saturday	....	....	....	....	....	....
Monday	118⅛	117	....	....	114⅛	112
Tuesday	....	....	114	113½	114⅛	113⅜

*After August.

WHEAT.

	S. S.	Nov.	B. '90	*B S. '90	S '90.
Thursday	h.	....	141½	....	....
	l.	....	141½	....	....
Friday	h.	....	....	....	....
	l.	....	....	....	....
Saturday	h.	....	....	....	....
	l.	....	....	....	....
Monday	h.	141	144⅛	150½	135⅛
	l.	141	143	149⅝	134½
Tuesday	h.	....	144⅝	150½	135
	l.	....	143⅜	150	135

BAGS—The market shows signs of easing off, owing to the bulk of the demand being met. Standard-sized grain bags are quoted in lots to suit at 7c.

BARLEY—For sample parcels there has been quite an appreciation. In options, trading has been light, owing to sellers fearing to short at present prices. The following are to-day's reported sales on Call:

Morning Session: Buyer 1890—200 tons, $1.13⅞; 100, $1.13¾. Buyer 1890, after August 1st—100, tons, $1.13½; 100, $1.13⅜; 700, $1.13¾. Seller 1890, new—100 tons, $1.06¾ ₩ ctl. Afternoon Session: Buyer 1890—200 tons, $1.14½ ₩ ctl. Buyer season—100 tons, $1.18½; 200, $1.18¾ ₩ ctl. Buyer 1890, after August 1st—200 tons, $1.14½; 300, $1.14¾ ₩ ctl. Seller 1890, new—100 tons, $1.08 ₩ ctl.

BUTTER—The market has exhibited a stronger tone for gilt-edged. Receipts continue free. Western creamery continues to flood the northern coast markets.

CHEESE—The improved tone noted in last week's RURAL PRESS is more pronounced this week. Choice to extra choice mild is wanted.

EGGS—Strictly selected fresh-laid eggs are slightly higher. Heavy receipts by overland railroad are against the market for other kinds.

FLOUR—The market is strong and fairly active at a slight advance.

WHEAT—Sample wheat fetches more money. Holders are somewhat excited, and, as a rule, ask quite an advance over buyers' bids. In options, trading has been more free. The following are the reported sales made on to-day's Call:

Morning Session: Buyer 1890—500 tons, $1.43⅞; 100, $1.43¾ ₩ ctl. Afternoon Session: Buyer 1890—100 tons, $1.43⅝; 100, $1.43¾; 100, $1.43⅜ ₩ ctl. Buyer season—200 tons, $1.49⅜ ₩ ctl.

[COMMUNICATED.]

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending July 9th, were as follows:

Flour, qr. sks	90,378	Middlings, sks	1,877
Wheat, ctls	157,649	Alfalfa, "	....
Barley, "	36,271	Chicory, bbls	215
Rye, "	....	Broomcorn, bdls	....
Oats, "	4,849	Hops, bls	....
Corn, "	473	Wool, "	1,155
*Butter, "	1,125	Hay, tons	1,877
do bxs	785	Straw, "	30
do bbls	3	Wine, gals	66,490
do kegs	50	Brandy, "	420
Cheese, ctls	667	Raisins, bxs	455
do bxs	24	Honey, cs	....
Eggs, doz	38,270	Walnuts, sks	....
do " Eastern	122,050	Flaxseed, sks	....
Beans, ctls	1,624	Mustard, sks	....
Potatoes, sks	16,601	Almonds, sks	....
Onions, "	1,274	Peanuts, sks	....
Bran, sks	1,417	Popcorn sks	....
Buckwheat, sks	....		

*Overland 126 ctls.

Cereals.

The wheat market made a substantial advance the past week under review, fully justifying the strong bull position taken by the RURAL PRESS in its last week's issue. The advance has element of stability with every encouragement of still higher ranges being reached within the near future. It now looks as if the world's shortage will be larger than heretofore claimed, while there are indications that a speculative bull campaign will be inaugurated soon. The many reverses met by the bulls within the past eight years made them cowards, but now with everything seemingly in their favor, they are justified in believing that a successful upward move can be made.

The wheat crop in the United States promises to be short from 75,000,000 to 85,000,000 bushels in comparison with last year's crop, while the consumption will be larger. In this State there are conflicting views regarding the total yield, but the general opinion is that it will be from 150,000 to 200,000 tons short of last year's. While the crop will be short the grade will be better, consequently the price should be proportionately more. It is to be regretted that leading farmers do not help the writer in securing crop advices. If they would furnish us with such information it will prove of inestimable advantage. Address all letters regarding crop and prices to J. R. Farish, Produce Editor RURAL PRESS. No names will be used unless by permission.

From Oregon and Washington our advices indicate a good crop. The acreage is reported to be more, while the yield to the acre will be a full average. Taking the carry-over into consideration and this coast will have a surplus this year of fully 1,400,000 tons and it may go as high as 1,500,000 tons.

The large surplus of wheat on this coast is attracting more vessels to this port, as well as to Portland and Puget Sound ports. The only danger now feared by leading exporters of not having a large wheat fleet and reasonable charters, is that of high tariff (provided there is an increase) driving ships from us, for when vessels can bring inward cargoes they can take outward cargoes for less money, but if they are unable to get the former but have to come in ballast then they have to get high charters for the latter, and the higher wheat charters are outward, the worse it is for farmers.

The barley market has gained in strength at steadily advancing prices. The demand is both consumptive and speculative. The short crop on this coast and light carry-over from the season of 1889–90 are the chief factors in promoting the improvement. The grade this year is better, both in plumpness and in color than for several years past. Samples of brewing which were sent to the Chicago, Milwaukee and New York markets provoked favorable comments, and will doubtless lead to liberal orders from those points.

Oats have not shown any material advance, notwithstanding continued light receipts. Consumers or feeders evidently think that prices are unduly inflated and that with liberal receipts of new the market will shade off. Time alone will prove whether or not their opinion is well grounded. The crop on this coast does not show any increase over last year's, while the stock of old is light.

Corn has held to steady prices throughout the week. With higher markets at the East, under a more active European demand, it is reasonable to look for still better prices on this coast.

Rye is steadier, but no higher.

Feedstuffs.

In ground feed there is a very strong market for bran, middlings and ground barley, with a slight advance in the latter. The demand is fairly active.

New hay is coming in quite freely, but the market cleans up well under an enlarged demand. The shipments out of the State are quite heavy. Nevada advices report the crop largely in excess of last year's but from Oregon and Washington our advices do not appear favorable to much if any increase over that of 1889.

Fruits.

Cherries and currants are about out of market, consequently we drop the quotations from out of our list of prices.

There continues strong competitive buying for for peaches, Bartlett pears, prunes and apricots. Prices have been forced to still higher figures. The excited condition of the market makes it difficult to give correct quotations; all that can be said is that holders of choice to extra choice fruits can about name their own prices. The present condition of the market was foreshadowed by the RURAL PRESS early in the season, and its fulfillment is a source of gratification to all in interest.

In berries there are no material changes to note outside of a shading off in blackberries under freer receipts. Canners are putting up a large increased quantity of them, which will keep the market from going too low, as it went in 1889. The quality this year is good.

For raisins in the sweat better contracts can be made now than it was possible to have made in last month. The scarcity and consequently high prices ruling for other fruits have a favorable influence, as has the cholera scare abroad. Eastern importers will hardly dare to import many Spanish raisins with cholera in that country.

Dried fruits are higher under an active competitive buying in sympathy with higher markets at the East. Sun-bleached apricots are selling at 12@14c in sacks and 13@15½c in boxes. Nectarines are readily sold at 11@12½c and prunes at 7@9½c according to size. Peaches are quoted at an advance on last week's prices. It now looks as if apples, plums and pears will command better prices than they did in last year.

Vegetables.

In garden truck there is a small decline in string beans, summer squash, garlic, peas, tomatoes, etc. Cabbages and root vegetables hold steady. Rhubarb and asparagus are about out of market.

Onions under light receipts and a good demand are higher, closing fairly firm at the advance under a good local and shipping demand.

Potatoes have strengthened under moderate receipts and a good demand. The quality this year shows an improvement over that of 1889.

Live-stock.

Bullocks continue depressed. The depression is said to be due to free offerings and light buying owing to a lessened consumption. Mutton sheep hold strong, as do lambs. Hogs are essentially unchanged.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4@4¼c ₩ lb; dressed, 6@7c ₩ lb.; heavy, 3¾@4c ₩ lb.; dressed, 5½@6c ₩ lb. Stock hogs, 4¼@4½c ₩ lb.

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¾@—c ₩ lb.; second quality 5@5½c ₩ lb.; third quality, 4½c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6@8c ₩ lb.; large, 4@6c.

MUTTON—Wethers, 7½@8c ₩ lb.; ewes, 7@7½c ₩ lb.; lamb, spring, 7½@8½c.

Miscellaneous.

Poultry is moving off fairly well. Large well-conditioned young hens are wanted, as are large well-conditioned young roosters and ducks.

Beans are moving slowly. Judging from all obtainable information the crop at the East will probably be light, which if true, should cause our market to hold strong.

Honey is steadier at last quoted prices. The demand is improving.

Hops for future delivery continue in good demand, with as high as 19c reported to have been paid for extra choice.

Wool is barely steady for fine fleeces, but for wools suitable for luster goods the market is firm.

Exports by sea the past week aggregate as follows: Flour bbls, Honolulu, 520; Japan, 1045; Vladivostock, 125; Manila, 1250. Barley ctls, Honolulu, 1075; Japan, 1045. Hay bls, Honolulu, 781. Beans lbs, Butavitavi, 850; Victoria, 7974; China, 18,124. Hops lbs, Victoria, 150; Japan, 666. Wine gals, Japan, 250.

From the *Commercial News* of July 9th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	236,481	250,623
On the way to neighboring ports	21,711	27,726
In port, disengaged	13,521	9,876
In port, engaged for wheat	44,587	50,636
Totals	316,300	338,861

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1889, to July 1, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	13,702,191	13,385,095
Flour, bbls	1,189,629	909,032
Barley	952,248	1,298,153

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 9, 1890.

BEANS AND PEAS.			
Bayo, ctl	3 90	@	4 20
Butter	2 00	@	2 25
Pea	2 20	@	2 40
Red	2 25	@	2 75
Pink	2 85	@	3 00
Large White	—	@	—
Small White	2 20	@	2 40
Lima	4 00	@	4 50
Fld Peas, blk eye	—	@	—
do green	—	@	—
do Nlies	2 00	@	2 25
Split	6½	@	—
BROOM CORN.			
Choice to Extra	80 00	@	95 00
Fair to Good	70 00	@	75 00
Poor	50 00	@	60 00
CHICORY.			
California	6	@	6½
German	6½	@	7
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair, lb	10	@	12
do good to choice	13	@	16
do Giltedged	17	@	17½
do pickled	—	@	—
do in kegs	—	@	—
do Creamery in rolls	17½	@	18
CHEESE.			
Cal, choice mild	8	@	9
do fair to good	6½	@	7½
Young America	8½	@	9½
N. York Cream.	13	@	14
Western	8	@	11
EGGS.			
Cal. ranch, doz	21	@	22
do do sel'cted	23	@	—
do. store	17	@	19
Eastern, cold storage	—	@	—
do fresh	15	@	17
do selected	19	@	20
do to arrive	—	@	—
FEED.			
Bran, ton	14 00	@	15 50
Feedmeal	20 00	@	22 00
Gr'd Barley	24 00	@	25 00
Middlings	21 50	@	23 00
Oil Cake Meal	25 00	@	—
Manhattan Food Per 100 lbs	7 50	@	—
HAY.			
Compressed	10 00	@	14 00
Wheat, per ton	8 00	@	10 00
do choice	12 00	@	14 00
Wheat and Oats	10 00	@	14 00
Wild Oats	7 50	@	10 00
Tame do	8 00	@	10 00
Clover	8 00	@	9 50
do ch'ce red top	—	@	—
Barley	7 00	@	9 00
Barley and Oats	—	@	—
Alfalfa	—	@	—
Stock Hay	—	@	—
Alfalfa Compr'sd	—	@	—
Straw bale	45	@	55
New hay, Wheat	—	@	—
do do Oats	—	@	—
FLOUR.			
Extra, City Mills	4 10	@	4 35
do Co'try Mills	4 05	@	4 30
Superfine	3 10	@	3 75
GRAIN, ETC.			
Barley, feed, ctl	1 00	@	1 07½
do Choice	1 10	@	—
do Brewing	1 10	@	1 12½
do do Choice	1 15	@	1 16½
do do giltedg'd	1 18½	@	1 30
Chevalier cuce	—	@	—
do com to good	—	@	—
Buckwheat	1 25	@	2 00
Corn, White	1 00	@	1 10
Yellow	1 10	@	1 25
Oats, milling	1 65	@	1 75
Surprise	1 70	@	1 75
Choice feed	1 60	@	—
do good	1 55	@	—
do fair	1 50	@	—
do Gray	1 45	@	—
do Black	1 40	@	1 50
Rye	90	@	93½
Wheat, milling.			
Gilt edged	1 41½	@	1 42½
do Choice	1 40	@	—
do fair to good	1 38½	@	—
Shipping, choice	1 37½	@	1 38½
do good	1 35	@	—
do fair	1 31½	@	1 32½
HIDES.			
Dry light to h'vy	8	@	9
Salted	5	@	8
HOPS.			
Oregon, 1889	14	@	20
Cal 1889 Choice	18	@	20
do Fair to G'd	13	@	16
ONIONS.			
Silver Skin	1 25	@	1 50
NUTS—JOBBING.			
Walnuts, Cal. lb	7	@	8
do Chice	9	@	11
Almonds, hd shl.	5	@	6½
Softshell	9	@	10
Paper shell	12	@	14
Brazil	11½	@	13
Pecans	9	@	14
Peanuts	5½	@	7½
Filberts	11½	@	12½
Hickory	6	@	9
Chestnuts	14	@	—
Pine nuts	7	@	8
POTATOES.			
New	1 00	@	1 25
do choice	1 50	@	1 75
Early Rose, sks	—	@	—
Chile	—	@	—
Peerless	—	@	—
River Reds	—	@	—
Humboldt	—	@	—
Petaluma	—	@	—
Burbanks	1 50	@	1 75
Sweet	—	@	—
POULTRY AND GAME.			
Hens, doz	6 00	@	8 00
Roosters, old	6 00	@	7 00
do young	6 50	@	9 50
Broilers, small	2 50	@	3 50
do large	4 00	@	5 00
Fryers	5 00	@	6 00
Ducks, tame	3 50	@	4 00
do young	4 50	@	5 50
Geese, pair	1 00	@	1 25
Goslings	1 50	@	1 75
Turkeys, Gob'r	19	@	21
Turkeys, Hens	16	@	18
Pigeons	2 50	@	3 00
Rabbits, doz	1 50	@	1 75
Hare	1 75	@	2 00
Venison	8	@	10
Dove	75	@	90
EGG FOOD.			
Manhattan, ₩ lb	12	@	—
PROVISIONS.			
Cal. Bacon.			
Heavy, lb	10½	@	11
Medium	12	@	—
Light	13	@	—
Extra Light	—	@	—
Lard	9	@	12
Cal. Sm'k'd Beef	11	@	12
Hams, Cal	12	@	13
do Eastern	12½	@	13½
SEEDS.			
Alfalfa	9½	@	10
Canary	—	@	4½
Clover, Red	12	@	13
White	20	@	22
Cotton	20	@	—
Flaxseed	2	@	2½
Hemp	8	@	8½
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German	5	@	6½
do Common	5	@	6
Mustard, yellow	1½	@	2
do Brown	2½	@	3
Rape	1½	@	2
Ky. Blue Grass	14	@	16
2d quality	13	@	14
Sweet V. Grass	75	@	—
Orchard	12	@	14
Hungarian	7½	@	8
Lawn	27½	@	40
Mesquit	6	@	—
Timothy	6	@	6½
TALLOW.			
Crude, lb	3	@	5
Refined	6	@	—
WOOL, ETC.			
SPRING—1890.			
Humboldt and Mendocino	19	@	24
Sac'to valley	15	@	22
Free Mountain	18	@	24
S Joaquin valley	12½	@	17
do mountain	17	@	22
Cala'v & F'th'll	15	@	24
Oregon Eastern	13	@	22
do valley	20	@	25
So'n Coast, def	10	@	14
So'n Coast, free	12½	@	19

Rope.

Baling, Duplex, lb	12
" Manilla, lb	15
Twine, for hops, balls, tarred, lb, Manilla	16
" " grape vine, balls, lb "	16
" " cons, lb "	16
" spring, lb "	18
" binder (600 ft. to lb), lb	16

Duplex twine 3c per lb less.

THERE are about 1000 elk killed in Oregon and Washington every year, the antlers from most of which are sent to England for ornaments.

Australian Ballot System,

With illustration, by Abbot Kinney, a 32-page pamphlet giving a brief and concise discripuon of the above-named new system of voting. Price 15 cents, postpaid. Sold by Dewey & Co., 220 Market St., San Francisco, Cal.

California Fruits East.

NEW YORK, July 3.—California canned fruits are now held at from 5 to 15c per doz advance on the opening prices in this market.

Southern Pacific car 10,583, containing California fruit consigned to agents of the California Fruit Union, arrived 40 hours late, and passed through very warm weather, consequently the condition of the fruit was poor. Two hundred and eighty boxes of plums sold from $1.95 to $1.40; 183 boxes Alexander peaches at $3.05 to $1.50; 430 half crates Royal apricots at $1.55 to $1.35.

CHICAGO, July 3.—The Earl Fruit Co. sold a carload of California fruit to-day as follows: Apricots, $1.85 per half-crate; peaches, $2.20 per half-crate; Royal Hative plums, $2.10 per half-crate.

The California Fruit Union sold two carloads at the following prices: Plums, $1.75 to $3.55; Bartlett pears, $5; peaches, $2 to $2 55; apricots, in poor order, $1.55 to $2, and some at $1.40.

NEW YORK, July 3.—The sale of California fruits, which has now fairly begun for the year, promises to be greater than ever before, and the price obtained for apricots and early peaches augurs well for other fruits. This morning 1000 crates and boxes were sold for over $2000.

CHICAGO, July 6.—The Earl Fruit Co. sold two carloads of fruit yesterday. Peach plums brought $4.25 per half-crate, $3.05 per box; Royal Hative plums, $2.90 for fancy to $1.75 for choice per half-crate; peaches, $2 to $2.85 per box; apricots, $2 to $2.15; figs, $1.60 to $1.75. The fruit is in fine order, and prices the highest realized this season.

NEW YORK, July 6.—The first California peaches of the season were sold at auction Saturday for upward of 5c each.

NEW YORK, July 7.—Market here in good shape for liberal supplies of prime fruit. Since the withdrawal of Coast offerings, new canned fruits are stiffer; buyers, however, have considerable start in orders. Dried fruit firm, but not promptly responding to the excited feeling of shippers.

CHICAGO, July 7.—The Earl Fruit Co. sold one carload of peach plums at $2.80 to $2.90 per half-crate; peaches, at $2.35 to $2.70 per box; Royal Hative plums at $1.85 to $2.10 per half-crate; apricots, in over-ripe condition, $1.05 to $2 per half-crate.

Porter Bros. sold five carloads of apricots at $1.25 to $3.10, except stock by slow freight, which is in very bad order, and which went at 80c to $1.25. St. Catherine plums fetched $1.25; Bartlett pears, $2.55 to $5.35; Clapp's Favorite pears, $3.50; Dearborn seedlings, $2. 65; German prunes, $3; cherry plums, $1.30; peaches, $2.65 to $3.05; Royal Hative plums, $1.50 to $2.45.

NEW YORK, July 7.—The sales of evaporated California apricots are reported at 15½c, delivered here, August and September shipment. Sales are also noted of prunes, 40s and 50s, at 11c here; 12c is now asked.

NEW YORK, July 8.—The local papers are paying an unusual amount of attention to California products, owing to the conditions now obtaining. The trade papers have daily accounts of prices at which peaches, apricots and canned goods are held in the California markets. These papers reach just the class where the publication is the most effective—the dealers in such goods. The prominence of California products is increased by daily comparisons with foreign goods. Statements are reiterated persistently that, in the matter of prunes especially, foreign growers have been forced by the growing popularity of California goods in all the Eastern markets, to imitate California's way of packing, the purpose evidently being to persuade purchasers they are getting the California goods. Florida is not getting one-tenth the advertising here in the trade papers that California is. The flattering feature of all this is that it is unsolicited, and that the facts are printed as mere items of news. Even the daily metropolitan press, which falls to make a speciality of such trade matters, is noticing California fruit in the regular news column. There is not a possibility for doubt, according to the best authorities interviewed, and who call attention to these facts as significant, that California goods will be introduced to twice as many new people this year as during any season preceding. The latest pointers are that Turkish prunes are now selling at from 5¾c to 7½c, with a strong staple market. French prunes hold their own, with small sales at 8¾c to 9c.

CHICAGO, July 8.—The Earl Fruit Co. sold California fruit to-day as follows: Bartlett pears, $4.10 ₱ box; German prunes, half crate, $2.95; Purple Duane plums, small box, $2.40; Royal Hative, half crate, $2.35; peach plums, half crate, $2.35@2.75; peaches, half box, $2.55@2.80.

Porter Bros. sold one carload as follows: Plums, $1.50@3.50; peaches, $2.70@2.75, except one line in bad order, which went at $1.85; prunes, $2.60@3.75; Bartlett pears, $4.05@4.35.

CHICAGO, July 9.—California green fruits are quoted as rather quiet, at the same time steady to firm; quotable as below: Apricots, 20-lb boxes, according to quality, $1.50@2.25; peaches, 20-lb boxes, $3@3.50; prunes, 20-lb crates, Black Tragedy $3@3.50; plums, 20-lb crates, Cherry, $2@2.25; do, 10-lb, $1@$1.25; plums, 20-lb crates, Royal Hative, $2@2.50. California oranges are about all gone. A few Rodi remain and they are of moderate sale. Rodi, small sizes, $6.50@7 ₱ box; do, large sizes, $5@6.50. In beans no improvement is apparent; the demand is light and the weather too warm to expect anything different; offerings are only moderate but the feeling is easy. California Lima beans, choice, 5¼@ 5½c ₱ lb; do, common, 2@4c.

CHICAGO, July 9.—The Earl Fruit Co. sold one carload of California fruits as follows: Peaches, $2 40@2.50; Purple Duane plums, $2 40; Tragedy prunes, half crate, $2.75@2.95; Royal Hative plums, $1.85@2.05; apricots in poor order, $1.25@1.80.

Porter Brothers sold five carloads as follows: Peaches $1.75@3.15; plums, $1.50@3.55; prunes, $2.15@3.70; Bartlett pears, $3.30@3.70; apricots, $1.25@1.75; figs, 85@90c.

SACRAMENTO, July 9.—The first special fruit train of the season was sent East to-day by the Earl Fruit Co., the W. R. Strong Co., the Gregory Bros. and C. W. Reed. The train was made up with shipments for Chicago, New York and Boston.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE, July 2-8.	Olympia. Rain	Temp.	Wind	Weather.	Portland. Rain	Temp.	Wind	Weather.	Eureka. Rain	Temp.	Wind	Weather.	Red Bluff. Rain	Temp.	Wind	Weather.	Sacramento. Rain	Temp.	Wind	Weather.	S.Francisco. Rain	Temp.	Wind	Weather.	Fresno. Rain	Temp.	Wind	Weather.	Keeler. Rain	Temp.	Wind	Weather.	Los Angeles. Rain	Temp.	Wind	Weather.	San Diego. Rain	Temp.	Wind	Weather.
W.	.T	66	Nw	Fr.	.00	76	SW	Cl.	.00	62	Nw	Cl.	—	—	—	—	.00	80	SW	Cl	00	60	W	Cl.	.00	92	Nw	Cl.	.00	94	S	Cl.	.00	84	S	Cl.	.00	74	W	Cl.
T...	.00	70	Nw	Cl.	.00	78	NE	Fr.	.00	58	Nw	Cy	.00	92	SE	Cl.	.00	82	S	Cl	.00	60	W	Cl.	.00	96	Nw	Cl.	.00	96	SW	Cl.	.00	78	W	Cl.	.00	74	SW	Cl
F...	.00	68	SW	Cl.	.00	70	S	Fr.	.00	60	Nw	Cl.	.00	88	SE	Cl.	—	—	—	—	.00	62	W	Cl.	.00	96	W	Cl.	.00	92	W	Cl.	.00	82	SW	Cl.	.00	70	SW	Cl.
S...	.18	62	SW	Cy.	.28	64	Nw	Ry.	.00	60	SW	Cy.	.00	90	SE	Fr.	.00	82	SW	Cl	.00	60	W	Cl.	.00	96	W	Cl.	.00	92	SW	Cl.	.00	74	W	Cl.	.00	70	SW	Cl.
S...	.14	62	W	Cy.	.04	64	SW	Cy.	.00	60	N	Cl.	.00	86	SE	Cl.	.00	81	SW	Cl	00	60	W	Cl.	.00	94	W	Cl.	.00	96	W	Cl.	.00	76	W	Cl.	.00	68	SW	Cl.
M...	.02	66	N	Cy.	.00	68	N	Fr.	.00	60	Nw	Cy.	—	—	—	—	.00	76	SW	Cy.	.00	62	W	Cl.	.00	90	Nw	Cl.	.00	94	S	Fr.	.00	72	SW	Cl.	.00	68	W	Cl.
T...	.10	64	SW	Cl.	.20	66	SW	Fr.	.06	60	Nw	Cl.	.00	82	SE	Cl.	.00	72	SW	Fr.	02	60	W	Cy.	.00	90	Nw	Cl	.00	94	SW	Cl.	.00	70	W	Cl.	.00	70	Nw	Cl
	.44				.52				.06				.00				00				02				.00				.00				00							

EXPLANATION. Cl. for clear; Cy., cloudy; Fr., fair; Cm., calm; – indicates too small to measure. Temperature, w nd and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 9, 1890.

Bananas, bunch	1 00	@	3 50	Cantaloupes crt	1 50	@	4 00
Cranberries	—	@	—	VEGETABLES.			
Limes, Mex	4 50	@	6 00	Okra, dry, lb....	6	@	10
o Calsml cases	75	@	1 50	do green.....	12½	@	15
emons, Cal., bx.	1 00	@	1 50	Parsnips, ctl....	1 25	@	1 50
do Sicily, bx..	5 00	@	6 00	Peppers, dry, lb	12	@	—
do Malaga....	4 00	@	6 00	do green, lb..	5	@	10
do do Seedling	1 50	@	2 50	Turnips, ctl.....	75	@	1 00
Pineapples, doz.	3 00	@	3 50	Beets, sk.....	75	@	1 00
Strawberries....				Cabbage, 100 lbs	75	@	1 00
fair, chest...	5 00	@	8 00	Carrots, sk.....	50	@	60
choice, chest..	10 00	@	15 00	Mushrooms, Cultivated, lb.....	—	@	—
Apricots, lb.....	2½	@	3½	Wild, lb.....	—	@	—
Raspberries do.	6 00	@	8 00	Cucumbers box	25	@	75
Bl'kberries, do..	3 50	@	5 00	Tomatoes, bx...	50	@	75
Figs, box, black.	35	@	50	Rhubarb bx.....	50	@	1 00
do white.....	25	@	50	Garden peas, lb	2	@	3
do Smyrna..	25	@	55	Sweet do do	1½	@	2
Plums, blue, bx	50	@	1 00	String Beans ...	1	@	2
Peach plums...	1 00	@	1 25	Wax, do.....	2	@	3
Pears, bx.....	50	@	—	Fountain do....	2	@	—
do Bartlett..	1 50	@	2 00	Squash, summer, bx	15	@	60
Peaches bkt....	50	@	75	Garlic, lb.....	4	@	5
do box.....	40	@	95	Green corn doz	12½	@	25
Grapes, box....	50	@	1 50	do do com sk ..	50	@	1 00
Apples com box	50	@	75	Egg Plant, lb..	5	@	10
do choice....	1 00	@	1 25				
Watermel'ns doz	2 00	@	3 00				

The World's Fair Big-Tree.

The Porterville *Tidings* gives further particulars as to Mr. Van D ornum's plan for exhibiting at Chicago in 1893, the section of a big redwood from the Mammoth Forest in Tulare county, which was mentioned at some length in the RURAL of June 14th.

For convenience in handling, the section has been divided into 16 parts. First, there is a base section one foot thick, sawed into semicircles. This is surmounted by another section seven feet high, which is hollow, consisting of little more than the bark of the tree. As a roof for this cylinder there are two more semicircles similar to those of the base, thus making a huge pill-box nine feet in hight an 20 in diameter. When exhibited the whole will stand on a circular platform, supported by nine finely-carved legs, eight near the edge and one in the center.

One of the 12 parts of the middle section will be on hinges to serve as a door. One stairway will allow ascent to this circular room, and another to the top. At the fair it is proposed to light up the exhibit, inside and out, with 250 incandescent lights. The chamber will be large enough for 50 persons to move about in.

This curiosity may be placed on exhibition at the Mechanics' Fair in this city, before it is sent to Chicago.

The Fortieth Volume.

The following unsolicited testimonial to the value of the RURAL comes from the pen of an intelligent and conscientious reader—one of the most faithful and respected veteran Patrons:

EDITORS PRESS:—By persistent will, by energy of brain and muscle to battling all obstacles and bearing goodwill to all men and hatred to none, the RURAL PRESS has won the esteem of the thousands who read its columns.

Having been a regular subscriber from its first issue, I can bear witness to the above points, which are to the credit of the publishers and editors of this journal, which is the friend of the farmer and Granger on the Pacific Coast. Its weekly visits reach not only the tillers of the soil, but find their way to the commercial and other branches of trade and traffic. Its Grange columns, headed by our esteemed editor, including the W. M.'s "Desk," also departments for California, Oregon and Washington, bear good news to all and show beautifully the application of Grange principles which makes all true members happier and better in life. I hope the 40th volume will open with many bright auspices. May its future issues be held in high esteem by the intelligent and wide awake readers, thus cheering both publishers and editors in their ambitious endeavor to bring out still a more excellent paper. GEO. T. R.

FATAL COLLISION ON A RACE-TRACK.—A singular fatality is reported from the San Luis Obispo race-track. A filly owned by E. W. Sneele and the stallion Enterprise owned by John Price were being driven in opposite directions, and were so reined that they came in collision, and both horses were killed outright.

THE commission to examine the San Joaquin and Sacramento rivers, appointed by the last Legislature, have started from Sacramento on their work, and invite people who wish to confer with them to meet them at the river towns.

THE thermometer registered 101 degrees in New York on Tuesday, which is its greatest heat experienced since July, 1876. Many of the Eastern States have been visited by extreme heat during the past week.

FISH BROS. WAGONS of pioneer merit and sold by the trade everywhere. Ask for them or write Frank Brothers, San Francisco.

HEMP SILK.—Mr. Nayemura Sakusaburo, a druggist of Hikone, in Omi, Japan, has succeeded in converting wild hemp (yachyo) into a substance possessing all the essential qualities of silk. Nothing is said about the process, but it is asserted that trial of the thread has been made at the first silk-weaving establishment in Kioto and other factories, with excellent results in every case. The plant in question grows on moors and hillsides. Its fiber is said to be strong and glossy, in no wise inferior to silk when properly prepared. Cultivation on an extended scale would present no difficulties.

THE boiler of a thrashing machine, near Los Banos, exploded last Wednesday week and injured two men. Fielding A. Hodges had a leg broken and one or both eyes destroyed.

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To the Editor:—

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Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

DRAFT AND LAND GAGE FOR PLOWS.—Owen T. Owens, assignor to the Benicia Agricultural Works. No. 429,220. Dated June 3, 1890. This draft and land gage for plows consists of a draft bar having its rear end swiveled to a depending yoke beneath the beams to which the plows are attached, a guide through which the front end of the draft-bar passes and within which it is allowed a vertical movement, horizontal transverse guide-bars upon which this guiding yoke travels from side to side, a lever by which it is adjusted, and a holding rack and the means for altering the points of attachment of the rear end of the draft-bar. By means of these adjustments and the free vertical movement allowed to the draft-bar within the yoke, the work is very much improved and the draft upon the horses is made very much lighter.

AXLE-SET.—Willard F. Nightingale, Latrobe, El Dorado county. No. 429 245. Dated June 3, 1890. The object of this invention is to provide a simple and readily operated tool or implement of this class which will accurately determine the set and gather of the axle-spindle.

APPARATUS FOR AGING WINES.—Luther Wagoner, S. F. No. 429,826. Dated June 10, 1890. This invention relates to the artificial aging of wines and distilled alcoholic liquors; and it consists in a means for gradually supplying a small quantity of air, which is caused to flow continuously and steadily into the liquor to be treated, and in a means for filtering said air before it is introduced into the liquor Wines are at present aged by slow absorption of the oxygen of the air through the pores of the wood of which the cask is made, about 15 to 20 per cent, by volume, of air being required to age the wine in from four to five years. Should the air be introduced into the liquor too rapidly or directly, the process may be endangered by giving the wine an undesirable flavor, and also by exciting a new fermentation either by the introduction of germs to the wine, or if the germs are already in the wine, in supplying oxygen in sufficient quantities to produce their growth. The object of this invention is to introduce purified air nto the cask in a slow and regular manner, and so gradually that the oxygen may only react upon the acids in the wine, and not be present in sufficient quantity to unduly permit the said reaction or to excite the latent germs if they be present.

PIPES.—John P. Culver, Los Angeles. No. 429,844. Dated June 10, 1890. This invention relates to the class of pipes which are specially adapted for water, gas and drain pipes, and also for use as conduits for laying electric wires underground, and it especially relates to that class of pipes which are formed of a volute of sheet metal covered with and rolled up in asphaltum. The improved pipe consists of a volute of sheet metal covered with and rolled up in asphaltum, and its exterior bound with wire wrapped side by side several laps around at places desired, said laps being soldered together.

FRUIT PITTING MACHINE.—Chas. W. Elkins, Palermo, and Wm. C. Foreman and Stanton Foreman, Bidwell's Bar, Butte county. No. 429,209. Dated June 3, 1890. This is one of that class of fruit-pitting machines in which the fruit is caught between and cut by opposing reciprocating knives, the cut fruit being discharged automatically by a swinging or tilting bed. The object is to provide a simple and effective machine for stoning fruit which does not require any manipulation of the fruit, the latter being fed to the knives automatically, cut in halves and the pit and halved fruit discharged separately and automatically, the whole operation being performed by a single crank movement.

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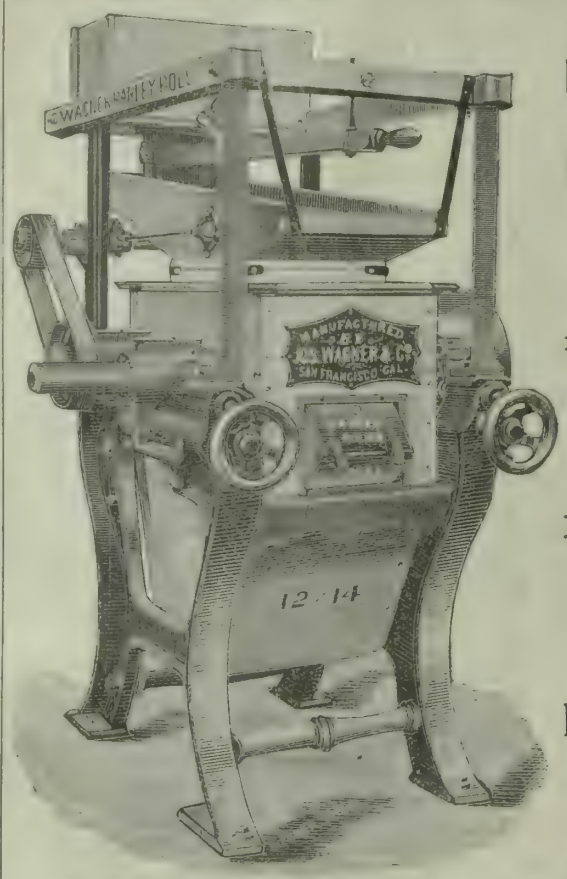
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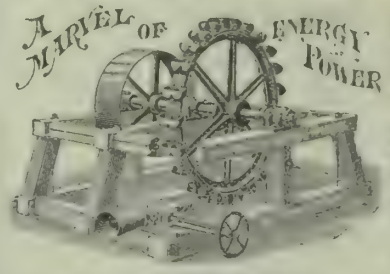
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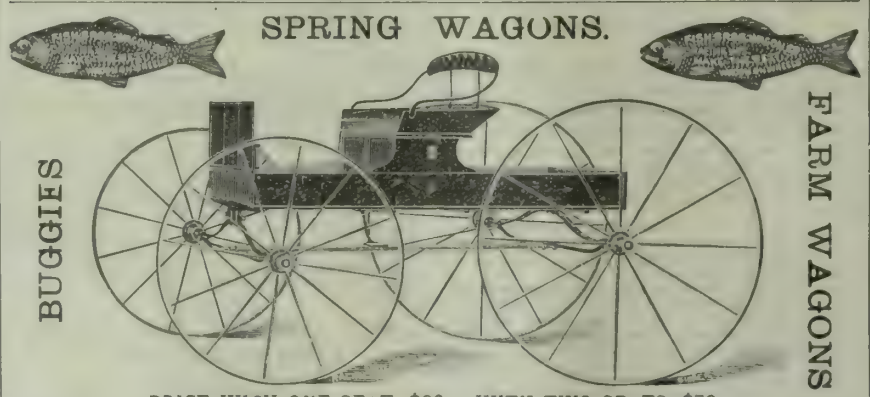
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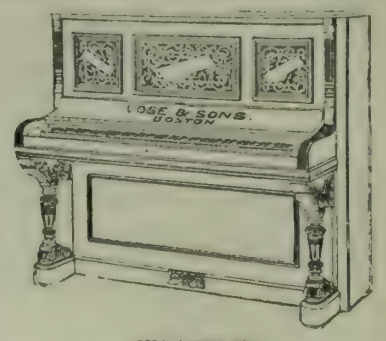
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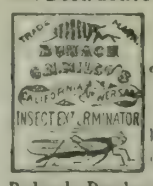
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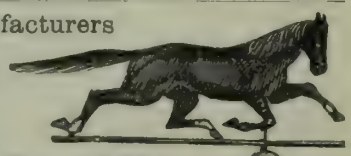
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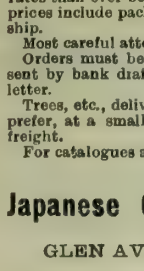
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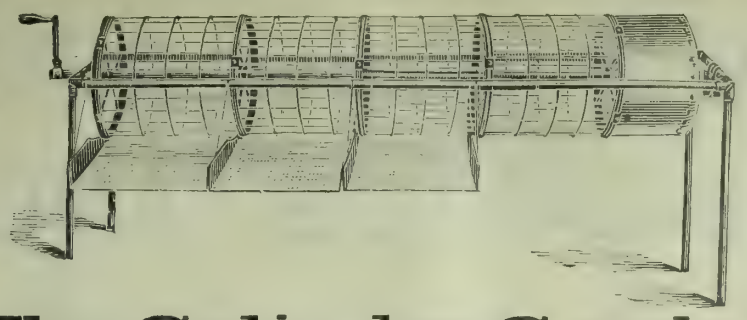
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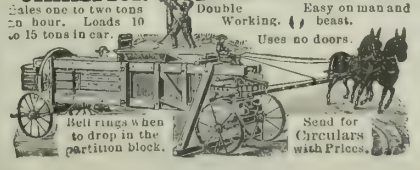
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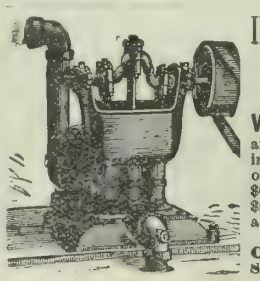
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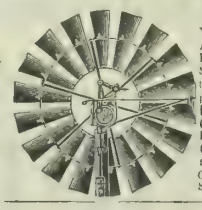


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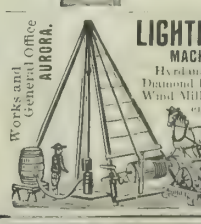
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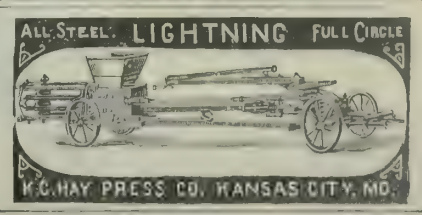
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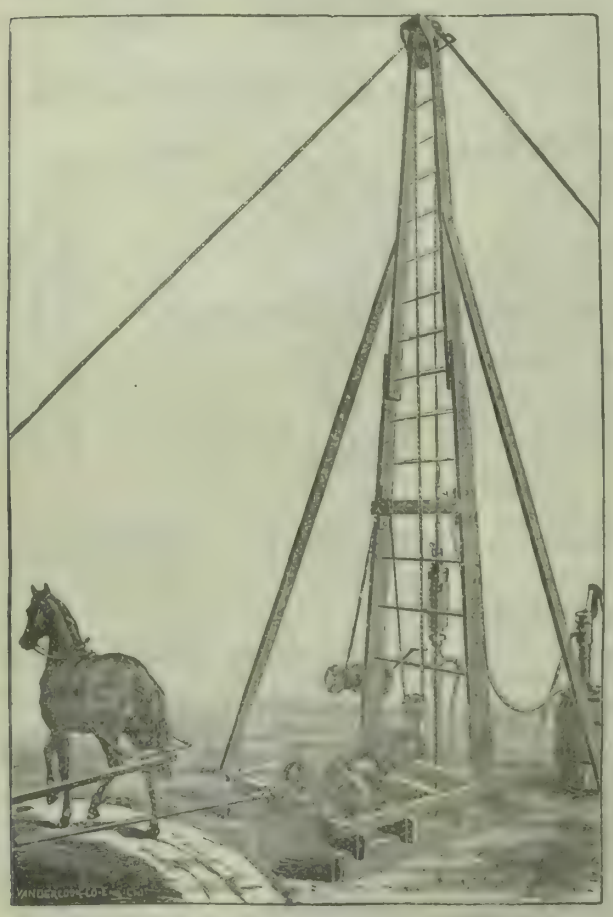
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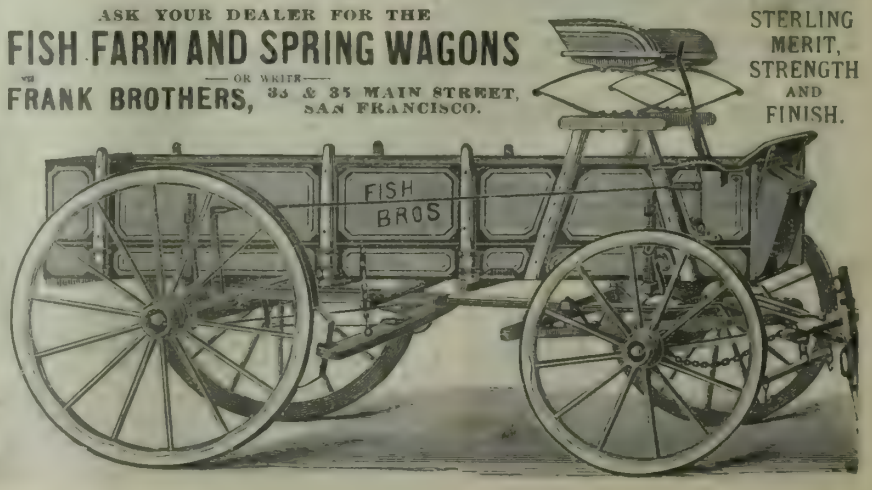
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Office, 220 Market St.

Mono Lake.

Lake Mono is situated in east-central California, within a few miles of the California-Nevada border. The lake is 6380 feet above sea level. The Mono basin is remarkable for its diversity of topography, its varied and striking contrasts of scenery, its wide range of climate and corresponding variations of flora. Besides these more obvious characteristics, the basin has a varied geological history, the later chapters of which are of fascinating interest and can be read with unusual facility.

The highest peaks that overshadow the lake rise more than 6000 feet above its level. Over the entire area of the basin no running water can be found during the greater part of the year, and the region is consequently silent and lifeless. Near the shore of the lake are low hills with castellated summits which at once attract the attention of the geologist by the peculiarities of their forms. These are tufa crags, mainly composed of calcium carbonate which was deposited from the waters of the lake when it stood much higher than now. There are three varieties of this tufa, tubular masses being sometimes formed, that appear to have been precipitated from springs.

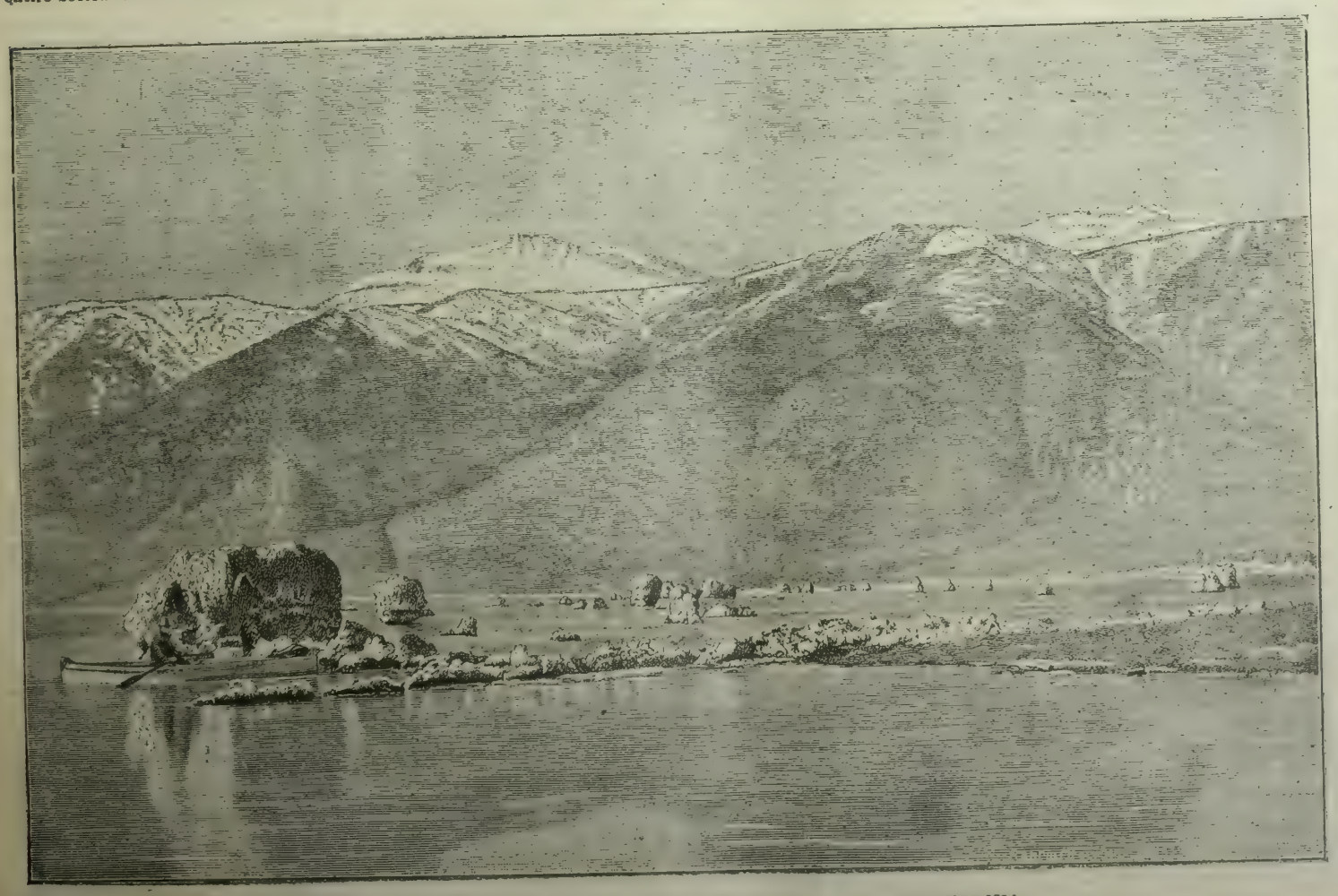
The lake is rudely circular in outline, and, including its islands, has an area of 87 miles. The average depth is about 62 feet, and the greatest 152 feet of water. The entire bottom is of soft black mud. The most remarkable features of the lake are the absence of an outlet and the strongly alkaline condition of its water. The lake derives the principal portion of its water supply from the creeks that descend the slope of the Sierra, and supplementing this surface drainage are a number of springs, many of them warm ones.

At the western extremity of the lake are several sublacustral springs. Two of special interest rise at the base of tufa crags 20 or 30 yards from the lake shore. At the present time they are not depositing mineral matter though the tufa about them was evidently deposited by them. The positions of the springs rising in the lake near Black Point are indicated in calm weather by the eddies on the lake surface. On rowing over these submerged springs it is seen that some of them rise from the tops of tufa crags which are covered by 10 or 12 feet of water. These crags are of the same character as those on the shore and were formed by the deposition of calcium carbonate from the incoming waters. The submerged towers from which these springs issue are in some

[(*Continued on page 56.*)



A SKETCHING CLASS OF THE SACRAMENTO SCHOOL OF DESIGN—See page 56.



TUFA TOWERS NEAR BLACK POINT, IN MONO LAKE, CALIFORNIA.

POULTRY YARD.

General Topics.

The value of whitewash as applied to poultry fences, roots, etc., is greatly overestimated. It is true that it beautifies the poultry yards when well put on, which is of some value, but is overbalanced by the harm it does by reflecting the sun's rays to the injury of the fowl's eyes. This is particularly the case in California, where the summer months are one continuous procession of cloudless days. As a disinfectant whitewash has some value, but the fences do not require a disinfectant. It is only the roosts, and a little gas-lime scattered about and dusted into corners that become damp and foul, is ten times more effective than lime-wash. Leave the fences and buildings the natural color, or mix some dark color with the wash or paint.

What to do with broody hens puzzles not only the beginner, but nearly all fanciers and poultry-raisers. Probably as good a method as any to relieve them of their desire to incubate is to remove them to a large coop or yard where they may have room to move about, scratch, dust themselves, etc., but with no place that resembles a nest. Liberal feed and pure water should not be withheld. As broody hens are generally more or less lousy, it is a safe rule to always give them a good dusting with some insect powder when "breaking up" the fever; and while they are "in hand," give their shanks and feet a good brushing with sweet oil and carbolic acid as a precaution for possible scale leg.

From experiments I conclude that eggs from vigorous stock, *fertile* and properly packed, can be brought from the East, and a fair hatch obtained; that better results are obtained from eggs packed in baskets than cases, owing, I suppose, to cases being handled more roughly; that the best way to pack is to wrap each egg in paper or excelsior, place in egg fillers in a basket (the Eliot egg-basket being the best of any I received) with a good layer of excelsior under and over them. If shipping from a cold climate, I would prefer newspaper to wrap eggs in, as it would help to keep them from getting too cold. Bran or sawdust is bad packing for long distances; it settles down and packs too tightly around the eggs. If Eastern breeders would be more careful to send *fertile* eggs, they would get more trade; all they care for, with some exceptions, is to fill the order. In addition to my own experience, an acquaintance sent for 75 White Leghorn eggs, which, after reposing under hens 21 or 22 days, produced 4 chicks, the only ones fertile. As the expressage was $4 25, when added to the first cost of eggs, the chicks were a trifle dear, to say the least, and there is no danger of that man sending East for any more eggs.

John D. Mercer of Los Angeles, writes: I believe the following to be the best, most practical and cheapest poultry fence: No. 20 wire netting, two-inch mesh, four feet high, board of any width at bottom; no top piece; posts six feet, two by three resawed, making one end come almost to a point; set large end 1½ feet in the ground, small end come to a point so that the fowls have nothing to alight on. By resawing post and bottom board you get twice the amount for your money, excepting $2 or $3 a thousand for resawing. The above is for acres. For small pens or yards, posts 8½ feet, two by three resawed, set two feet in the ground; 14-inch board resawed, one above another, making 28 inches high; four feet, two-inch mesh, No. 20 netting over bottom boards, making fence six feet four inches high; no top piece, and posts sharp at top; posts eight feet apart. Small stake driven in the ground between each post, and board nailed to them will keep them from warping. That kind of a fence looks well, is cheap and practical, and I will guarantee it to hold any breed of fowls.

Geo. B. Badger writes of color of fowls' legs, etc. as follows: Speaking of strong light and wind as causing paleness of plumage in poultry, Mr. Harker has expressed his views on that subject quite in agreement with the conclusions arrived at by ornithologists in regard to birds in general. The subject has been under consideration by scientific men for many years. Extensive and systematic collections of birds have been made in all parts of our vast domain. From Maine to Oregon, and from Mexico to Alaska, large series of specimens have been obtained; in fact, but little doubt now exists, not as to actual color, but rather as to the expression of the color. Heat accompanied with moisture and shade, tends to bring out and intensify all colors, whatever those colors may be and *vice versa*. As to yellow legs on the Plymouth Rock, I don't see but what breeders on the Atlantic Coast experience very much the same difficulty that Californian breeders do, perhaps not quite to the same extent, though the difference is not so great as many suppose. There, as here, the trouble is mostly with the hens. It seems to come almost as natural for the cock to possess yellow legs as it is for him to carry a lighter plumage throughout; though the pullets will have the bright yellow legs, the matured hen frequently loses this desirable characteristic. The trouble has always been to prevent the hens from running too dark, even to blackness. There is a law of nature known among naturalists as the law of correlation, whereby a change of one part of any organism is followed by a change of some other part; of course exceptions occur, but the rule is a substantial one. It is quite reasonable to suppose that a plot of grass should assist fowl in maintaining the bright color of their legs, as grass and moisture are natural concomitants. Add the shade so easily obtained in this, the most magnificent of all the States of our Union, and California can do as well as Massachusetts. If grass does not naturally grow here during the dry season, there is one thing certain, the Californian Yankee knows how to make it grow: and as to shade, so essential to the comfort and well being of fowl, where can it be grown more favorably than in this land of plenty?—*California Cackler.*

Vermin on Fowls.

During the past week I have received no less than nine letters from parties inquiring what to do in order to rid their hen-houses of the vermin that have taken possession.

Lice on fowls is one of the most annoying features connected with the poultry business, and although it seems to some almost impossible to guard against their becoming firmly fixed in the fowl house, it is to others no trouble to keep clear of them. If you will commence in time and pay close attention to your roosts, nests, etc., you can by diligence greatly reduce the probability of having these minute parasites take possession of your buildings. Use kerosene on your roosts at least once a week freely. A good idea is to take the roosts out of the house once a month, cover them with kerosene and set them afire; the oil burns off, killing the lice and germs, but does not injure the wood. After seeing all the fire is out replace the roosts and again cover with kerosene. Aside from keeping lice from the roosts, the evaporation during the night, when the fowls are roosting, and the fumes rising and entering their feathers serve to destroy all vermin on them. Sprinkle sulphur in the nests twice a week. The heat of the fowls while on the nests aids the propagation of vermin to a great extent, but it also causes the sulphur to pass up in fumes, thus destroying all that hatch out. A wash made of lime with carbolic acid, in the proportion of two ounces of crude acid to the gallon of whitewash, is not surpassed for cleansing the inside of the poultry-house. Whitewash your house with this every two or three months. By following the above you will have few, if any, lice about your fowls.

Should your fowl-house be affected with parasites, shut it up close, take an iron kettle with a quantity of live coals in it, place in the center of the house and throw on the coals a quantity of sulphur. The fumes rising and filling the house will eradicate all vermin.

There are a great many breeds of lice—more than enough to correspond with the breeds of fowls—but of the whole the greatest mischief is done by three or four kinds, which are persistent and not easily driven off. The worst of the lot on this coast is the red spider louse, which is a very small parasite. Unless very close examination is made, this little fellow will escape observation. Many persons suppose that the birds are free from his depredations because he is so diminutive as to escape notice, but give him a few days grace and he and his mate will multiply so rapidly that countless millions will be present, and in every crack and crevice. It will only be necessary to touch any part of the wall with the hand to find out if they are there. We have known of several instances of their getting on horses, where the fowl-house was located next to the stable, and if not speedily attended to they will kill a horse in a short time. They do more damage at night than during the day, and as their small size enables them to hide most anywhere, the best way to destroy them is to make a thin, hot whitewash, add a tablespoonful of strong liquid carbolic acid to each gallon of wash, and, with a watering-can, sprinkle (or pour if necessary) it into every portion of the poultry-house, then follow with a brush. Let no part of the house escape—roosts, walls, nests, floor and even the roof must be deluged

The tick louse is a large fellow, nearly one-eighth of an inch in length, dark in color, with legs near the head. He prefers the head of chicks, and sticks close to his victim. A good dusting with insect powder is more than his constitution will endure, and he quickly succumbs or leaves.

The flesh louse—so-called because it is nearly the color of the flesh of the fowls—is very active, long in shape, and feeds close to the roots of the feathers. A good dusting with insect powder renders his location very unhealthy, and once he is out of the way the dust-bath will prevent his return.

The flat louse is buff in color and eats portions of the feathers, often stripping the quills clean, giving the birds the appearance of having lost their feathers. Dust the fowls freely with insect powder and repeat three times a week.

It is of the utmost importance to keep the quarters clean, as filthy houses will be inhabited by lice. The whitewash solution should be applied every week till there is no sign of vermin left. Many persons advocate using grease on young chicks, but I am thoroughly opposed to its use, having known many valuable chickens to be killed thereby. Insect powder is much safer to use, and if applied with a "powder-gun" takes very little. If your soil is sandy you do not need to provide a special dust-bath, but if not, take some dry dirt and add a little sulphur for the fowls to dust in. Keep the house clean and the fowls will free themselves of lice with the dust-bath.

If strict cleanliness be observed about the house, using kerosene on the roosts and sulphur in the nests, as recommended above, you will never be troubled to any extent with the pest of the chicken-raiser—lice.—*Los Angeles Tribune.*

THE FIELD.

The Washington and Oregon Hop Crop.

Ezra Meeker's Hop circular dated Puyallup, June 26th, says: It has been 26 years since the first hops were planted in the Puyallup valley—the first in Washington—and never before, with but one exception, has there been so much rainfall and consequent heavy growth of vine in all these years, before the bloom; that exception—the year of 1888, we grew fully 50,000 bales although we were not able to save but 42 000

Unless all the usual signs fail we will grow as large a crop as that of 1888, and neighbors of Oregon will turn out 20,000 bales or more, so that with no unforeseen event the two States will grow fully 70,000 bales of hops the present yeare.

Are we ready to take care of that quantity properly? This is a question that each individual grower must canvass for himself, and if not, then go to work at once to set his house in order. To make the best quality of hops, a house 24 feet square, will probably cure an average of not over 1000 pounds per day. It is better that not more than 800 pounds should constitute an average day's run; with this as a starting point, and take 20 days as the season's run, it is an easy matter to estimate whether the drying capacity is ample for the probable crop; if not, then it is the poorest kind of economy not to proceed at once and prepare to properly care for the crop that all or nearly all the expenses of raising has accrued.

It is well to remember, that were it not for our export trade, that some of our hop yards would need to be plowed up; that without the extra care of some of our growers, this trade would be impossible; that to the reduction in the temperature in curing much is due to the good name our hops have acquired abroad; that it is our well-matured hops that are wanted for export — thoroughly cured but not high dried, baled whole and while hot, or at least soon after curing and before time elapses to toughen — absorb moisture — and in not too heavy bales.

On this last point, as to heavy or light bales, we have abundant experience and say that we know the light bales are the best—make better summer-use hops, nicer, brighter, springy samples which give that "polish" on the "boards" in the borough so highly prized by the English consumers.

We hope for a good market, as well as for a large crop. This last is almost an assured fact; we can only wish the former was as certain. The experience of the last year only again impresses us as to the impossibility of even guessing what the future of the hop market will be. It is fresh in our memories, how we all thought, producers, dealers and consumers alike, that there had been a large surplus of hops produced the world over in the crop year of 1889; how growers became eager sellers, even at unremunerative prices, while consumers were reluctant buyers, believing prices would go lower, still no surplus existed and instead an actual shortage was manifest; how prices here rose from 7 to 14 cents per pound, and even to 18, and finally how the market was never more bare of hops in June than now.

The lack of accumulated stock ought to assure a steady market, but whether it will or not, no man can tell. A marked feature of the trade—if dealing in futures can be called a trade—is the unusual number of contracts for the incoming crop. Up to the present writing, fully 8000 bales have been contracted, almost all at 15 cents per pound. Most of these have been upon "American" account, so termed in contradistinction to those bought upon export orders, and have gone into the hands of a number of dealers, instead of but a very few as heretofore.

A cheerful feature as to the outlook for the future of hop-growing in Washington and Oregon is the fact that orders for the English market can be placed at all before the hops are grown. These contracts are all based upon the quality of the best growth, and the moment we lower the standard of our qualities, that moment we drive the English buyer from our fields. No market is more exacting than the English, and none more discriminating as to the quality; if we will produce what they want, they will buy, if not, then they will let us severely alone. Then let us strive, all of us, to produce only the best, for thereby we create a market that would otherwise be lost to us, and likewise enhance the price of the whole crop.

WATER WORKS.—It is said that water-works in the United States and Canada have about trebled in the last ten years, growing from 660 in 1881 to 1900 to day. The capital invested is $500,000,000, their annual revenue is $50,000,000, their mains are 30,000 miles long, and they have 2,000,000 taps.

SHEEP AND WOOL.

Wool and Mutton.

I. J. Williams writes for the *Sheep Breeder* on a question which every sheep owner has thought more or less about, as follows:

The question whether sheep can be profitably bred for mutton alone has been one upon which considerable thought has been given, and yet we find a diversity of opinion among men whom it would seem are fairly able to judge. To the question I will venture the answer, No; and try to give reasons afterward. Now if we raise sheep just for the mutton, why not abandon them and raise cattle?

In my experience I have arrived at the conclusion that in the raising of sheep the wool will pay for the keeping, and we have that much more profit; and when we breed for the mutton alone we materially decrease the wool product and proportionately decrease the profits arising therefrom, and therefore we must not breed for one thing alone.

If the enormous herds of this country were bred for mutton alone, it would be but a short time until the entire wool trade would be turned over to our Australian friends, who would supply the demand, which would have a tendency to increase the price of wool, which in turn of necessity would increase the price of common wearing apparel, or turn the whole wool business over to our merino friends to supply us with fine wool, and we all cannot afford to wear such fine clothing.

The merino breeders don't raise very much mutton, as their sheep is nearly all wool, and after the fleece is clipped there is nothing left but a very small carcass. In order to gain a requisite amount of profit we must raise a sheep that will combine a growth of wool with a growth of mutton—one that will make the most pounds of mutton and a good grade of wool. Enough pounds with the least feed—that is where we get our profit. When we drop the wool interest we are losing that which we should have, for if the wool pays for the keeping then all we make on the lambs pays us a good interest on our money. For illustration we will take $100 in the fall and start out and buy 20 good common ewes for $75 and pay the $25 remaining for a ram. We then breed them and take fairly good care of them through the winter. When spring comes look after them closely and we should have 20 lambs, which at the end of the year from where we started, we can sell to the butcher at $3 75 or $4 per head. We will accept the lower price and will be safe in saying that we can sell the 20 lambs for $75, which brings us a return of 75 per cent on the money originally invested, and the flock is left.

Now we will fall back on the wool, and with anything like good care the wool will bring $30, which pays all expenses for the keeping of the sheep. Now it is easy to be seen that if the sheep had been raised alone for the mutton we should have to deduct the $30 from the sale of lambs, which would leave $45, or only 45 per cent on our money. From this deduction it is plain to be seen that we must keep the mutton and the wool together to make the raising of sheep profitable.

This is the reason that sheep breeders can raise sheep and sell the mutton at the same price as that of cattle and make more money, for the wool pays for the feed, and the wool from the cattle don't sell very well.

There is another thing in favor of the sheep; they don't tramp the ground so much as the heavy cattle and the manure is far superior to that of any other stock.

Now on the other hand, we must not breed too much for wool, for when we do we weaken the constitution; we always notice that sheep of any breed which are the best covered on head and legs are the weakest in constitution. Therefore we must guard against that part and try to raise a sheep with a good constitution, with plenty of mutton and all the wool we can get, the more the better.

Australian Scab Cures.

The following letter with instructions was sent to the *Breeders' Gazette* by P. R. Gordon, Inspector of Stock, Brisbane, Queensland, Australia:

As Australia is the only sheep country which has effectually stamped out scab in sheep, it will be permitted me to offer advice on the subject to other countries. I inclose copy of instructions issued by me to my staff of inspectors for the dressing of sheep. These are insisted on by the Governments of each of the Australian colonies and have never been known to fail.

The tobacco and sulphur cure is equally efficacious with that of the sulphur and lime cure; but the latter is preferred for the reason that it is much the cheaper and more easily prepared.

You will notice that we insist on using the dip at a high temperature. The reason for this is that we find by actual experiment that whereas the scab acarus will live for some minutes in the mixture when cold, it succumbs in about 40 seconds when the temperature is 110 degrees Fahr.

It is essentially necessary to a perfect cure that the sheep swim or float in the bath, so that every part of the body will be in contact with

the mixture. The head should be pressed under just prior to the sheep leaving the bath.

Many hundreds or thousands of sheep have been cured in the Australian colonies by means of the above dips without the loss by death of a single sheep. I have not known a single dressing to fail, but our legislature compels three dressings in the case of all sheep imported from other countries whether diseased or not.

The instructions referred to in the above letter are as follows:

Either one or the other of the following preparations must be used in dressing imported or infected sheep:

Tobacco and Sulphur.

One pound of sound leaf or manufactured tobacco and one pound of flowers of sulphur to five gallons of water.

Mode of preparation.—Infuse the tobacco the night previous to dipping by boiling the water and adding the tobacco in a proportion not exceeding one gallon of water to one pound of tobacco. Allow the infusion to stand all night in the boiler well covered over. Mix the bath with hot water to the desired heat and strength in the morning. Thoroughly mix the sulphur with the hand in a bucket or other vessel with water to the consistency of gruel before putting it in the bath and keep it well stirred before immersing the sheep, so as to keep all the particles of sulphur afloat.

Lime and Sulphur (Hydro-Sulphuret of Lime.)

Take in the proportion of ten pounds of flour of sulphur to five pounds of quicklime (a large proportion partially slacked); boil in ten gallons water; keep mixed by constantly stirring for about ten minutes or until a clear, dark brown orange color supervenes. Then make up the dip or bath to the required quantity by mixing one gallon of this solution with three gallons of hot water. If rock or unslacked lime cannot be procured, use double the quantity—that is, equal proportions of lime and sulphur.

Directions for Using the Bath.

Temperature.—Never allow the temperature to fall below 110 degrees nor to exceed 120 degrees Fahr.

Duration of bath.—Never less than 50 seconds for the second and not less than 80 seconds for the first and third dressings. The whole body, with the exception of the head, to be kept completely immersed during that time, the head to be immersed on the sheep being placed in and taken out of the bath. Never allow the sheep to be exposed to rain for at least one day after dressing.

THE DAIRY.

Feed to Preserve the Milk Flow.

The secretion of milk has a tendency to diminish the volume of blood by drawing both upon its liquid and solid elements. To keep up a flow of milk, this draft must be supplied by furnishing enough to restore the steady waste. A failure to do this for any considerable time, is not only to decrease the yield of milk during the lack of food, but to invite a hurried contraction of the blood vessels connected with the udder. These once reduced, there is no enlarging them again till the occasion of another birth, and the supply of blood for making milk will be diminished to their reduced capacity, keeping down the flow permanently and shortening the time of its final cessation.

Immense losses are sustained every year by dairymen from not comprehending this fact with sufficient clearness. A lack of feed in the midsummer drought where shrinking has already begun, hurried the shrinking along; lasting several weeks, the reduction becomes permanent, and must remain the rest of the season. No former activity of the glands will be resumed, for the vessels supplying them have become reduced. The great value of soiling, when grass fails, lies in keeping up and prolonging the action of the mammary glands The dairyman who appreciates this will never let his milch cows lack for food or drink.

An instance will illustrate the effect of a defective supply of food upon the milk secreting vessels. In visiting the farm of the Hon. Harris Lewis, in the fall of 1873, I found his cows, after the severe drought of that summer, giving an average of 22 pounds of milk a day; his heifers and farrow cows giving 13 pounds a day, and the other cows 24 pounds each. Though the rains had come and the grass had revived, the average at the factories around him, where soiling had not been adopted, was 13 pounds the cow—just equal to Mr. Lewis' heifer's and farrow cows. The soiling more than paid for the cost in the dry season, and in the fall the large yield gave larger profits. But many dairymen complained that year that their cows did not pay for their keeping. The reader may possibly see why.—*Arnold's American Dairying.*

We had personal knowledge of the spoiling, for profit, for the season, of 16 very fine cows of one of our patrons, in Ozaukee county, by pursuing the above deprecated course. He was the most active and enterprising patron we had for a small branch factory we were operating. He had planned to have ample pasture, about half of it on well seeded upland, and the rest on a swampy, quite level piece of land. Long continued rains, late in June, flooded the marsh, and drove his cows to the upland. This they soon gnawed to the roots, and semi-starvation commenced, and consequent shrinking of the milk, first in quantity then in quality. We remonstrated with the owner that he was spoiling his cows, and that as he had no other place to feed them he should do it in the barn, with hay of which he had plenty, and bran, which he would have to buy, or cut grass from his meadow, and soil them. But no; that was an innovation he then saw no money in, neither did he believe what we told him—that his cows would be half dry ere he got the second growth from his meadows. He believed as thousands do yet, that all that is fed a cow in summer that she does not nip from a pasture, whether it be long or short, tender or woody, is a dead loss, and the half dried-off cows will regain their flow when fresh pasture comes again. But that man learned a lesson that fastened conviction on him that went down to his pocket-book. In the fall he had 16 noble cows up to their eyes in pasture, all getting fat enough for beef, and not giving more than a half mess of milk per day, as compared with the cows of his neighbors. Two tons of bran fed to his cows, at the opportune time, would have saved his cows for profit that season, and the fertilizers left on the soil would have been worth two-thirds the investment.

Not to feed cows, no matter what the price of milk, at a time when they will dry off otherwise, is just as silly as to not throw a few pails of water on a fire when a little water will prevent a conflagration.—*Hoard's Dairyman.*

THE STABLE.

Feeding Horses.

The following from Prof J. W. Sanborn will interest all who are entering upon the business of breeding and raising fine horse stock, although written from Eastern experiment and observation and does not take account of many feedstuffs available in California. He says:

The sole purpose for which horses are kept is for the production of force and work. This sets the horse apart from other domestic animals in special features of feeding and care. His ratio of stomach to body and intestines is also unique, and calls again for special consideration. His stomach holds only some three and one-half gallons, while his intestines are very large. The horse, however, seems to be specialized for the peculiar purpose of speed.

The horse sells for some fifteen cents a pound, while the steer sells for but two or three cents. Is the difference one of food cost, that is, does the horse require in food for 1000 pounds in growth an amount in ratio to the difference in cost more than does the steer? He certainly does not, although he costs some more, and unless there is a great difference in other directions, is a much more valuable market for food than the steer.

German experiments have shown that of very coarse foods the horse digests somewhat less than the steer, but this difference seems to be confined to coarse foods. E. W. Stewart gives us an account of feeding three colts whose gain was in round numbers two pounds daily, which was as economically made as that of steers.

Boussingault, of France, fed several colts on weighed rations. Three, weighing 1106 pounds, ate 19.8 pounds of hay and seven pounds of oats. This was in the equivalent of hay 2.6 per cent of live weight daily, and gave a growth of 1.2 pounds daily, as good as an equal amount of hay would make on steers. I made some trials with four horses and mules last winter, which led me to believe that maintenance for a horse is slightly more than that for a steer of equal weight. But cattle and sheep are ruminants, or chew the cud.

They have four stomachs, while the horse has one little one. The ruminants were designed by nature to handle coarse foods to best advantage. I believe that we are fairly taught by the makeup of the horse that when at work, if not at other times, he should be fed on more concentrated food. The attempt to make hay the chief ration of horses imposes a severe tax upon them, and the result is seen in their distended stomachs and the spiritless and clumsy horses of many farmers.

All intelligent students of the horse give little hay, or a moderate amount of hay, and feed grain more liberally than to the ruminants, for the double reason that the horse will make poorer use of the hay than the steer or the sheep will, and will be less easy of motion. Good horse feeders give but ten to twelve pounds of hay a day, and feed once or twice daily. In feeding the colt we have to bear in mind that mare's milk is richer in proteine than cow's milk in ratio to its sugar and fat. This means that a colt's diet should be rich in proteine.

While latitude in the ratio of proteine to carbohydrates is permissible in the fattening animal, or in any animal being kept for animal products, it is not so with the colt. He is kept for his muscle; hence a fattening diet, or a very carbonaceous one, is out of place on the colt until matured and set at work. When his muscles are grown and work begun, then feeding foods that are most productive of force is permissible. I do not, therefore, join the outcry against the use of cornmeal for working horses. It is now known that the carbohydrates are a source of force.

Formerly, proteine was held to be the only source of force by many. Corn is a good, cheap heat or force producer, hence will answer for a work horse. This does not mean that it should be the only food given. In large mass it does not digest perfectly. I have shown, if not, I will now assert, from my trials, that a pound of cob meal (corn and cob ground together) will make as much pig growth as a pound of clear corn meal. The cob acts as a divisor in part of the doughy meal, and digestion is probably more perfect. For the horse, bran mixed with cornmeal will serve this purpose, while incidentally it will make a more valuable manure and furnish proteine. One half a pound of linseed meal, where carrots or some other roots or ensilage are not fed, will tend to keep the bowels open and secretion good. Where clover is at command the use of straw cheapens the ration, and may be used as one of two feeds of coarse food daily.

For traveling horses there seems to be but little doubt that oats are the best, although usually the most costly food. A French investigator claims to have found that there is a principle in oats called avenine, which develops nervous force in the horse. This he asserts on the basis of a trial by an electric machine. Horsemen agree that for road horses oats have no substitute. I should say that a trial of corn on a great commercial scale in Paris found it a cheap and valuable food for work horses. Great transportation companies using horses make rather free use of corn. Most of them use some oats. I should desire to give one feed a day of them and the rest of corn, with a little bran mixed with it on the score of economy.

Where bran is used I do not recognize the absolute necessity of oats, and hence would not use them for work horses where the disparity of price is very wide. The horse's stomach is so small that he often drinks in hot weather as much or more than his stomach will hold. In such an event the grain fed is subject to being pushed out into the intestines when it is fed before the horse drinks. A trial of feeding grain before and after watering resulted in an advantage of importance to the practice of watering before feeding. This matter I went over with some care, and believe it invites a change of practice on the part of those who feed grain before watering horses.

The relation of mixing grain with hay for the horse to the economy of the ration, may not necessarily have the same result as that found for the cow, because of the difference in the stomach relations of the two classes of animals. The single small stomach of the horse did not, in a trial of mixed grain and hay, give the same result as with the cow, and was therefore more effective for the horse than when fed alone. That is, grain mixed with hay for the horse was more effective than when either was fed alone.

I began with contrasting the horse with the steer as a food economizer, but did not quite complete the thought. The horse will not make as effective use of coarse foods as will the steer by, probably, from four to 11 per cent. It will make, probably, as good use of grain and very digestible foods as the steer. These foods cost something more per pound of digestible matter than does hay, so that it is probable that horseflesh costs slightly more than steerflesh, yet not enough more to cut any figure when the relative values of the growths are considered.

THE IRRIGATOR.

A Meeting of Irrigation District Directors.

EDITORS PRESS:—In the interests of irrigation will you have the kindness to call attention to the inclosed circular of invitation now being sent out, and its objects in your paper. The favor will be duly appreciated.

E. OAKFORD,
Sec'y Tulare Irrigation District.

Tulare, July 10th.

The Circular.

It has been suggested that the officers of the various irrigation districts of California formed under the Wright Irrigation law, should meet in convention for the purpose of forming a State Association of district officers.

It is thought that such an association would enable each district to benefit by the experience of all other districts in the solution of problems of mutual interest, and that an arrangement might be made whereby all districts should contribute to the adjustment of such difficulties as beset the paths of all alike.

It is not unlikely that further legislation will be required from time to time, and that concerted action upon the part of the districts would greatly facilitate the passage of such laws as are needed.

It is possible also that concerted action may be needed to prevent the enactment of legislation adverse to the district system.

Subjects important for associated consideration will doubtless suggest themselves to the minds of directors of all districts, the discussion of which would be productive of good.

In view of the foregoing and other considerations the undersigned, directors of Tulare Irrigation district, hereby extend their cordial and earnest invitation to the directors and officers of your district to meet delegates from the several irrigation districts of California in convention at Tulare, California, Sept. 12, 1890.

Delegates are requested to invite friends of the district system to attend and assist in the deliberations of the convention.

Arrangements have been made whereby persons paying one full fare to Tulare will be given a return ticket for one-third fare, provided they bring with them a receipt from their agent showing purchase of a ticket to attend said convention.—J. W. MACKIE, W. B CARTMILL, E. DE WITT, A. P. MERRITT, J. F. GIBSON, Directors Tulare Irrigation Dist. E OAKFORD, Sec'y.

Comments by the Tulare Register.

About a year ago the *Register* suggested the propriety of forming a State association of irrigation district officers, so that each district may have the advantage of the experience of all other districts, and that all may pull together for whatever is necessary for the advancement of the district movement. From time to time since then we have repeated the suggestion, and, no other district having taken it up, our own district officers in Tulare have issued a call for a convention to be held in Tulare September 12th next.

There are many important subjects for a district association to consider, a number of which are suggested in the official call which appears in another column. But there are others of even greater importance which a free discussion among delegates would certainly bring out. Among other subjects for consideration, we would suggest the following:

First, whether California might not with propriety follow after the Australian idea, by aiding in placing district bonds. District bonds are not taken as readily as the State's necessities require, and something should be done to further their placement. Suppose, for instance, the State of California were to issue bonds of its own of a like nature as district bonds, but bearing 4 or 4½ per cent interest, and, with the proceeds, take up irrigation district bonds bearing one cent higher rate. This would furnish a revenue for repaying the State all expenses entailed, and more, and would give an impetus to internal development that nothing else could. Of course the State's engineering and legal departments would have to sanction all such purchases of bonds to insure against wildcat enterprises.

There is another point of great importance. It is a correct principle that "the land that gets the water should bear the expense of the getting." Towns should, by right, no more help the farmer to build his ditches than his barn or fences. Considerations of public policy may sanction a departure from this principle, still it is nevertheless a sound one to follow generally, just as it is sometimes advisable to subsidize railroads and other public enterprises.

But the land that gets the water can well afford to pay for it, and districts can easily be made self-supporting. No more should be required of unirrigated property than that it should lend its credit for the common good. When once the canals are built, the banks settled and the system in working order, a reasonable charge per foot for the use of water would create a much larger revenue than would be required to discharge the operating expenses of the canal, and whatever sum should be found to remain after discharging such expenses should be applied upon the interest charges. If the law were so modified as to permit this, the land that gets the water, the actual use of water, could, without feeling it, pay off the entire indebtedness, and it should do it, for the plant is for its benefit. Whatever other and public benefits are enjoyed will be shared in common by town and country, whatever helps the one helping the other also. We respectfully commend this subject to the consideration of delegates to the State Association of Irrigation District Officers, to be held at Tulare September 12th.

Let there be a big convention, the fullest discussion, a permanent organization and concerted action in furthering the irrigation district movement throughout this State.

ANTISEPTIC VALUE OF EUCALYPTUS.—A late correspondent of the Selma *Irrigator* says: In soaking up old wine or vinegar casks, we throw a few blue-gum boughs with their leaves into the water, and it never becomes putrid, while without the blue-gum we would have to change the water daily to prevent putridity and spoiling of the flavor of anything afterward kept in the cask. We have kept fresh beer eight days in the hottest weather, by keeping around it a plentiful supply of green blue-gum leaves, and changing them daily. A decoction of green leaves is a stronger and more lasting stimulant than tea or coffee, and more salutary in its effects, as it does not cause wakefulness. It seems to have the stimulating effect of quinine, without any of its injurious qualities. In addition to the above it may be remarked that no worm or insect is ever found upon the eucalyptus tree, or in the earth where its roots permeate. A row of trees planted through an orchard or vineyard will cause insects, worms and caterpillars to vacate that region. The branches of the eucalyptus used in the rooms or windows, or as decorations in dwelling rooms, will cause mosquitoes, moths, fleas and flies to leave the premises, and when the leaves are placed beneath a carpet around the border of the room, when the carpet is laid, is an insurance against the moth, and branches placed beneath the bed pillows a protection against fleas.

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

Patriotic Grange Meeting.

EDITORS PRESS:—Watsonville Grange held another of those delightful meetings, for which it has become so noted, at its hall, July 5th. This meeting varied from all others as it was purely patriotic. The hall was tastefully decorated with flags, banners and emblems, the artistic work of W. O. Judd and his energetic committee, while the rostrum, the position occupied by Ceres, Flora and Pomona, were beautiful to behold. A pleasing and appreciated feature was the Master's chair, made into a bower of beauty by garlands of red, white and blue flowers, in honor of her first visit, after a protracted illness.

After routine business the gates were thrown open under "Good of the Order," and all interested in the elevation of humanity invited to listen to a select and patriotic program gotten up by our energetic Lecturer, Sister A. Bowman. The hall was soon filled to its utmost capacity. Among those present were noticed visitors from Stockton, San Jose, Hollister and Salinas. Patriotic speeches, gay, grotesque, profound, convincing, converting and declamatory, were heard on all sides, while the "Star Spangled Banner," "Hail Columbia," and "America" lost none of their old thrilling sweetness and power. That peerless matron, Sister Merrill of Stockton Grange, gave one of her inimitable recitations, "The Dandy Fifth." She was promptly encored and replied in a manner which proved her an elocutionist of pathos and genius. Her little daughter also added to the pleasure of the occasion. Bro. Brown, W. A S., of Hollister Grange, evidently sees the way out of the difficulties besetting farmers; significantly pointing to Bro. Nash, Master of Hollister Grange, he said: "We don't talk politics in our Grange, but we do outside. Brothers and sisters, there is our next Assemblyman," to which we add, and a better man can't be found in San Benito county.

Remarks were also made by Bro. Debart, for years efficient Steward of Watsonville Grange, now of Hollister. Bro. Feeley of San Jose Grange gave some thoughtful hints as to the duties of Grangers, the practical carrying out of which would be of inestimable benefit.

Thus ended another gathering of great benefit to all, and should be a convincing proof (if any is needed) that no Patron can afford to miss even one Grange meeting; for if they do, a link in the great chain of events is lost, never to be recovered; a gap is left open through which attack and defeat are made possible; indifference is engendered; lukewarmness often follows, while time swings great opportunities out of reach. Rush of work as an excuse at all times to keep Patrons out of Grange meetings sounds like a rush of bullets to keep soldiers out of a battle when their camp is attacked—an act of cowardice for which they would be court-martialed and shot. Surely, Patrons, the interest and honor of one should be as great as the other. If so, we sincerely hope that no Patron will desert the banner of the Grange in these stirring times unless actual necessity compels, and let not that necessity be the delusive hope that a dollar is gained by staying away to get in an extra day's work, when the truth is, very much more has been lost by the absence. Make attending Grange a regular business. Everything will soon give way to it, and you would as lief think of going to bed with your boots on as to miss even one meeting.

Watsonville. A. P. R.

Grimes Grange.

EDITORS PRESS:—It has been some time since you have heard from Grimes Grange, but the busy season of haying and harvesting has made Grange matters, for the time, a little quiet. However, you will see by our quarterly report we have not been altogether dead, and have added a few names to our roll-book.

We conferred the third and fourth degrees on a sister at our last meeting, July 12th, and have several applications for membership in now. As soon as the busy season is over we will have all we can do in the way of conferring degrees, as there are quite a number anxious to join.

The farmers here are busy harvesting now, but crops are far below the average. The extremely wet winter greatly interfered with farming pursuits.

You will hear from us oftener after this, as the harvest will be over in a few weeks and we will have better attendance at Grange meetings. We feel sure of increasing our membership to 50 within the next three months, and with one or two harvest feasts the Grange will boom.

Grimes, July 14. P.

BRO. H. H. REHSE writes that Orland Grange of which he is W. M., has appointed a special committee to urge the claims and advantages of the Grange upon eligible members of the community, and that when the busy season is over, some effective work is expected. The RURAL is also winning new friends in the Grange circle.

Sacramento Grange.

EDITORS PRESS:—W. M., La Rue being sick, the W. O., E. Greer presided. A good attendance was present, considering the harvest.

A number of communications from sister Granges were read and acted on. There was a discussion of the "Bar and Grange," as Friend Easton puts it, and Bro. Krull expressed his views. The Grange condemned the act by voting unanimously to allow no more privileges in that line.

The circular letter from Pomona Grange of San Joaquin county, on the "Australian plan of voting" was received and placed on file for future action. To rest the brothers, the W. L., Sister Hattie Sims, announced a short program, when the W. L. called on Sister Ella Merwin for a song. Sister Gussie Wilcox followed with a fine instrumental piece, and Sister Flora Duden closed with a song.

The sisters are tuning themselves up for the coming State Grange (for all must exert themselves to do their part with what talent they have), so look out for fine speeches, essays, poems and music, as well as a social high time. If each does his or her part, no time will be wasted, but all will be happier and better.

The committee on "Woman's Work" came together and arranged their work for future action. I believe they intend to appoint a committee for next year, on "Children's Day." We must not forget the young folks. Bring them in the way they should go.

P. M., Daniel Flint gave us some good points on county exhibits. He came back full of enthusiasm from his visit at Sebastopol and "Children's Day." W. S., W. W. Greer gave his reasons for not being there. Work in the harvest demanded his attention.

Sacramento can beat Watsonville six to one in initiating "native" born Granges. We don't have time to "resolute" for it would keep too many "committees" at work, but we at once book their names on the roll list with dates, as fast as they enter the Grangers' realm.

The Committee on Annual Exhibit at the State Fair met and appointed Bros. Geo. McMullen, Chairman, E. Greer, Sec'y and A. Krull, Manager; also appointed sub-committees for various departments. Public-spirited Grangers think a fair showing can be made from the products of the soil, although the outlook is not very promising, still they feel the chances in this county are as good as the surrounding ones. Bro. Krull has been busy passing through the county selecting parcels of grasses, grain and whatever he thought would make up a good variety for display. They intend to put up fruits of different kinds by cold storage to preserve for public exhibit.

Lemon Hill. G. T. R.

A Token From Oregon.

Many Patrons will remember the presentation scene when Treasurer Cressey, on behalf of the brothers and sisters of the Oregon State Grange, presented a gold-headed cane to Bro. John Simpson, Past Lecturer. Also the prompt and magnanimous words with which Bro. Simpson delegated Bro. Cressey and the other California visitors to present Bro. A. D. Logan, President of the Grangers' Bank, with a rare old keepsake in the shape of an unique walking-cane having a queer but conveniently shaped young buck horn for a handle.

Bro. Simpson's words of commendation of Bro. Logan, whom he had casually met while at the National Grange, were both excellent and well deserved.

Recently, in the RURAL PRESS office, there met by chance Bros. Logan, Steele, Cressey and Dawey, when the aforesaid cane was suddenly drawn upon Bro. Logan and presented in that lively and common-sense language that Bro. Cressey is so much noted for. He mentioned the kindly feeling existing between the brethren of Oregon and California, and the noble words of fraternal regard that Bro. Simpson had sent with the cane to Bro. Logan, with thanks for his personal kindness, and also the good-will felt toward him and all the brothers and sisters of California.

Bro. Logan looked thanks, and modestly spoke with gratitude for the unexpected compliment and present thus brought 700 miles to him. Now, Patrons, when Bro. Logan puts in an appearance at Grange it will be in perfect order to ask him to make the little speech which the sudden caning and unqualified pleasure prevented our hearing in the RURAL PRESS sanctum.

WALNUT CREEK GRANGE.—The old Grange veteran of Walnut Creek, Brother Nathaniel Jones, called in on Tuesday looking as happy and vigorous as ever, bringing us information that Walnut Creek Grange expects to confer the first and second degrees on a class of four on Saturdry, July 26th, at 2 o'clock P. M. We are glad of this evidence of progress on the part of Walnut Creek and hope that, as the Grange has had some difficulties in its way, there will be a liberal visitation present from other Granges. Walnut Creek is a promising town and should have a thrifty, growing Grange. Brother Jones bears marks of a late accident which came near leaving us one less Master in our Grange circle. May he always make as fortunate an escape.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

Charters have been signed for Anderson, Grimes, Hanford, Orland and Waterloo Granges during the past week. The delay in receiving these charters from the National Grange has been patiently borne by each of the Granges above-named, and we most cheerfully commend their patience to the Fraternity everywhere. Patience is a cardinal virtue, and the Grange *teaches* and *practices* it on all occasions. Truly, the Order or Patrons of Husbandry is composed of a patient and forgiving people, or, long since, the politician would have been routed from his station, high and low. Be ye patient, then, brothers and sisters, and persevere to the end.

It is the duty of every good citizen, and especially of every Patron, to denounce and oppose the sale of lottery tickets. The Louisiana Lottery is robbing *this State* and *this Nation* of untold millions annually. We object to the lottery plan of selling our wheat, corn, live stock and other farm products, yet we silently countenance the sale of lottery tickets. We know it is against the law to *buy, sell* or *have* a lottery ticket. Our newspapers, even (I am sorry to write it) some of our Grange papers advertise the "Lottery Robbery." These things ought not to be. Let us elect men to office who will enforce the law and stop this "Louisiana" and "Mexicana" lottery business in California.

Contra Costa county Granges propose a reunion of farmers some time in the month of August. Several "Big Guns" are to "fire away" then and there. No doubt Mt. Diablo will echo and re-echo the good things said and done for many years to come. Bro Geo. P. Loucks of the Executive Committee is to arrange the forces, and as he is an executive man, all may expect a well-prepared entertainment.

I have been told to write something of a practical kind. Wish I might do it. For me it is easier to *preach* than to *practice*. But here are a few things a farmer ought to remember Though old, the facts are useful. A bushel of wheat, beans, potatoes or clover seed weighs 60 pounds; corn, rye, flaxseed or onions, per bushel, 56 pounds; castor beans, per bushel, 46 pounds. There are 2150.4 cubic inches in a bushel; 43 560 square feet in an acre. A strip of land 220 feet long by 198 wide is an acre. If you walk one mile you pass over just 5280 feet, or make 1760 steps of three feet each. Minds, like mold-boards on our plows, hardly ever *wear* out. Most of them *rust* out. This is a sober fact.

Folded arms bring saddened hearts.

Sunshine, activity and smiles will make your life more than ordinarily successful.

Love your neighbor as yourself, and be sure you love yourself only for what there is in you worthy of love.

Steel is only valuable when well tempered. So we are only companionable when our tempers are under proper control. Remember that speech is silver, but silence is golden, and thus you can largely govern your temper.

The minimum fee for membership in a subordinate Grange is for a man $3, and for a woman, $1. All persons over 14 years of age and interested in agricultural pursuits are eligible to membership.

The Grange is a success in spite of its enemies and of all opposition.

Scatter seeds of friendship and you will gather friends for your harvest. And "a friend in need is a friend indeed."

If Lincoln, Wheatland, Roseville and Eureka Granges will hold a joint meeting, we are sure the farmers of Placer county will be benefited. The State Grange will be pleased to send some of its best speakers and will do all it can do to foster the cause of agriculture, to promote the welfare of the Order of Patrons of Husbandry and to make all who attend feel it is well they were present. Won't Bros. D. A. Ostrom, Hollis Newton, John C Burns, E. L. Hawk and John Gould take hold of the work? Bro. B. F. Frisbie will lend a helping hand, and he is a whole team in Grange work. A long pull and a strong pull! All together now, and let's hear of the reunion and the revival of Grange work in that flourishing section of the State and among those progressive farmers.

Never put off till to-morrow what can be better done to-day. Join the Grange now. Next day may be too late. At any rate you lose one day's time.

WORTHY MASTER DAVIS speaks correctly of lotteries. Do our readers ever think of the hundreds of dollars it costs us every year to exclude lottery advertisements and other questionable advertisements and injurious puffs out of the RURAL, or of the thousands of dollars saved thereby to the community, besides that which is better than gold?

Unpleasant Truths Ably Stated.

The historian, John C. Ridpath, of Indiana, recently gave the following address at the commencement exercises at De Pauw. Thoughtful Americans know his assertions are lamentably true, and the question, "What shall we do about it?" has long been on the minds of true Patrons and patriots:

What, then, is the modern political party? Practically it is an organization of a few men in a great State, constituting a sort of close corporation, having one single ulterior end in view, and that is their own advantage. In order that such a body of men may get power, it is necessary that they profess something. What their profession is depends exclusively upon what they think is best calculated to take the country in. There are always lying about the surface of human society certain questions in which the people at large, from patriotic or other considerations, are likely to take an interest. The party maker searches diligently among these questions to find one or more which he thinks are likely, if fanned with a little fallacious oratory and factitious discussion, to break into a flame. So the question is taken up, and all the elaborate machinery which a century of self-interest has invented is immediately put into operation to create or penetrate an issue. People are actually made to believe that the interests of the country depend upon the decision of this question or that question by their votes. They are made to believe that that sublime product of reason and eternity called history is created by drum majors and central committees. They are taught that they should leave their cornfields and workshops in the village and rally at once to the call of some peripatetic demagogue who is hired out of a corrupt fund, collected from the beneficiaries, to go about the country explaining and perorating about the "burning issues which now divide the American people." Sometimes a man of sense and reflection attends one of these meetings and stands like Anacharsis on the edge of the crowd to hear the oration or perhaps to contribute feebly by his presence to the proposed salvation of the country. What must be the real impression made on the mind of such a man under such circumstances? He listens for awhile at the oratory. He sees his country's flag at the back of the platform. He watches the drummer as he pounds his booming war-tub, and then considers the antics of the orator as he goes up and down the platform roaring and cavorting like a wild ass of the Assyrian desert filling his belly with the east wind, and then turns on his heel toward the seclusion of his own home, the quiet of his own study, saying as he walks along and communes with himself: "How long, O Lord! how long?"

And yet this performance in the public square is at present, and has been for more than half a century, the dominant fact in American society! Of course orators and teachers go about telling you something else. They say that our public schools, our churches, or our railroad enterprises, or our great cities, or our marvelous industries, or our expansion as a people from east to west, from north to south, are the dominant facts in American society. But it is not so; that is, it is not so as things go. The dominant fact in American society is that political meeting which the thoughtful man attended and went away from with bitterness in his heart. That is the thing to which every other element of power and influence in the public and the private life of the United States bends a humble, and I am sorry to say a patient, knee. That is the thing after which the great Protestant church marches at the tail of the procession. That is the thing which, beginning far back in the history of our republic, under the modest name of *convention*, at length achieved autonomy, gained an independent life of its own, grew and expanded until its jaws were full of dragon's teeth and its throat sufficiently enlarged to swallow at a gulp every form of opposition that appears in its pathway. That is the thing that has gone wallowing and sprawling and roaring through the United States, crushing and devouring and devastating the land, living on the fruits of industry, gathering the reward due to enterprise, and blasting not only the blossoms and fruits, but the very branches and stem of American culture and American manhood.

Let all honest citizens take counsel, plan and act against the giant evils!

Letter Notes.

From Worthy Master Davis.

I send duly signed, under separate covers, charters for Anderson, Grimes, Hanford, Orland and Waterloo Granges. You will please sign, affix seal and forward as soon as possible. These good people have been very patient.

Bro. Coulter in the Field.

Bro. S. T. Coulter, P. M. of S G., will represent W. M., Davis at the anniversary celebration of Kibesillah Grange, about Aug. 10th. Bro. Coulter, we are glad to announce, will soon begin a little Grange campaign in his own district of Sonoma county, which we are sure will be productive of many good results.

Juvenile Granges.

"I received a letter from Mr. F. B. Mills, Woodbridge, Cal., stating his Grange was in receipt of a fraternal letter from me, in which

I spoke of Juvenile Granges. He wrote for information, and said they had appointed a committee to see what could be done. I referred him to Bro. A. J. Rose, Salado, Tex., and to Sister Hawkins for information. So, you see, the seed sown may take root in one field. Let us work and hope."

Will Sister Lander of Alhambra, lend Bro. Mills a copy of the California Juvenile Grange ritual.

A Farmers' Meeting.

Bro. James R. Hebbron, Secretary, sends the following from the Salinas *Index:*

Salinas Grange held an open meeting at Grangers' hall in this city Saturday afternoon, June 28th, W. J. Hill, Master, presiding. Quite a large number of farmers and others not members of the Order were present. The first speaker introduced was Mr. C. J. Cressey, Treasurer of the State Grange, who made one of his characteristic and spirited speeches to the tillers of the soil, giving good reasons why every one of them should join the Grange for self-protection and mutual improvement.

Hon. I. C. Steele of Pescadero, P. G. M. and present D. D. G. M. of the California State Grange, was the next speaker. He took for his text an article printed elsewhere in to-day's *Index*, entitled "The Farmers' Lot," and delivered an eloquent and convincing address, which ought to have been heard by every farmer in the Salinas valley. At the conclusion of Mr. Steele's address, the meeting adjourned.

Result, several applications for membership in Salinas Grange.

[We hope the class mentioned will be followed by one of 20 candidates or more; that a rousing good number of the intelligent, progressive farmers, matrons, sons and daughters of Salinas and vicinity may attend the State Grange at Watsonville in October next and enjoy one of the best social and educational seasons it will ever be their lot to so conveniently fall in with. It will no doubt be a rare privilege offered to every Patron in the State. Don't forget that boys and girls of 14 are now eligible to membership, and that every one of them on the farm will be benefited by stepping forward into the line of good experience.—EDS.]

March Grange

Having received the date and time of meeting, March Grange will hereafter appear in our directory. We have to thank its live Master for the following:

March Grange has its regular meeting on the second Saturday of each month, with a fair attendance. Despite the busy times, I think it will prosper in the end. I want to say that our Lecturer has not visited this Grange since it moved to Pennington. We would like to have the Master of the C. S. G. visit us some time in the near future, or any of the other State officers. Our regular day of meeting is on the second Saturday of each month at 2 P. M., though we have been meeting regularly twice a month since moving to Pennington. Harvesting is getting along pretty well, and the yield is very light—say one-third of an average crop. Fraternally yours,

W. T. LAM,
Master of March Grange.

The Farmers' Movement.

The farmers' movement is on. There is no mistaking it; the movement is started and can not be stopped by the sneers and misrepresentations of those who are interested in having it stopped. Of course there is opposition developing; but it would be folly to suppose there would be no opposite influences. Everything that moves must have opposition—there must be a resisting medium in everything. All nature is thus constituted. Society always tends toward centralization. The relations between men and classes are becoming every day more complex. The only remedy is organization. The farmers have found it out, and they are organizing. The movement is as broad and long as the continent. It has scared the corporations, and the politicians in Congress. Its influence has already penetrated the frigid recesses of the United States Senate chamber. The Congressmen are hustling and the United States Senators are hustling. Yet there is nothing strange about it; the farmers are all-powerful if they determine they will be; and nobody appreciates this fact more thoroughly than the politicians. The strangest feature of the movement is that there are still some persons who don't know that the movement exists. These fellows are destined to a rude awakening in the future; but what good will it do them? Some people only get information too late to do them any good.—*Highland (Pa.) Farmer.*

WATSONVILLE GRANGE has a large and increasing class to take the first and second degrees on Aug. 21. The third and fourth degrees will be conferred on Aug. 16th, when the Worthy Master, E. W. Davis, is expected to be present. An open meeting will be held Aug. 23d.

Pescadero Grange.

EDITORS PRESS:—Pescadero Grange received three members by card and conferred the first and second degrees on a class of six on the 12th instant. The third and fourth degrees will be conferred on the first Saturday in August. The Grange will be called to order promptly at 11 A. M., at Good Templars Hall in the village of Pescadero.

A Harvest Feast, music by our band and a good time will follow the degree work, within the gates.

All Patrons in good standing are cordially invited. Few Granges are so isolated as Pescadero. The presence of visiting members is much appreciated and inspires our members with fresh courage.

Our dormant members are returning and the prospect is good for another class soon.

Pescadero. I. C. STEELE.

AT the last meeting of Temescal Grange the report of the committee showed that the picnic finances were coming out even or thereabouts. Sister Kerr of Elk Grove gave some cheering remarks. That Grange is improving and has quite a number of able and good working Patrons, including a member of the Executive Committee and Lady Assistant Steward of the State Grange. It is hoped that sojourning Patrons in S. F., Oakland and vicinity will follow Sister Kerr's good example in visiting Temescal.

HORTICULTURE.

A Few Hints on Fruit-Drying.

If your trees were neglected and not thinned or overbearing, the fruit will be very small, averaging from 14 to 18 to the pound, and when dried weighing 800 pounds to the 10 tons green. If you had an easy time while your neighbors thinned theirs, you will have a light job hauling it off when dried, and your pocket-book will be very light too when you get home and settle up for cutting the fruit. The cutting of large fruit will cost 18 cents per hundred, while it will cost 40 cents per hundred to cut small fruit, and when the first-class fruit is dried it will bring from 10 to 15 cents a pound, while the others will sell at from 4 to 6 cents per pound, and hard to sell at that. If your fruit has been thus neglected, it will pay you to get a lot of pigs and turn them upon it in the orchard.

If you have as much as 10 tons of fruit it will require 500 trays. I use redwood and pine shakes for the trays, preferring the pine, although they cost about one-third more than the others. I use four shakes to the tray, making them two feet wide and three feet long. For a scaffold you want 52 pieces 1x4, 16-foot lumber, which will make enough scaffolding to hold your 500 trays. Make the supporting stakes of any kind of lumber, 2½ feet high, allowing one foot or more for driving, with one end cut square. Drive three stakes in a straight line seven feet apart. Now drive three more the same way, three feet one and one-half inches apart, making 25 rows, then take the 16-foot pieces, lay them on the stakes and drive a six-penny nail in each stake, making 25 rows with a three-foot gangway between. You will save enough in convenience of handling to pay for the scaffolds. A great many put their trays on the ground. I do not like this plan, as the dirt sticks to the bottom of the trays when you want to stack them of damp nights, falling off and soiling the fruit. If the trays are not stacked, the dogs and rabbits will be racing over them or perhaps a stray cow will run over them and ruin the trays and fruit. If your dried fruit has to be washed it will hardly be fit to cook.

You will want a sulphur box for bleaching, and it must be very tight. Make it 2½ by 3½ and 6 feet high. It will then hold 25 trays. It needs no bottom, but dirt should be banked around to make it tight. A little trench is necessary for the sulphur pan. One-half pound of French sulphur burning two hours will bleach 25 trays of fruit. Some people think sulphur is injurious to the system, but it is healthy for man and beast. It is true, a great deal of the fruit is spoiled by using too much of it; so is butter often spoiled by using too much salt.

The most important part in the drying of fruit is to let it get entirely ripe. Then it will be better, brighter and weigh heavier. The first two or three pickings should be very carefully made. If you pick green fruit you will beat yourself and every one who has anything to do with it. Apricots will dry in four days if the sun shines brightly. Sack the fruit in good sacks and before the sun is down. Then there will be no worms in the fruit. The moth comes soon after the sun goes down, depositing its eggs on the fruit, but the hot sun of the next day spoils them. Your sacked fruit should be placed so the wind will not strike it, which prevents the fruit from drying out too much. The best way to grade the fruit is to do so before it is cut, making three grades, carefully removing dust or dirt.

Do not take apricots to the cannery that will run more than 11 to the pound, and in gathering don't use a pole to knock off the fruit. Last year much was brought to our drier gathered in this way, and we don't want thus to discourage or break up the driers, but rather encourage them by bringing good fruit. The man that dries poor fruit will stay poor, and the poor man that eats it will not get fat. I think the man who markets this trifling fruit should be compelled to put a pound of sugar with each pound of fruit, and a bottle of "pain killer" along with it, and I think growers would take a little more pains, and consumers a little less, with it. We cannot expect a cannery to locate with us unless we generally improve the fruit, and the very men who produce poor fruit are the ones who will cry "hard times" the loudest as they demand the second mortgage on their farms.—*H. D. E. in The Pomotropic.*

The above article has many good suggestions in it, and the writer makes many good points, which, if carried out, will prove both beneficial and remunerative to the producer, besides being satisfactory to the purchaser. But right here let us offer a few words, by way of suggestion, regarding plans that have come under our observation.

1st. We find the most satisfactory method of paying cutters is by the pound. Weigh out a sweat box of fruit and give to each cutter, keeping track of the number of pounds each person cuts during the day, and if your sweat boxes are of uniform size the number of pounds net that each has cut can be easily computed; if the sweat boxes are not of uniform size they can be weighed and the tare deducted at the close of the day, or when most convenient. This saves the unnecessary provocation arising from half-filled trays, as some persons, while cutting by the tray, will put on one-third less than others. You not only pay more for cutting the fruit than is necessary, but do an injustice by paying more to one for cutting than to another. More than this, a great deal of time is lost by the handling of half-filled trays from the cutting table to the dried fruit bin. Where the cutting is done by the pound this difficulty is easily overcome. We believe the average price paid for cutting is 20 cents per 100; some are paying 25 cents.

2d. The drying on scaffolds in sections away from the coast as in San Bernardino county, is very essential, as the sun's rays are so hot that fruit placed on the ground would burn to a crisp; but in Orange county fruit on scaffolds would be so long in drying that the fogs would blacken the fruit. The best way to sun-dry fruit here is to lay the trays on nice clean stubble land, far enough from the road to be free from all dust. The stubble serves to draw the heat and it keeps the trays clean.

3d. The best French sulphur should be used for bleaching. When this is used no forced heat is necessary for burning the sulphur. A scrap of paper and a match will light the sulphur and it will continue to burn as long as there is oxygen to support oxidation, or until the bleacher is filled with the gas, when the sulphur will cease to burn and there is no danger of over-bleaching. If the bleacher is tight and the fruit allowed to remain exposed to the action of the gas for two hours or more, it will come out of the bleacher in a perfect condition, and cannot help but make fine fruit. On the other hand, if the sulphur is forced to burn, a little too much sulphur or a little too long exposure will ruin the fruit for market, and if you dispose of it at all it will be through the ignorance of the buyer, and your gain will be somebody's loss.

4th. There are tricks in all trades, and so there is in forcing the producer into grading his fruit. The buyer comes to look at your dried fruit, he offers you a first-class price for your best grade, which constitutes perhaps one-half of your dried fruit; for the second grade he makes an offer of a little more than cost of picking, hauling, cutting and drying, and on the third grade you will probably lose money. We believe a better way is to throw out the small fruit before cutting, and a still better way, see that the trees are well taken care of and the fruit properly thinned while young. This may look like a waste of fruit, but it can be given to those who have no fruit, and even though it be thrown away there can be no waste if it costs more to harvest it than it will bring in the market. The only true way of gathering fruit to dry is to pick it by hand, and even then you will need to look well to your pickers.

5th. We cannot place too much stress on the importance of handling the fruit carefully and when perfectly ripe. It is one of the impossibilities to make a nice dried fruit out of an unripe apricot or peach. It is not until the fruit is thoroughly ripe that the sugar is formed, and when you undertake to dry fruit in the watery state the water is evaporated and there remains a dry, tasteless chip, containing no nourishment whatever. A little of this inferior fruit mixed with the good, will knock off a half cent on the whole lot.—*Orange Post.*

Notes on Fruit-Drying.

EDITORS PRESS:—I have never written to you before, but I take great pleasure in reading the PRESS and I do not think you will object to my saying a few words in regard to the drying of fruit.

Not long since, I saw an article in a Southern California paper that treated on that subject, and must say my views are very different. To show you the difference I must give you some of the contributor's views, viz: The trays were best made of redwood shakes, dimensions 3x8 feet. He also stated that the poorest quality of sulphur was the best for bleaching purposes.

I think that the trays should be made of the purest white lumber that can be obtained; the whiter the tray, the whiter the fruit. This may be proved by drying a few peaches on a earthen or china plate, and comparing them with those dried on a tray. A great deal depends, too, on how ripe the fruit may be, for the riper the fruit, the darker the dried fruit. I do not think the trays should be so large, for the simple reason that they are hard to handle. The common raisin tray is a good size, and even that may be improved by tacking lath on the sides, so that in handling the fruit will not be wasted. There can be more fruit put on one of these trays, too, if the lath is on.

As to sulphur, I think the best sulphur is the best, because the cheapest grade of sulphur is not all sulphur, and consequently may spoil the flavor of the fruit.

One more difference, and that is, I do not think it is well to leave the fruit in the bleacher too long. In doing so it absorbs the sulphur flavor and loses its own. Sugar barrels are very nice to put the fruit in when it is taken off the drying-yard. The fruit crop is very good in this county and drying begins with us next week. MINNIE D. PERDEW.

Grapeland, Cal..

California Fruit in New York.

EDITORS PRESS:—I call your attention to the prices California fruits brought at my sales of July 7th and 8th. Three cars in all were sold with the following results, which go to show New York is rapidly making a record for being the market to obtain the best results for your deciduous fruits:

The highest sales as you see were $2.90 for cherries (8 lbs. each); boxes Early May peaches, $3 15 (18 lbs. each); boxes Hale's Early peaches $3 30 (18 lbs. each); boxes Alexandria peaches, $5 00 (18 lbs. each); crates apricots, $4 80 (20 lbs. each); boxes Peach plums, $2 65 (18 lbs. each); crates Tragedy prunes, $4.40 (20 lbs. each).

The market continues good with a demand that will maintain equal prices on no heavier receipts. The prospects are for a consumption double last year's shipments, at profitable prices, if the best quality is shipped and the fruit is in good condition on arrival.

New York, July 9th. E. L. GOODSELL.

Hop-Growers' Meeting.

The annual meeting of the California State Association of Hop-Growers was held in Grangers' Hall, Sacramento, July 14th.

The following officers were elected for the term of one year: Daniel Flint of Sacramento, President; A. E. Camp of Sacramento, Vice-President; Henry Whittenbrock of Sacramento, Treasurer.

The new Directors are from each of the five hop-growing districts, as follows: M. B. Tuttle, Watsonville, Santa Cruz county; A. Menke, Sacramento, Sacramento county; J. F. Long, Largo, Mendocino county; Joseph Pennington, Santa Rosa, Sonoma county; Dr. Durst, Wheatland, Yuba county. The Directors-at-large were: H. Rodden, Yuba county; L. Ross, Sonoma county; Judge R. McGarvey, Mendocino county; T. B. Lovdal, Sacramento county.

The following resolutions were unanimously adopted:

We, the hop-growers of California, in body assembled, do hereby condemn the universal practice of consigning hops to be sold on commission as detrimental to the best interests of hop-growers, as it brings into competition the dealer with the commission-man. As the latter has nothing to lose, but everything to make by the greater sales that he makes, he naturally infringes on the grounds of the dealer by offering to place the same hop or one of equal quality at a lower rate. Thus he paralyzes the interest of the dealer and grower, inasmuch as no one knows what length he may go in order to sell more hops. This naturally forces dealers and buyers to handle hops on commission. The present state of our market proves the injury to which growers were subjected in last year's crop.

Owing to the fact set forth above, we, the hop-growers of California, do firmly resolve and agree among ourselves not to consign under any consideration, hops to be sold on commission; and be it

Resolved, That we demand and will require to be allowed a tare of 3½ pounds to the bale, a tare equal to that on New York hop bales.

A Victory for an American Machine.

Farming and implement men will be interested in news by cable despatch July 4th, from Bucharest, that the reaper manufacturer, Walter A. Wood, has captured for our country on its national holiday the first prize, the gold medal in the important Roumanian sheaf-binding harvester field trial. Bucharest, with a population of a quarter of a million, is the capital of Roumania and beautifully situated in the heart of a great grain producing part of Europe. Wood's ingenious machine is doing credit to this country by gaining the high prizes, and also aiding in improving the conditions of farming everywhere.

A Notable Stock Sale.

The announcement that J. H. White of Petaluma, will sell his fine horses and Holstein cattle, must attract wide attention. Mr. White is one of our best known and respected farmers, and he has given much care and capital to the improvement of his live stock. His sale should draw buyers from all parts of the coast. An advertisement in this issue gives particulars of the sale which will be conducted in Killip & Co.'s best style, on Sept. 4th and 5th prox.



Our Daily Bread.

Give us our daily bread, we say,
And look no farther than to-day;
And be to-morrow gray or gold,
Or plentiful, or pinched with cold:
Thine be to-morrow as to day!

Even as the small bird shall receive
The food its mother gives, nor grieve
Lest that to-morrow fail; so we,
Lifting our lips and hearts to Thee,
Trust Thee for all the days we live.

Keep us within Thy heart that's wide;
Thy love our nest in which we hide;
Thy thought, the wing to fold us in
All night till the new day begin—
The day for which Thou wilt provide.

Katherine Tynan in "Ave Maria."

Miss Dorothy's Romance.

Dorothy Field looked very sweet and demure as, with her father, old Squire Field, and her tall, rather loosely hung brother Andrew, she walked to church one Sunday morning forty years ago. The little village of Framleigh was always quiet, yet on Sunday mornings it seemed even more peaceful than usual. Dorothy was sometimes a little oppressed by the calm, and wished it would not make itself so obtrusive. But on this May morning no such rebellious thoughts were in her mind, for she entered into the gently beguiling mood of Nature, and her heart was full of sunshine.

As they neared the rather stately looking brick church, little groups were seen coming from all directions, for every one in Framleigh went to church. Although the congregation was not large, it was on the whole a well-to-do one, for the inhabitants of this little village, most of whom were descended from a few aristocratic old families, prided themselves on this fact and kept up their good old names.

As Dorothy, from her place in the choir, looked over the familiar faces which showed themselves over the high, straight pews, her attention was caught by an unfamiliar face in Deacon Gray's pew. Surely never before had she seen this tall, elegant young man, with the pleasant eyes and sunny hair. And as she looked from him to her good-natured, awkward brother, it seemed to her that Andrew's coat had never fitted so badly.

Occasionally, during the service, she glanced demurely over her hymn-book at the new face beside the staid old deacon, and as she was singing, in her sweet soprano voice, "Sweet Fields Beyond the Swelling Flood," she looked over toward the deacon's pew to see if the new occupant was singing, and finding his dark eyes fixed on her with a calm, interested gaze, this simple country girl blushed and nearly lost her place.

At the various dinner-tables in Framleigh that day, this young man was spoken of with more or less interest. It became generally known that he was a cousin of the deacon's wife, and had been studying at the medical school in Cambridge, but was now obliged to give his eyes a rest.

The blooming damsels of Framleigh, who outnumber the young men of the village, were especially interested in the stranger. Rebecca Thompson, a good-natured, red-cheeked girl, who was hospitably inclined, was much grieved that it was too late in the season to have a sugar party, that she might ask Mr. Deane; but finally decided to content herself with a "gathering," which meant a social meeting of the swains and maidens of Framleigh in the large old parlor, where they played "fox and geese," or "around the chimney," and ate apples and cake or popped corn. The "gathering" would break up at ten o'clock, when those of the youths who were not too bashful to ask their favorite Mehitables or Abigails if they might see them home.

This kind of gaiety was quite new to the young Harvard student, and although he went in a rather superior mood, thinking to be mildly amused by the harmless gambols of these country people, yet he felt a thrill of interest as he wondered if he should see the sweet-faced girl who had sung in the choir on Sunday.

Rebecca, the hostess, ushered him in and introduced him to every one in the room. Then Robert did something which quite shocked the feelings of Framleigh society. On one side of the room all the maidens were sitting, while on the opposite side were all the young men, looking awkward enough in the straight-back chairs and dressed in their best clothes, for this was the way in which the guests always were arranged at the "gatherings" until the games began. But Robert, with an easy, graceful manner, took a seat on the girls' side of the room, between Dorothy and little Ruth Hawks, and began talking to them as if very much at ease, a proceeding which caused a surprised flutter on one side of the room and struck consternation to the other.

But when they began to play games, the chilly air of reserve which seemed to encircle the company was changed to one of merry good humor. From the moment when Dorothy's clear, shy eyes looked into his, as she took the cat's-cradle off his hands, Robert had a feeling of exhilaration, and he knew that he should enjoy himself. And when he left Dorothy at her own door, he felt very joyful as he walked home to the deacon's, and it seemed to him that there was nothing more charming than a country village in May.

Dorothy came down to breakfast next morning, looking very trim and domestic in a light print gown, and when Andrew spoke in a joking manner about her new city beau, she blushed up to the little curls on her forehead, and looked rather conscious.

That afternoon she thought she would go into the woods to see if she could find some late arbutus. When she reached the top of the hill she found a bed of May flowers, which had come out late, as they were under a pine tree which had kept off the sun. As she was bending over the flowers, pulling off the dead leaves which covered them, she heard a deep voice humming:

Oh, do you remember sweet Alice, Ben Bolt?
Sweet Alice, with hair so brown?

Looking up, she saw Robert Deane not very far from her. Just at that moment he saw her and came towards her. So together they gathered the arbutus, and when Robert said that picking May flowers seemed to be the most appropriate thing in the world for her to do, she was so like them, she turned pinker than the pinkest of flowers in her hand; and then he added, "I never knew how beautiful the arbutus was before." After they had gathered all the blossoms under the pine tree, Robert wanted to go up higher on the mountain to see if there were not some flowers there. So they did not get home till supper time, and Dorothy, who was usually very capable about the house, seemed rather abstracted that evening.

As the days went on Robert Deane still stayed in Framleigh. The simple old deacon, in speaking to the minister's wife about him, said: "It does seem mighty queer about Cousin Robert's eyes. The doctor told him he wouldn't need to rest them for more than a week or so, and here he isn't able to get back to Cambridge yet; but he does seem mighty content here."

May changed to June, and still he stayed. He acquired a great interest in walking, and he and Dorothy used to take long rambles on the mountains, or by the quiet little river.

One morning when she was working in the kitchen, the old knocker went in such a vigorous way that she hurried to the door with her apron on. She found Robert Deane there, looking pale and anxious. She had hardly time to say "Good morning" before he began: "I have just received a letter saying that my mother is very sick. I must go home. Cousin Nathaniel is going to drive me to Dayton and I am going right on. He is out here waiting; but I couldn't go without seeing you. May I write to you, Dorothy?" Dorothy very softly and blushingly told him how sorry she was that his mother was sick, and that he might write to her if he wanted to; then, with an earnest, lingering look and a gentle pressure of her hand, he was gone, leaving Dorothy in a very bewildered state of mind.

She stayed in the house for several days, and then she began to go to the postoffice. At first she asked the good old postmaster if there was any mail, demurely, with a happy, conscious little blush. Then, as the days went on and no letter came, she would ask with an anxious, nervous manner. Poor little Dorothy! Although she was faithful in her visits to the postoffice, she received no letter, and after a time all the pretty pink went out of her face, and it grew pale and had a pathetic expression. She always cherished a faint hope that she should hear from Robert, and although one of the most well-to-do young men of Framleigh was urgent in his proposals of marriage, and the squire would gladly have welcomed him as a son-in-law, she told him it could not be.

* * * * *

It was a bright June morning. Miss Dorothy, now a nice old lady of sixty, was picking roses off the large old cinnamon rosebush at her back door. Although her face was not so youthful looking as it was that afternoon when she gathered May flowers with Robert Deane, forty years before, yet it was still very attractive, with its clear, kind eyes, its sweet mouth and just a trace of the roses that used to bloom in her cheeks. Perhaps it was partly her kindly face that made all the children of Farmleigh love Miss Dorothy—Aunt Dorothy, as they called her—and no real aunt ever had more regard and love than she did. Her life was not an unhappy or lonely one, for it was so full of kindness and blessing to others that she was content.

A few years after Robert Deane had gone from Farmleigh, she had heard that he had married a rich Boston girl. Only about a year after she had heard of his death. While practicing at the hospital he had taken some contagious disease. That was all she knew about him. She had never received a word from him. Although at first her heart had been very bitter toward Robert, yet as time went on her feelings had softened, and now she thought of him in a fond, tender way as of one she had loved.

This morning as she was picking the roses, little Tommy Chapin, one of her most devoted cavaliers, came out of the back door and said: "I left a letter on the table in the sitting-room for you, Aunt Dorothy."

"Thank you, Tommy. Don't you think your mother would like these roses? They are about the last there'll be, I guess, and if you'll come in I'll give you one of my ginger cookies."

So Tommy followed Miss Dorothy in, and she gave him a large, round cooky out of a stone jar which she always kept full, so that she might have something to give the children when they came to see her.

When he had gone, with a large bunch of roses in one hand and a cooky done up in brown paper in the other, Miss Dorothy went into the sitting-room and opened her rather official-looking letter. There was a letter and note enclosed in the envelope. She unfolded the note and read:

SALEM, June, 188—.

Miss Dorothy Field:—In refitting the boxes of this postoffice it was necessary to take down the high base-boards behind the receiving box. There we found this old letter directed to you. On ascertaining that you still live in Framleigh we at once forward it. Respectfully yours, POSTMASTER.

Then there was an envelope yellow with age and with a postmark of 40 years before. Miss Dorothy opened it with trembling fingers and read:

SALEM, June, 1840—.

My Dear Dorothy:—I have thought about you a great deal since I left Framleigh and now that my mother is better I must write to you. I could not bear to come away without telling you that I loved you, although I think you must know it. I never supposed that I could care for any one as I care for you. Now, dear Dorothy, if you return my love at all let me know and I will come at once to Framleigh. If you do not and cannot care for me, do not pain yourself and me by saying so, but don't write at all. Hopefully yours, ROBERT DEANE.

As poor Miss Dorothy read this a mist came over her eyes. This was the hardest moment of her life, harder than those weary weeks of suspense. As she thought of Robert's weary, restless waiting, of his heartache and sorrow, and of the sadness which had come into her own life, it seemed to her that a very cruel fate had guided the course of that letter.

But Miss Dorothy's trusting heart could not be bitter long. She believed that somehow all things must be best as they were, and after a few quiet hours spent alone she came out of her room with her usual sunshiny manner. Then she went out into the garden to pull some of her nice radishes to send to unattractive old Miss Dunn, whom she pitied very much, for she firmly believed that she had never had a lover.—*Springfield Republican.*

Why Woman is Man's Best Friend.

First and foremost, woman is man's best friend:

Because she is his mother.

Second, because she is his wife.

Because she is patient with him in illness, endures his fretfulness and "mothers" him.

Because she will stick to him through good and evil report, and always believe him if she loves him.

Because without her he would be rude, rough and ungodly.

Because she teaches him the value of gentle words, of kindly thought and of consideration.

Because she can, with him, endure pain quietly and meet joy gladly.

Because, when he is behaving like a fretful boy—and we all do, you know, at times—with no reason in the world for it, woman's soft word, touch or glance will make him ashamed of himself, as he ought to be.

Because, without her as an incentive, he would grow lazy; there would be no good work done; there would be no noble books written; there would be no beautiful pictures painted, there would be no divine strains of melody.

Because she has made for us a most beautiful world in which we should be proud to live and contented to die.

Because—and this is the best reason of all—when the world had reached an unenviable state of wickedness, the blessed task of bringing it a Savior for all mankind was given to a woman, which was God's way of setting his seal of approval on her who is mother, wife, daughter and sweetheart, and, therefore, man's best friend.—*E. W. Bok, in Ladies' Home Journal.*

Too Many for the Bear.

Dispatches from Vanceborough, Me., tell how Mrs. Roderick McDonald and her sister, who live near Molus river, were busy with their house work the other evening, when they noticed a frightful bellowing of the cattle in the barnyard. Going out to see what was the trouble, they were confronted by a huge old black bear. On either side of him lay a fallen ox, while the rest of the cattle were huddled closely in one corner of the yard bellowing piteously in their terror.

On seeing the dead animals, Mrs. McDonald rushed at the bear with a pitchfork and thrust it into his neck. A roar of rage and pain, and, with a sweep of his paw he knocked her down. The other woman then struck him with an ax, disabling one of his forward legs. Mrs. McDonald arose, recovered her pitchfork, and attacked Bruin in front, while her companion plied the ax. In a few minutes the bear was dead. The women had their clothes torn, but suffered no injury beyond the fright and a few scratches.

A Few More Hints.

[Written for the RURAL PRESS by LUPA.]

From a child, I have persistently followed the suggestion, almost command, in my verse of Proverbs (the one whose number corresponds with the date of birth), which is:

"Open thy mouth, judge righteously, and plead the cause of the poor and needy." In other words, defend the weak against the strong, the yielding against the overbearing. So, on reading in an exchange the self-accusing confession of a mother, who had been studying over some remarks addressed to her conscience by a writer for the RURAL PRESS, besides "Domestic Hints" in a later number, I was compelled to protest in the name of humanity (it might be "huwomanity" if there were such a word), for we have had reproachful exhortations flung at us till we began to think we must deserve them all or they would not have been given so often.

This mother says, when referring to the children: "I have sometimes been petulant with them when weary with a hard day's work." I presume she has, so have most of us, and suffered hours of sorrow for it afterward; but did we carry out the resolutions formed in those remorseful times? If we did not, why? There was some season, physical or spiritual, for our desire to do so was sincere and strong. There may have been a cause farther back than the momentary feebleness of the will power, for petulance is not more likely to come from a serene spirit in a comfortable body than a whirlwind from harmonious atmospheric elements.

If a mother is exhausted by the hard work which has taxed every muscle and nerve to their utmost, perhaps it is her fault and perhaps it is not. It *may* not have been necessary for her to do so much, and, on the other hand, blame may belong with others who have made previous demands on her vitality.

Why must the mother alone be the one who shall personify the charity that "suffereth long and is kind; * * * that endureth all things," etc.? Why do we hear so few hints to the father and the boys of a household about making home attractive? They are quite as much responsible for the family miseries as the mother, and have a better chance to bring peace where is now discord, for they come to their meals (I am now referring to farmers) fresh from the out-door air, with their minds full of the satisfaction which comes of doing constructive work which will remain long enough to show that something has been done; while the mother has been laboring for hours to prepare what in a few minutes will be reduced to repulsive fragments and, perhaps, taken with such haste, in such quantities, divided into such enormous mouthfuls, that at the sight, the heated, tired woman loses what little appetite she had, especially after some sarcastic remark about the foolishness of being affected by such little matters, and the boastful "Now *I* never let such small things move me." If a child should make a demand just then, could the greatest of saints prevent the petulant answer?, And if that great "I" happens to have a little toothache, or the babies, or even the fleas, keep him awake half an hour, is *he* never cross? Watch him and see.

Now as to setting the table attractively: What good does it do to cultivate artistic taste till everything uncouth brings distress when there is no escape from repulsive combinations? You may arrange your table exactly according to your ideal, and nine times out of ten the men and boys will take their places before the dinner is half there, because the hay or the grain is waiting and they must get back as soon as possible, and in their hungry eagerness, commence on whatever they find, shoving things this way and that in order to reach better, till the whole effect is destroyed. In this way they get ready for pie or pudding before the mother has scarcely taken two mouthfuls, if indeed she could swallow past the big lump brought by weariness and disappointment.

In both these cases, and they are not by any means the only ones which could be described, the body is not nourished, the nerves suffer on account of the poverty of the blood, the energy oozes out in helpless tears, and home is not "made attractive." If it is not, whose fault is it? Is it *always* "the woman whom Thou gavest to be with me"—she that should be held accountable for everything?

Of course "circumstances alter cases;" we have been told that times enough to know it, and of course it is our duty to do our best, but no more than it is the father's duty to make the same effort. I am sick of preaching from men who never have been and never can be in woman's position, and tired also of seeing women meekly appropriate all the blame to themselves when, just as often, at least half belongs somewhere else. We do enough that is unwise or wrong under the best of circumstances, so let us not quite destroy our hope and prevent the growth of self-respect by taking the discredit of more sins than we actually commit.

But of course the PRESS and its patrons are generally right. There were lately some gloriously strong sentences against the lottery business, and S. R. Easton brings a needed rebuke concerning saloons.

Not long ago I had occasion to ride down the San Leandro road, near Oakland, and because my turning-point was at a certain saloon, I

commenced counting and found eight in a distance of two miles. Here is a chance to do some thinking as to who does most toward supporting them and how much of the increase of this business in the outskirts is due to increasing stringency of town laws and all the other questions that come into the mind of one who hopes the world is getting better.

Kindness in Speech.

An illness of long duration once kept me secluded for weeks at a time. A few close friends penetrated as far as the room to which I was confined, but they were not of the sort who enjoy scandal and I grew unused to the criticisms which people hurl at each other when the person criticized is not present. Recovery permitted a close contact with the outer world and it seemed as if the very spirit of caustic speech was vented upon my unaccustomed ears. They were what are termed "good-hearted people," but I felt ready to cry out on the utter badness of the hearts which could prompt such unkind remarks. Every speck of dust in a neighbor's kitchen was enlarged into a mountain of untidiness. The least slip in the behavior of her children showed mismanagement and unfitness for motherhood. A cold supper served at the close of a hot, busy day was construed as neglect of husband and home. And the girls and boys who had arrived at the dignity of being "out in company," but who had not learned to lay aside all their kittenish pranks and nonsense, were denounced without mercy; there were even hints which touched upon the purity of the lives of fair young girls, who had never harbored even a thought of evil. I looked at these spiteful detractors in perfect horror, and when one of them addressed me, prefacing his or her remark with "have you heard" or "I don't know how true it is, but they say," I felt like asking them to pause and reflect as to the wisdom of soiling their tongues with such gossip.

There is another class, whose work is just as dangerous, if not more so. Their charges do not come in frank speech, which can be met with equal frankness, but they respond to your word of praise for an absent one with "Oh! well!" and a toss of the head or an elevation of the eyebrows which may mean much or little, but when voiced by the person who carries the story onward, is sure to mean the very worst.

There is no guarding against these enemies to the peace of a community. A vigorously prosecuted slander suit might perhaps quiet them for a time, but they would soon forget the lesson.

The only way to get at the root of the matter is to fill the minds of the rising generation so full of good, useful thoughts that a love of gossip will find no lodgement there.....To know the great men and women of our own and former times through the records of their lives and work is knowledge which must advance all ages and classes. Nothing could be devised which would be more likely to check idle gossip. A lady who is deeply interested in the work of the Chautauqua Literary and Scientific circle, once said to me: "I have no time to talk about my neighbors since I began the C. L. S. C. reading and study." Let us hope that the rising generation will be unable to find either time or inclination for any "work or recreation" which lower them mentally or physically. "Jennie" gave us a good thought in her letter in the *Husbandman*, for June 4th, when she said: "If we would always look for the good qualities and meanings of our friends, in lieu of mistrusting their words and acts, how much unhappiness would be avoided!" Let us cultivate kindly feeling and kindly speaking. Our glass houses are so very frail that we cannot safely throw stones. —*Alice Carrington, in The Husbandman.*

Chaff.

A YOUNG man at Louisville, Ky., who smoked 40 cigarettes a day, has just been declared an idiot by the courts. Hardly necessary to bother the courts. Any body could have decided such a case.—*Ex.*

MANY a man has made a goose of himself with a single quill.—*Philadelphia Inquirer.*

"YES," said the old hen as she prinked her feathers a little, "everything is changing." "What's the trouble?" asked the pea-fowl. "These incubators. Seventy-five chicks came walking out last night, and I can't tell which are mine and which are the incubator's. Maternity is truly an awful responsibility."—*Merchant Traveler.*

AN obituary notice in one of the religious papers, says of the departed brother: "For two years preceding his death he was a constant reader of the ———. He was a great sufferer, but grace sustained him." The *Congregationalist* exclaims: "How sad that he did not take to the reading of some other newspaper in time!"

MAMMA: Now, Lilly, tell me what Mrs. Roundabout was saying to you. Obedient Lilly: Must I, mamma? Mamma—Certainly. Obedient Lilly: Well, she said it was strange such a pretty little girl should have such a homely mother.

NATURE'S tendency is to restore the balance; as a man gets "short" his face gets long.—*Hotel Gazette.*

YOUNG FOLKS' COLUMN

The Prime Minister Becomes the Executioner of Whisker Mousetop.

[Written for the RURAL PRESS by E. STONE LEWIS.]

"I swear," said the groceryman, as he stuck his head into the cheese-room and withdrew it quickly, shutting the door with a fierce slam that shook the pickles in all the bottles and ran behind the counter. "Oh, this is a little too much," he continued, running his fingers through his hair until it stuck up straight as if he was really quite wild. "How did that mouse get out after he was drowned dead? Come, now, tell me that!" he demanded savagely as he put the pepper where the clove belonged and the preserved blackberries among the pickles, emptying a bag of salt into the sugar barrel. There was no one to answer him, so he put a dozen bad eggs into the box of good ones. Really there was no end to the things that man did, he was so mad.

The clerk was down cellar patiently holding eggs in regular procession between his left eye and a candle to determine which box they should go in when they walked upstairs, so he couldn't hear and knew nothing of the whirlwind the little dead mouse was creating in the grocer's breast. The reason the clerk held the eggs between his left eye and the candle to determine whether they were clear and good, or clouded and bad, was because the right eye had a squint, and being of a philosophical turn of mind he was troubled with fears lest the right one should grow worse, and he decided that of the two evils he preferred to have them match, so he worked away on the eggs with his well-favored eye while his master flew around upstairs. Now the woman who got the pepper instead of clove and the man who carried home sugar with salt in it, were both very angry with the groceryman and left him in great wrath as a man who did not understand his business, and traded with the grocer in the next block. When his wife heard of it she was furious and rated her husband soundly because he had so stupid a clerk. He never spoke one word in reply but got up and walked into the cheese-room where Bungler still lay by the side of the tin can. Certainly the cheese was nibbled shockingly.

"It is no use to get angry with a mouse. One can't reason with the horrid little things, but I must fix the creatures in some way," he muttered to himself as he chewed his lip. The harum-scarum young Mousetops who lived in the tall chimney and blasted holes which filled up with soot, and so became quite downy, comfortable places of abode, were certainly made quite comfortable places of abode, were certainly making considerable commotion and havoc in the grocery store, and the grocer went out and cut up some slices of bread. Then he mounted the step-ladder and came down with a little tin box in hand, spreading the contents evenly and carefully on these slices. He carried them into the cheese-room, throwing the pieces about in a careless way, and then Bungler hit the board fence out in the back yard with a dull thud, but the poor thing could not feel it, which was a mercy.

Whisker heard the door when it slammed, so he rushed down to see what the groceryman had been doing, as he was quite gorged and tired to death of cheese. He rushed through the hole in a hurry, or rather he tried to get through, but unfortunately he had grown so stout on his new diet that he stuck fast. Scurry Mousetop senior was slim and slender, for really he had never taken the time to eat, which a well-regulated mouse considers necessary, and the hole was made to fit him. If the Mousetops had only been there to see they must have split their sides laughing, Whisker looked so funny. His eyes were like two big glass beads, they stuck out so, and his ears seemed quite too large for his mouth, as he held it wide open. He looked as if he wanted to speak and could not on account of the pain.

"This comes of eating too much cheese!" he finally groaned. "I guess I don't want to go in here. That grocer may want to poison me. He's full of tricks. I'll back out of this." It was not one single bit of use; he was caught and all he could do was to lash his tail.

When the Mousetops came down one after another to take a secret nibble of cheese and saw his big tail lashing they were frightened, for he had ruled by the strength of that, so it fell out that they raced up-stairs and kept the secret of Whisker down in the hole to themselves. Broomsticks and all sorts of unpleasant occurences would be forthcoming if it was known that they had been in the forbidden chamber, so they just scampered about in a most delightfully innocent way.

That very night the prime minister went down for a morsel of cheese as he felt quite faint. He had been searching all day for some secret and had determined to keep it to himself when he found another, and he sat down and washed his face very coolly indeed on finding Whisker stuck fast. He could easily have pulled him out, for Dot was not at all afraid, but he did not do it and went away full as softly as he had appeared.

"I don't care," he said as he rushed back to bed. "I won't pull him out. He is a greedy, selfish thing. He took all those Mousetops in there just to show how smart he was. The groceryman never would have set that trap in there for me, as I only nibble a little. It is lucky they are all so busy on that tunnel, and are all tired of cheese, or he would be found out and saved. I'll be glad when they get through into the next building; it'll be prime fun, for now I shall rule the Mousetops," declared Dot sleepily, and he went off into dreamland, as if he was a saint instead of an executioner. Thus Whisker's grand scheme to appoint Dot his prime minister, flattering him so as to worm his secret out of his little breast, caused Dot to commit a crime and sealed his own doom.

The groceryman walked in, to see the effect of his bread and tin box trap, when his eye fell on Whisker and he just laughed till his wife and the little grocers all rushed in, to see the fun, and then father and mother kissed each other and made up their quarrel then and there.

All the customers were invited in to see the new trap, and everybody laughed heartily and loudly; so the grocer became popular and famous, so much so that he had to lay in a new stock immediately. Whisker died of fright, although the grocer tried to keep him alive with bread and cheese and all the dainties he could think of, which were at hand. It was no use; Whisker expired, and he had to haul him out and send him after Bungler; but he grew rich on the trade the funny trap had brought him, for people were never tired of joking about it; so the grocer became very fat and jolly. When the Mousetops had nothing to fear, as Whisker had disappeared no one knew where, they ate up all the grocer's bread, and were all caught in the tin box trap and went off suddenly. Grandpa Mousetop died of the great shock, and those left to mourn moved into the next block through the tunnel, but closed it carefully behind them, leaving the grocer to solitude and trade.

GOOD HEALTH.

How to Live.

There are two things we chiefly wish for while we live—health, to make life enjoyable, and length of days to make it lasting. To obtain both mainly depends on ourselves.

We do not simply die; we usually kill ourselves. Our habits, our passions, our anxieties of body and mind, shorten our lives.

The key to health and long life is sobriety in living. It is the fashion to restrict the term sobriety in the use of intoxicating liquors.

We say with truth that the drunkard is killing himself, but we rarely speak of overeating as a shortener of life.

A sober life implies moderation in all things. "It consists," says Cornaro, "in moderate eating, in moderate drinking and in a moderate enjoyment of all the pleasures of life; in keeping the mind moderately but constantly employed, in cultivating the affections moderately, in avoiding extremes of heat and cold and in shunning excessive excitement either of body or mind. A sober life is a life of order, of rule, of temperance—that divine sobriety which is grateful to God, friendly to nature, the daughter of reason, the sister of virtue, the companion of temperate living—modest, gentle, content with little, guided by rule and line in all its operations."

It is an important rule to observe and practice for health, comfort and our peace within and without, to attack every ailment and malady at its beginning, to arrest the premonitory symptoms before they take root in our vitals, and gradually or quickly interrupt the normal action of the organs. A loss of strength, a weakened memory, a tottering walk, all bespeak a mental or physical disorder, which, if not arrested in the early stage, will lead to disease and fatal consequences.

"One can hardly believe," says Reveille, "how far a little health, well treated, will carry us."

"And the rule of the sage," says Cicero, "is to make use of what one has, and to act in everything according to one's strength."—*Ex.*

Leprosy of the Middle Ages.

According to Dr. Morell Mackenzie, leprosy, the scourge of the middle ages, has not become practically extinct among Europeans, but is in reality spreading. It has between 1000 and 1200 victims in Norway, is also found in Portugal, Greece and Italy, and is rapidly spreading in Sicily, in the Baltic provinces of Russia, and in France, while the British Islands are not exempt from it.

In the United States cases have been found in California, in some of the States of the Northwest, in Utah and in Louisiana. Many cases exist in New Brunswick. In the Sandwich Islands the disease first broke out in 1853, and there are now 1100 lepers in the Molokai settlement alone. The disease is extending in the West Indies.

The Treatment of Leprosy.

Kate Marsden, whose investigation of leprosy in Russia has been mentioned frequently, had interviews with M. Pasteur with the view of ascertaining whether inoculation could be resorted to. M. Pasteur, however, could hold out no hope of leprosy being dealt with in that way. Miss Marsden is anxious that this negative result should be promptly known in New Zealand, where hopes have been entertained of the applicability of the Pasteur treatment to Maori lepers. Miss Marsden is about to return to Russia to continue her investigation.

DANGER IN STALE MEAT.—A man was found dead some two years ago in a lodging-house in this city. An analysis of the contents of his stomach was made, and the following report handed in to the coroner: "I have made a chemical and microscopical examination of the stomach and contents of John Dwyer, which shows that his death was probably caused from eating mince pie containing tainted or partially decomposed meat. The chemical analysis demonstrated the presence of a poisonous cadaver alkaloid."

DOMESTIC ECONOMY

STRAWBERRY JELLY.—Crush ripe strawberries, strain the juice, put in a kettle, let boil, add a pound of sugar to a pint of juice, let cook 15 or 20 minutes longer.

SPONGE CAKE.—Six eggs and three cups of sugar, beaten together five minutes, one cup of cold water, four cups of flour, two teaspoonfuls of baking powder, lemon or almond flavoring; bake in a dripping pan.

POTATO PUFF.—Two cups of mashed potato (that has been put through a sieve); season with salt and pepper; stir in two tablespoonfuls of butter, beat to a cream, add two well-beaten eggs and one cup of cream. Pour into a baking dish and bake in a hot oven.

MILK PORRIDGE.—Two cups best oatmeal, two cups water, two cups milk. Soak the oatmeal over night in the water; strain in the morning, and boil the water half an hour. Put in the milk with a little salt, boil up well and serve. Eat warm, with or without powdered sugar.

SPONGE CAKE. — This inexpensive recipe makes very satisfactory sponge cake: One cupful sugar, two eggs, one-half cupful cold water, one pint flour, one teaspoonful baking-powder. Beat the yolks of eggs and sugar to a cream, add the flour in which is the baking-powder and water, lastly the whites of the eggs.

RICE SNOWBALLS.—Boil one pint of rice until done soft, put in small cups, and when perfectly cold place on a dish, make a boiled custard of one pint of milk, three eggs, half-cup of sugar, one teaspoonful of cornstarch, flavor with either lemon or vanilla. When cold pour over the rice balls. This is a simple but nice dessert.

TO COOK RICE OR GRITS.—Take a clean can or other suitable vessel, put the rice in this with water sufficient to moisten it and allow for swelling, place the can in a kettle of boiling water, cover the latter closely and let boil without stirring until the rice is tender. There is no danger of scorching. Grits are nice cooked in the same manner. Salt to taste when putting on to cook.

INDIAN MEAL GRUEL.—One tablespoonful of fine Indian or oatmeal, mixed smooth with cold water and a saltspoon of salt; pour upon this a pint of boiling water, and turn into a saucepan to boil gently for half an hour; thin it with boiling water if it thickens too much, and stir frequently; when it is done, a tablespoonful of cream or a little new milk may be put in to cool it after straining, but if the patient's stomach is weak it is best without either. Some persons like it sweetened and a little nutmeg added, but to many it is more palatable plain.

WAFFLES.—First be sure the irons are smooth. In the first place, if your irons are rusty or rough, make a batter simply of flour and water; grease irons thoroughly and heat well. Put this batter in and cook till done; take out, and if it does not come out easily have patience, and get all the flour out by scraping with a sharp-pointed knife. Repeat this process, and you will be surprised how smooth your irons will become. Then to one pint of buttermilk or sweet milk use two eggs and soda or baking-powder as you would for pancakes.

GOOD WAYS TO USE COLD BISCUITS.—1. Cut into slices about a half-inch thick, put in the oven and toast brown on both sides, put in a dish and pour over enough boiled sweet milk to nearly cover them, let stand a few moments, then take out of the milk and serve with sauce. They make a really nice dessert. 2. Break the biscuits into crumbs, put in a saucepan, pour over them enough warm water to soften them, set the saucepan on the fire until the crumbs are thoroughly soaked, sweeten to your taste, flavor with nutmeg or essence of any kind preferred, add a little salt, a small piece of butter and an egg, beaten light; when the egg is done, take up, put in dessert plates and serve with sauce. A good way to use stale light bread is to slice it, beat four eggs, a little salt and two tablespoonfuls of sugar together, dip the bread in this and fry in hot fat. A good way to use cold rice is to mix just enough warm water with it to separate every grain, add pepper and salt to taste, break in a few eggs, and fry in a little hot fat. Tomatoes are very nice if boiling water is poured over them, the skins removed, the tomatoes sliced and placed in a saucepan, with a little water and enough molasses or sugar added to make them sweet, letting them cook until the syrup gets quite thick.

PACIFIC RURAL PRESS

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SAN FRANCISCO:
Saturday, July 19, 1890.

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Fruit Graders—G. G. Wickson & Co.
Auction Sale of Live-Stock—Killip & Co.
Insurance—The Home Benefit Life Association.
Ditchers—F. C. Austin Mfg. Co., Chicago, Ill.
Home Institution of Dr. John A. Miller.
Boarding and Day School—Miss Bisbee, East Oakland.

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The Week.

The death of the Pathfinder is the week's event which awakens the keenest interest and sympathy of the California people. He had nearly attained the outer scriptural limit to man's life and yet his unceasing activity led all to hope that he might yet be spared many years to enjoy the progress and prosperity of the great commonwealth which he did so much to bring into existence.

The engraving upon another page of this issue is doubtless one of the finest portraits of Fremont ever produced, and the fact that it represents him in the prime of his manhood, rather than after age had preyed upon the beauty of his countenance, will make it the more acceptable to his California friends. In connection with the portrait we give a brief sketch of his life, so full of effort and accomplishment, and so intimately interwoven into the history of the Great West.

Californians will sincerely mourn the death of John C. Fremont; their hearts will go out in tender sympathy for his noble wife, who is now on California soil, and was unable either to minister to him in his illness or attend his burial. Let the nation deal generously with her, and let California afford her a home among those who delight to honor her. It would be singularly proper, too, that the ashes of California's first hero should mingle with California soil.

Silver and Wheat.

The week has brought as full a realization of the ennobling of silver as can be expected from the present Congress, for the President has signed a compromise measure passed by both houses, the chief provisions of which will be noted presently. Intimately affected by the condition of silver, as has been repeatedly shown in the RURAL, is the market value of wheat. It is held by experts that because of the advance in silver which has thus far taken place, the cost of Russian and Indian wheat has already been increased, and as soon as accumulated stocks, which have been laid in with depreciated silver, are exhausted, the increased cost of such wheat will reach about 20 per cent of its old value. Of course this depends on the future of silver, and will be governed by the realization of additional silver legislation, which will be striven for by the friends of silver. Thus, though the full advantage to be gained by making a metal which purchases this competing wheat the equal of gold is not to be immediately secured, the tide seems to be clearly setting toward its realization, and this must encourage American wheat-growers, so long as they are dependent upon sale in European markets.

It is of special importance then to our farming interest to understand just how far the ennobling of silver is accomplished by the law passed last week. It provides that the Secretary of the Treasury shall purchase from time to time silver bullion to the aggregate amount of 4,500 000 ounces, or so much thereof as may be offered in each month at the market price thereof, not exceeding $1 for 371 25 100 grains of pure silver. Treasury notes issued in payment will be redeemable in coin, and will be legal tender in payment of all debts, public and private, except where otherwise expressly stipulated in contract, and will be receivable for customs, taxes and all public dues. Upon demand of the holder of the Treasury notes the Secretary shall, under such regulations as he may prescribe, redeem such notes in gold or silver coin, at his discretion, it being the established policy of the United States to maintain the two metals on a parity with each other upon the present legal ratio or such rates as may be provided by law. The Secretary of the Treasury shall each month coin 2,000,000 ounces of silver bullion purchased into standard silver dollars until the first day of July, 1891, and after that time he shall coin out of the silver bullion purchased as much as may be necessary to provide for the redemption of the Treasury notes. The present law is repealed. The last section provides for covering into the Treasury the fund held for the redemption of the National bank circulation.

As this enactment has been secured as party a measure there is naturally sharp disagreement as to its value and probable accomplishment. It does not satisfy the silver men because it does not actually remonetize silver, but it may be regarded as a step toward that end if the great western half of the country sends to the next Congress men who can be trusted to complete the ennobling of the white metal. Had provision been made for free coinage after the price of silver advanced to par, then no serious objection could be urged against the bill, but as it is, silver is still treated as a commodity, and as such it will be subjected to speculative influences. This, of course, is what Wall Street and the "gold bugs" in general at the East wish, for they can get higher rates of interest, besides speculate to a much better advantage, but to the country at large it is ruinous, for there are too many industries whose prosperity is dependent upon silver—the higher it advances in price, the greater the benefit that will be secured.

A broad effort is to be made to firmly fix silver money in the policies of the American nations. Last week Senator Teller introduced a joint resolution declaring it to be the determined policy of the United States to use both gold and silver as full legal tender money, and instructing the President to invite the Governments of the Latin Union countries and such other nations as he may deem advisable to join the United States in a conference to adopt a common ratio between gold and silver for the purpose of establishing the international use of bimetallic money and securing a fixity of the relative value between those metals, the conference to be held at such place as may mutually be agreed upon by the executives of the Governments joining it.

The legislation thus far had upon silver comes just in time to help wheat prices for the current harvest. The general shortness of the world's supply to which we have frequently alluded, the lessened production in this country, which according to the July report of the Department of Agriculture is about 20 per cent less than an average crop, and the reduced output of this State, all combine to bring firmness to values and to warrant the expectation of a considerable advance which is now generally indulged in.

Prison Bags.

There seems to have been a quick demand for prison-made grain bags. Warden McComb, in his report to the directors last week, said:

The extraordinary demand for prison-made grain bags this season exhausted our stock early in June, and at the end of the month we had orders for 269,000 bags, to be delivered as fast as manufactured. There were 3 295,500 bags sold during the fiscal year, figuring up $217,753 after paying for raw jute, and filling up the Jute Revolving Fund to $100.000. The surplus was put in the State Prison Fund, which now contains $151,754 59. We have raw jute on hand, including 2500 bales in bonded warehouse at San Francisco, valued at $57,087 84.

In accordance with the resolution adopted by your honorable board, I have arranged with C. D. Bunker, customs broker, to make the necessary entries for securing a drawback for duty paid on the raw jute used in the manufacture of grain bags at the prison. Mr. Bunker is to give his personal attention to the exportation of wheat in prison bags from Port Costa and other shipping points, and is to receive for his services as broker 20 per cent of the net amount of the drawback that may be returned to us by the Custom House authorities. New wheat will be shipped this month, and we can soon ascertain if our claims will be allowed or rejected; if our claims are allowed and our estimates are correct as to the number of bags that will be discovered at the shipping points, we will realize about $4000 through the drawback demands.

The question which will arise in the mind of the farmer, on reading this statement, is the same which was brought forward on a previous occasion, viz.: Does it mean that the State is making a large profit on the bags and thus using labor, which the farmer is taxed to support, to make bags to sell to him at a profit? It would look that way when the account shows $217,753 on hand after paying for the jute.

Again, if the State recovers $4000 as rebate for bags shipped out of the State, does not that belong to the farmers who bought the bags?

The Paine Break.

A dispatch from Sacramento announces that the closing of the great crevasse below the city is nearly completed. It states:

The dam is now some two feet or more above the water in the river. It is intended to raise it until it will confine the river up to the 24-foot mark. The water on the inner side is some two feet lower than in the river. Very little water gets through the dam. The tremendous current that swept through the break during the winter for several months cut up the land over which it roamed so badly that much of the territory has been rendered unfit for use for purposes of agriculture. About all the water now runs in its proper channel, and the scouring process below the break is going on.

We trust this is a true statement. The residents adjacent to the break have been very apprehensive of the unsatisfactory outcome of the work which has been in progress during the last few weeks, and have expressed serious doubts of its success and permanence. We trust these misgivings will be removed, for the menace of renewed losses will certainly have a bad effect upon enterprises in the immediate region and all along the path of the flood. Public work of this character should be a model of stability and efficiency, though unfortunately it is too often otherwise.

IT is now an assured fact that Phil Armour of Chicago will establish stockyards on the Pacific Coast. Work was begun this week at Baden, on the Coast Division of the Southern Pacific. The Armour Company has purchased 1920 acres adjacent to the station from the Lux estate, paying therefore $460,000 in cash. The Armour syndicate has advertised for 6,000,000 bricks for use in the new slaughter-houses, and a large supply of lumber has been engaged for the stockyards and corrals.

Mono Lake.

(*Concluded from page 49.*)

instances eight and ten feet in diameter and 20 or 30 feet high. They are clustered in groups in the same manner as the tufa towers and castle-like masses which have been left exposed by the receding waters of the lake.

Unlike the masses that have been exposed to the atmosphere, their forms are unbroken. The upward rush of fresh water from the orifices in the summits of these sublacustral towers is often strong enough to deflect a boat when allowed to float over them.

Other tufa domes rise above the surface of the lake near the shore and add an interesting and rural feature to the scenery. A group of these domes seen from the shore near Black Point, looking toward Mt. Warren, is shown in the accompanying engraving which we reproduce from "The Quarternary History of Mono Valley," by Israel C. Russel, published in the U. S. Geological Survey Report. These domes rise in water that is 10 or 12 feet deep to a hight about 12 feet above the surface. Many of them are vase-shaped, as shown in the illustration, being smallest at the water's surface, and nearly circular in outline. The more symmetrical ones appear not unlike huge specimens of the sponge, known as "Neptune's Cup." The tops of several are hollowed out so as to form basins, and in a few instances these depressions are filled with clear, fresh water that rises through the porous and tubular tufa comprising the submerged shaft of the structure. These are typical specimens of sublacustral spring deposits which have been left particularly exposed to a recession of the lake waters, but are still points of discharge for the springs that built them. The water of one of these natural fountains rising in a lake whose water is utterly undrinkable is of exceptional purity. The only other instance where fresh-water springs have built up islands in a saline lake is in Lake Tezasco, Mexico.

Sketching.

One of the engravings on our first page presents a scene familiar to those living near our larger towns. Any adjacent embodiment of the picturesque is quite likely to be invaded during the summer by a band of aspirants to art honors who come armed with camp stools, easels, drawing boards and sunshades, to test the skill of their eyes and fingers in catching nature in her varied forms. The scene in the engraving lies near Sacramento and the unsuspecting sketchers which the camera has attacked in the rear are members of the Sacramento School of Design. This school, as most of our readers know, has its headquarters in the Crocker Art Gallery, and is conducted in an enterprising manner to advance art and art studies. It has the fullest arrangement for indoor work with models and masterpieces and in the beauties in and about the capital city finds grand opportunities for field work. The institution is one which those seeking art culture should visit.

New Viticultural Headquarters.

The demolition of the Platt's hall structure to make way for a grand new building has made it necessary for the Viticultural Commission to select a new location for its headquarters, and this has been done by leasing the store 315–17 Pine street, between Sansome and Montgomery. This location is superior in some respects to the old one, and is cheaper by $100 per month. The removal will take place about September 1st.

At the meeting at which this action was taken, Commissioner George West of Stockton was present, and it may be of interest to other wine-makers to know that he considers prospects good for the present year. He said: "I think everything looks now as though our wine men were going to make some money this year."

The Commission proposes to prepare a revised directory of the viticulturists of the State. The names of all the growers and the variety of grapes which they grow, whether table, wine or raisin grapes, with the acreage of each, are to be obtained. The total number of acres of vines in bearing is likewise to be given. No doubt the commission will welcome reports from all growers covering these facts.

JOHN BIDWELL had 248,000 pounds of cherries this year on his Chico ranch.

Death of General Fremont.

Major-General John C. Fremont died in New York on Sunday afternoon, after a sickness of brief duration. He was 77 years and six months old at the time of his death.

General Fremont's name is closely identified with the early history of California, he having been one of the most prominent figures in the events which led to its cession to the United States.

He was born in Savannah, Ga., in 1813. In 1833, he obtained a position as teacher of mathematics in the U. S. Navy, which he kept a few years, and then went into surveying and civil engineering. In 1838–39, he accompanied M. Nicollet, a Frenchman and a distinguished man of science, in explorations of the country between the Missouri and the British line. These explorations were made under the authority of the Government, and while engaged in them in 1838, Fremont received from President Van Buren, under date of July 7th, a commission as second lieutenant in the corps of topographical engineers.

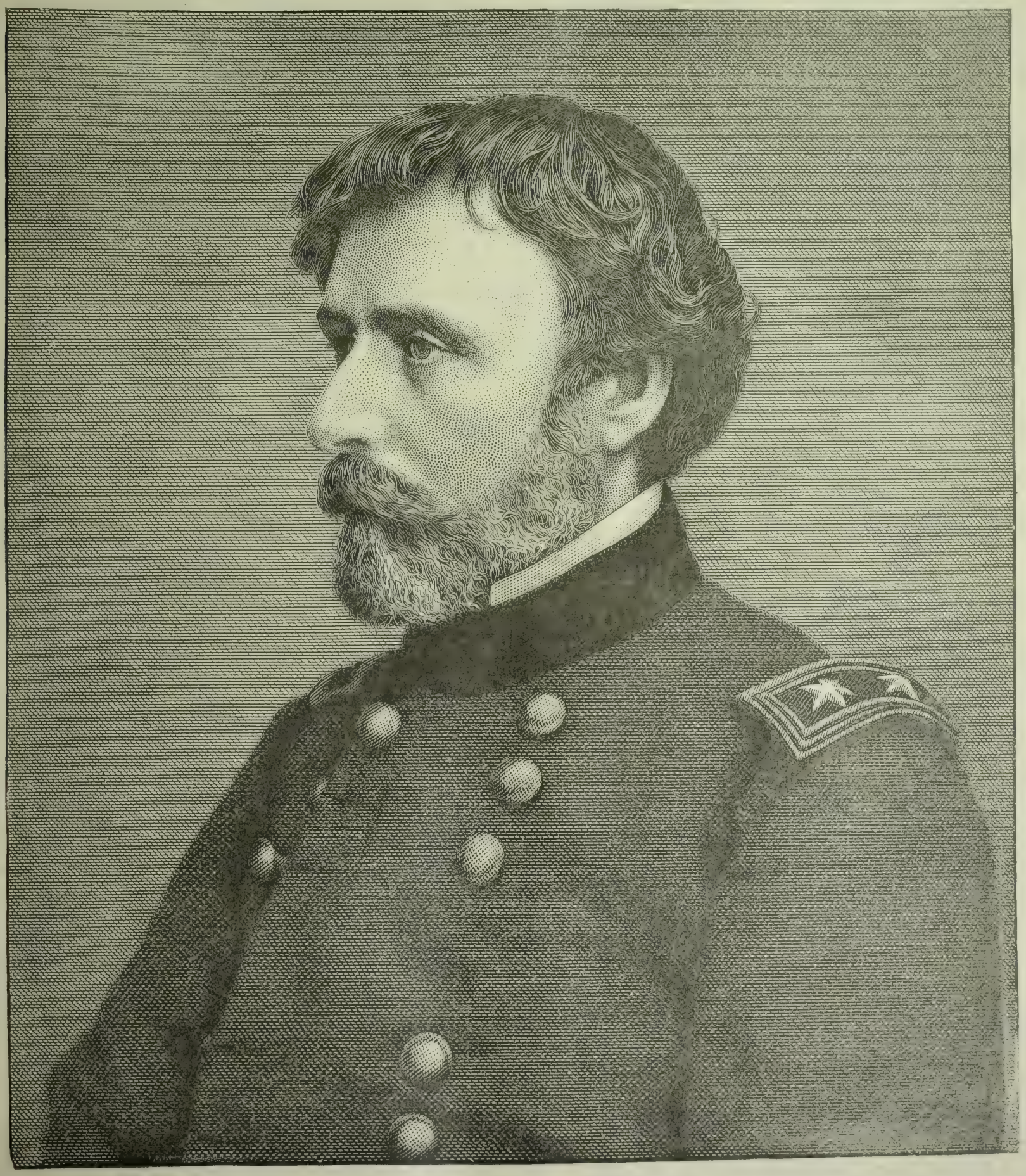
In 1842, Fremont projected a geographical survey of the territory of the United States from the Missouri river to the Pacific Ocean, the feasibility of an overland communication between the two sides of the continent being a leading idea in the scheme of explorations. He applied to the War Department for employment in this service, and having received, at his own suggestion, instructions to explore the Rocky mountains, and particularly to examine the South Pass, he left Washington, May 2, 1842, and on June 10th began his expedition from a point near the mouth of the Kansas river, a few miles beyond the Missouri border, whence he proceeded up the Platte river, through bands of hostile Indians, to the South Pass, which he carefully examined.

He next explored the Wind River mountains, the loftiest peak of which, 13,750 feet above the sea, he ascended August 15th, accompanied by four men. This mountain is now called Fremont's Peak. From the Wind River mountains, which he left August 18th, Fremont returned to his starting place by nearly the same route that he had followed going out. He reached the mouth of the Kansas October 10, 1842, afthr an absence of four months. He had encountered much hardship and many perils, and had successfully accomplished a ll the objects of the expedition. Over the whole course of his extended route, he had made barometrical observations to ascertain the elevations both of the plains and of the mountains, and astronomical observations for latitudes and longitudes.

Immediately after the publication of the report of this expedition, he planned another of a more comprehensive character. He determined to extend his explorations across the continent, and to survey the then unknown region lying between the Rocky mountains and the Pacific ocean. In May, 1843, he commenced his journey with 39 men and proceeded up the Kansas river far enough to ascertain its character, and then crossed over to the Platte, which he ascended to its source in the mountains, where the Sweetwater, one of its tributaries, springs from the neighborhood of the South Pass. He reached the pass August 8th, went through it, and saw the head waters of the Colorado flowing toward the Gulf of California. On September 6th, after traveling over 1700 miles, he came in sight of the Great Salt Lake, of which no accurate account had ever yet been given, and of which very vague and erroneous notions were entertained.

His investigations effected important rectifications in our geographical knowledge of this portion of the continent, and had subsequently a powerful influence in promoting the settlement of Utah and the Pacific States. From the Salt Lake he proceeded to the upper tributaries of the Columbia river, whose valley he descended, until on November 4th he reached Fort Vancouver, near the mouth of the Columbia. On November 10th he set out on his

(*Continued on page 61.*)



J. C. Fremont

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

FIGHTING FIRE.—Livermore *Herald*, July 10: A fire was started on the Pallareno place, on the south side of the Crane ridge, last Saturday, by a couple of hunters. They decamped upon seeing what they had done, and the fire attained considerable headway before the neighbors could get together to fight. Low B. Clark and Aurelius Ladd finally got a small party together and began work near the top of the ridge, while Julian Romo fought single-handed on his range, near the Mocho. The fire started early in the morning, and burned all day, the last spark being finally stamped out at five o'clock in the evening. Mr. Romo worked alone all day, while the party followed up their line to the end. The fire ran to the Crane ridge road on the ridge, and burned a large portion of the feed and about a dozen cords of wood on Horace Overacker's range. Mr. Romo lost a large area of feed, the fire going to the Mocho creek. A deep canyon checked its course toward the southeast.

Butte.

THE WHEAT HARVEST. Oroville *Register*, July 10: The big combined harvesters are now at work throughout the eastern part of the county. In many sections the crop is turning out better than was at first expected, though on much of the black land it will probably be only one-third as heavy as usual, or even less. The county, as a whole, is undoubtedly fully up to the average of the State in its wheat yield, and is far ahead of many less favored localities, where the proportion of low land is greater. There are many fields of heavy growth somewhat beaten down by the late rains, though by the present methods of harvesting nearly all the grain will be saved.

Colusa.

WHY THE CROP IS POOR.—Colusa *Sun*, July 12: The crops are not turning out as well generally as was expected. It seems that the wheat sown before the first rains in October, and which has been looking best, is turning out poorest. It is found after the harvesting has been begun that there are many heads without wheat. Captain Ash thinks a frost came at the wrong time for the first sowing. Taking all things together, this has been a poor season for wheat.

Contra Costa.

CROP NOTES.—Martinez *Gazette*, July 12: The harvest is in full bloom in the eastern portion of the county, and the yield is in pleasing contrast to the rest of the county. The excessive and continued rains prevented the proper sowing in the large wheat growing sections elsewhere, but the season was well suited to the system of summer-fallowing generally followed at Byron, Brentwood, and that vicinity. We learn that Mr. E. D. Grisby threshed 810 sacks from 40 acres at Brentwood, and that Mr. Geo. A. Miller's wheat yielded 2800 pounds to the acre. Others are presumed to do as well, but these are the only ones from which we have definite returns.

El Dorado.

MORE GRASSHOPPERS.—*Record Union*, July 9: A resident of White Rock, writing to the *Record Union* of the ravages by grasshoppers in that section, says: Having read the account in Monday's *Record-Union* of grasshoppers being so numerous in this vicinity, I write to tell you something of the damage already done by them here. They have stripped a great many fruit trees and grapevines of every leaf, and peeled the bark from all tender shoots. Vegetable gardens are ruined, and, where two weeks ago were lovely flower gardens, nothing but stalks remain. The pests undoubtedly hatched here as when they were first noticed they were about the size of common house flies.

Fresno.

GOOD YIELD OF WHEAT.—Selma *Irrigator*, July 10: E. F. Hammers, who has a half-section of fine land one mile south of Selma, reports the largest yield of wheat yet given this year. He thrashed this week from 80 acres of land 869 sacks of excellent wheat. This is almost 11 sacks to the acre.

GRAIN IN THE HURON COUNTRY.—Hanford *Sentinel*, July 10: Ransom Jones, whose grain ranch is one mile north of Huron, has harvested 2360 sacks off 150 acres—nearly 16 sacks to the acre. J. Schwinn, a resident of the same locality, harvested 2119 sacks off 140 acres—more than 15 sacks to the acre. Frank McClellan got 2008 sacks from a quarter section of volunteer, near Jones ranch, and the Huron country has done nobly this year.

MORE IRRIGATION.—Fresno *Republican*, July 11: The surveys, plans and details for the proposed lumber and water flume from Stevenson creek to Toll House, and ultimately to this city, have been completed and the work of constructing the flume will be begun at once. The flume will carry 300 feet of water to the head of Big Dry creek, four and a half miles above Toll House, this water to flow along Big Dry creek and to be used for irrigating purposes. The remainder of the water will be used in the flume for the transportation of lumber from that point down to Toll House and Fresno. The irrigating water will be taken out at a point near Academy and will irrigate the whole of the Big Dry creek country lying between the San Joaquin and the Kings rivers, a fertile region of rich, red loam that cannot be irrigated from any other source. This section includes the thermal orange, lemon, fig and olive belt lying along the foothills, and it will become valuable property as soon as the water gets upon it.

A RUNAWAY HARVESTER.—Traver *Advocate*, July 11: A combined harvester running near Huron, on the West Side, one day last week was run away with by the horses attached thereto, who carried the machine over the railroad track. Perry Clough of this vicinity, who was attending a lever on the top of the machine, was thrown off and had his right ear torn nearly off. The driver was pitched back on to the place where Clough had been and thus escaped serious injury. Mr. Clough came home and is under Dr. Williams' care, and his ear is now growing back to its usual place at a rapid rate.

Humboldt.

WOOL.—Eureka *Times*, July 10: Frank H. McKee, who lives in the southern part of the county, a few miles inland from Shelter Cove, was in Eureka yesterday and paid a visit to the *Times* office. Mr. McKee reports general prosperity in that section, with hopeful prospects. He says the wool crop is for some reason better quality than heretofore, and that good prices are being realized.

Inyo.

CROPS ON THE STEVENS CANAL.—*Inyo Independent*, July 11: This is the first season when crops have been irrigated from the Stevens canal. Mr. H. J. Robinson has wheat growing which promises to make a very heavy crop. He says part of it now looks as if it would yield one and a half tons to the acre and it is ripening fast. Corn is making very rapid growth and will be a heavy crop. His first cutting of alfalfa produced three tons to the acre. Mr. W. Jenkins also has fine crops of alfalfa and wheat growing. The canal is now in fine condition and carries a large volume of water.

Lassen.

FAIR DATE CHANGED.—Susanville *Advocate*, July 10: The Board of Lassen County Fair Directors met last Monday. President A. L. Tunison and Directors Lawson, Wemple and Leavitt were present. C. E. Emerson was elected assistant secretary, and immediately entered upon the discharge of the duties of that office. A speed program was adopted and a premium-list was arranged. The date of commencement of the fair was changed from Oct. 7th to Oct. 6th.

Los Angeles.

FRUIT CANNING.—Pomona *Progress*, July 10: Work at the cannery this week has been rushing, to say the least. From 50 to 60 tons of apricots per day are being delivered. A force of over 200 cutters are at work and nearly 400 men, women and children are employed about the works. The dried fruit is already being shipped to the East and several carloads have been forwarded. The variety mostly being brought in is the Royal, but some of the earlier Moorpark orchards are beginning to be picked and are yielding some of the most magnificent fruit we have ever seen. We should judge some specimens would go at least three to the pound. From 20 to 40 teams can be found at all hours waiting to unload. The cannery is running day and night.

San Bernardino.

EDITORS PRESS:—Harvesting is nearly over and the time is at hand when the speculator tells of the enormous crops, and runs the price down until he gets possession of the farmer's produce, when lo! we find the crop was not so large as estimated. Wheat is advertised for sale in Riverside at $1 15 per cental, and rolled barley is selling at $1.20 per cental. Why is this? Is it because the Perris and San Jacinto farmers have raised more wheat than usual, and buyers can afford to sell small quantities cheap, in order to be able to buy large quantities still cheaper? Thrashing has been going on for some time; still there seems to be no decline in the price of barley. There has been no thrashing done in the north end of our valley yet, but the hay is baled and the whole amount put up for sale is about 80 tons, where the crop, two years ago, amounted to between 1000 and 2000 tons. Many of the farmers have barely enough hay to carry them through the season. Mr. Kehl's wheat-field is being headed, and on the best of it the stacks are few and far between. The hot weather has ruined the corn and beans in our neighborhood, but we only raise small quantities for home use. We have a school district here now and have kept school one month. Our census marshal's report shows 21 census school children and 34 children all told in the district. The average attendance was 15½.—L. S. LYMAN, *Alessandro, July 10th*.

FRUIT DRIERS BUSY.—Redlands *Citrograph*, July 12: Cook & Langley, fruit driers, now employ 360 hands, and have a weekly pay roll of $2500. They handle from 60 to 80 tons of apricots a week, an amount which has never before been equalled in this section.

San Diego.

THE HEMET DAM.—San Jacinto *Register*, July 10: Hancock Johnston informed us Monday evening that he had received a letter from W. F. Whittier of Los Angeles, one of the directors of the Hemet Land & Water Co., stating that a ship load of cement had arrived at San Diego to be used in the construction of the great Hemet dam. 2,000 barrels of cement will be shipped immediately from San Diego. He also states that they will have to begin work on their warehouse and side tracks at once, and as soon as Engineer Schuyler returns from Denver, where he will be compelled to remain 10 or 12 days, work will be commenced on the dam.

NEW GRAIN WAREHOUSE.—*San Diegan*, July 11: The Spreckels Brothers' Commercial Company set men to work this morning to build an important addition to the west end of their coal bunkers. The addition will be 300 feet long and 40 feet wide, and is intended as a warehouse and elevator for the storage and shipment of grain. Its capacity will be 3000 tons. The warehouse will be located, as stated, at the west end of the bunkers, and will fill the vacant space in the wharf now seen between the bunkers and the engine-house. A big gang of men were put to work, and the officers of the company say the house will be ready to receive grain in 15 days. The intention is to supply it with all the modern appliances for handling grain which the coal bunkers have for handling coal, and ships will be loaded with the quickest possible dispatch.

THE PRODUCERS' UNION DRYING FRUIT.—*San Diegan*, July 11: The big drier ordered by the Union some time ago is to-day being set up at the Union's headquarters down on Fifth street and will be put in trial operation to-morrow. Half a ton of apricots will be put in as the first batch, but Manager Webber stated to a *San Diegan* reporter this morning that he expected by the middle of next week to be turning out two tons of apricots per day, and he would maintain the operation as long as the fruit lasted and the price warranted.

San Joaquin.

WATERMELONS.—Lodi *Sentinel*, July 12: On account of the exceedingly wet weather melons are late this year. The first shipment this season was made yesterday, Wm. Tecklenberg having consigned half a car load to San Francisco. Next week four or five car-loads will be shipped, but the business will not be booming until after the 25th instant.

San Luis Obispo.

ANNUAL FAIR.—Arroyo Grande *Herald*, July 5: The regular meeting of the Arroyo Grande Agricultural Association was held at Phillips' hall, on Tuesday afternoon, July 31. President Leedham being absent, Vice-President J. V. N. Young presided. It was moved and carried that the society hold its fifth annual fair on October 8th, 9th and 10th. The president appointed a committee consisting of A. Philips, W. N. Short and N. J. Downer to revise the premium list and bring the same before the board at a called meeting to be held Saturday, July 12th, at 3 P M.

Santa Clara.

THE EGG RECORD BROKEN.—Los Gatos *News*, July 11: Mrs. Caroline Gray, proprietor of the Hillside Cottage, in the Santa Cruz mountains, at Wrights, sent to this office on Monday some eggs which beat anything we ever saw in the line of hen's eggs. They weighed a quarter of a pound each and were laid by a light Brahma only one year old. This hen lays one of these eggs every other day.

Shasta.

ALFALFA.—Anderson *Enterprise*, July 10: Weaver & Campbell have 50 acres of alfalfa from which they will cut three crops this year, grown entirely without irrigation. Two crops were cut last year, the first year from the seed.

Sonoma.

NEW FRUIT-DRIER.—Healdsburg *Enterprise*, July 12: L. Jaffe, whose fine farm lies seven miles northeast of town, is having erected a good-sized fruit-dryer, and will hereafter dry his own fruit. Mr. Jaffe is at present in Oregon, but writes that he will return to California in time to handle this season's grape crop on his place. It is probable that he may also buy a considerable tonnage of grapes.

Stanislaus.

THRASHING OUTFIT BURNED.—Modesto *Herald*, July 10: On Monday afternoon the thrashing outfit of T. J. Young was burned while thrashing a stack of rye on the ranch of W. B. Harp, several miles south of Modesto. The fire caught from the engine, and the remainder of the outfit was burned together with the rye thrashed and the stack. Young's loss will be about $2000 and Harp's $6000, both uninsured. After burning a few acres of stubble, the fire was put out.

IT MIGHT HAVE BEEN WORSE.—Modesto *News*, July 11: On Saturday evening last, about 7 o'clock, a stack-bottom on the old Red Thatcher place on Dry creek, owned by M. A. Wheeler, was discovered to be on fire by J. A. Rydberg. Twenty acres of stubble and grass land were burned over before Mr. Rydberg and others succeeded in stopping it. The grain, which had been put in sacks eight hours before, and which was still piled up near the stack bottom, was not injured, though the stubble all around it was burned. Owing to the heavy rainfall last winter, Mr. Rydberg was unable to put in any grain, and when the fire reached his land, it was easily put out. Had a crop of growing grain been standing on the latter's ranch, nothing could possibly have prevented the fire extending to the Tuolumne river, a distance of over four miles, entailing great loss of property. The fire was probably started by the steam thrasher which had left the stack-bottom eight hours before.

Sutter.

GLANDERS.—Marysville *Appeal*, July 11: J. A. Peter of Nicolaus township, Sutter county, one of the gentlemen who appeared before the Sutter county Board of Supervisors yesterday in relation to stock running at large in his township, was seen by an *Appeal* reporter and questioned in regard to the report that a number of horses suffering from glanders had been killed near Nicolaus. Mr. Peter informed the reporter that the report was true, and that there were undoubtedly more of them that should be killed. One of the horses killed he had noticed on the road eight days previous in a most sickening condition. The spread of this disease so far has been very slow in the vicinity, but residents there are beginning to get very anxious, and want to see something done to prevent these afflicted animals from running at large.

THE GRAPE CROP.—*Sutter Farmer*, July 11: From present indications the grape crop this season will be unusually large. All varieties are well set on the vines and the clusters are full and numerous. R. C. Kells, one of the principal grape-growers, informs us that the early varieties will soon be ripe. The season is late, but is no detriment to the yield. Last year Mr. Kells had grapes in the market on the 4th of July.

Tulare.

CENTRAL CANAL COMPANY.—Visalia *Delta*, July 11: The Central Canal Company, organized to dispose of water for irrigating purposes in Kern and Tulare counties, has filed articles of incorporation in the Secretary of State's office at Sacramento. Principal place of business, San Francisco. Capital stock, $3 000 000. Directors—Robert McMurray, H. F. Cutler, George Easton, George H. Maxwell and George K. Wells.

CULTURE STATION NOTES.—Tulare *Register*, July 11: The foreman of the culture station, Mr. Forror, has nearly completed his task of harvesting. All the grain was cut by hand with the knife and shelled out with sticks, so that not a kernel was lost or damaged, and the varieties were kept separate. There is something of a contrast in expense between this mode of harvesting and harvesting with a steam combined harvester. The hand method costs about ten cents per pound, while the other costs about ten cents per 100 pounds. Varieties have been grown upon the station this year which have yielded as high as 85 bushels per acre. In a short time small parcels of the best varieties of grain will be given out to those who will stipulate to give them a fair trial another year.

Yolo.

DEATH TO THISTLES.—Woodland *Democrat*, July 10: The Board of Trustees passed an ordinance Tuesday, compelling all owners of property inside the city limits to keep their property cleared of what is known as "Bull Thistle." The Marshal has been instructed to notify all those on whose property there is a growth of this thistle, and if the owner will not cut them down and burn them, the Marshal will do so himself at the expense of the owner of the property.

PROFITABLE POTATOES.—Woodland *Mail*, July 12: In his ramblings about the county looking up the fruit interests, a *Mail* reporter visited a vegetable garden consisting of 25 acres on the I. P. Diggs ranch, north of Cache creek, and the property of Johnson & May. In an interview with Mr. Johnson he learned facts which seemed almost incredible. Thirteen acres of the garden were planted in potatoes about January 1st and the total expense including labor, seed and everything, did not exceed $400; 1600 sacks of potatoes were marketed from this patch and were sold at $1 60 per 100, bringing in $2000. Six hundred sacks of the potatoes were shipped to various points on the Pacific Coast, and the remaining 1000 sacks found a market at home.

MELONS IN BULK.—FRUIT SHIPMENTS.—Winters *Express*, July 12: We are informed that our enterprising fruit-growers are inaugurating a new plan for shipping their watermelons and cantaloupes to Oregon. By using false bulkheads in one end of a car, they are enabled to ship the melons in bulk, thus avoiding the expensive package they were obliged to use; which, taken with the heavy freight on same, shows a saving to our shippers of about six cents per melon. Should this plan prove successful, it will tend to largely increase the shipments in this line to Portland.... One hundred and twelve carloads of fruit were shipped from Winters during the month of June. The weight averaged over 11 tons per car. This is a large increase over any former year.

ARIZONA.

ALFALFA ON ALKALI LANDS.—Phœnix *Herald* July 10: Mr. C. L. Phippeny is up from the Buckeye country to-day and informs the *Herald* that that portion of the country is prosperous with good crops of alfalfa and grain. An important piece of information from Mr. Phippeny is that he has made a splendid success of alfalfa on alkali lands. He had some trouble in getting the seed to set well at first, but when it was once set, the crops are more luxuriant on alkali lands than elsewhere, all of which goes to show that the "salt lands" found here and there in the valley are as valuable as any land, if properly handled, in certain crops.

CATTLE SHIPMENTS.—Wilcox *Stockman*, July 12: Five cars of steers—125 head—were shipped from here Thursday to Hutchinson, Kansas. The cattle belonged to Henry Fitch and J. C. Stone, and were purchased from J. M. Richardson, Charles Gottgens, C. R. Purcell, H. C. Severin, W. M. Attenborough and J. P. Johnston. Mr. Fitch accompanied the shipment. A shipment of 247 steers, purchased in the Tonto country by George Frisk for V. B. Wright, was made from here Monday.

FLORIST AND GARDENER.

Rockeries and Vases.

[Read by JOHN GABLER, before the State Floral Society, at the meeting of July 11th.]

Rockeries belong to the unusual sights of nature, therefore they are contrasts, and help to relieve the stiffness of a level plain. In landscape gardens we are imitating nature, and the rockeries which claim such an important place are introduced into parks and gardens to render them more picturesque. Wherever nature has been so kind as to provide a rockery, where a garden is to be created, it should be made use of to the greatest advantage. The reputation of many landscape gardens is due to the natural rockeries which they had only to beautify. Many large rockeries would lose much of their beauty could their foundation be clearly seen, others appear imposing and elegant only from certain points, and the walks leading to those should be laid out with regard to the best view obtainable. For small rockeries the trees and shrubs used in planting about them should be of correspondingly small growth, so that when grown up they will not obstruct the view by hiding the rocks; neither should there be very large trees in the vicinity as the rockery will appear to disadvantage by comparison. The harmony in sizes should be preserved. Should there be an accumulation of loose rock around, it should be removed, thereby making the rockery appear larger and to better advantage.

In the gardens and parks of California there are many large rockeries. There is a fine one at Mr. W. Dingee's place in Oakland. A walk ought to be made up it, and a small temple with five or six pillars would be a nice ornament at the end of the walk. It is for many a great pleasure to climb over the rocks. It is man's peculiarity rather to climb up to take in a particular view than to go down for the same purpose. To perfectly imitate the rockeries of nature is very difficult. Those in the parks of Paris, the palm gardens of Frankfurth and in the Duke of Devonshire's place at Chatsworth in England are admirable imitations of nature. Rockeries should always, if possible, be built on elevated ground, and look well as adornment for knoll or hillsides. In building only large and carefully-selected stones should be used, with a view to bringing out the different formations and veins, leaving room here and there for shrubs, vines, etc., and also places for Alpine plants, for only by the most careful planting can it become a good imitation of the natural. It will also be improved by having large stones scattered around; those can be made any size and shape with small stones cemented together. Rockeries in flower gardens are generally small, and for such, lava and other stones of volcanic origin are the best adapted; if not obtainable, then any rough rock can be used. In the construction of bridges, circular and terrace walls, and other ornamental work in park or garden, rough stone produces the best effects and is much preferable to wood or other material. I have seen a garden on the Rhine built of terraces of rough rock in an irregular manner to the height of 50 feet, so that the house on the top had all the appearance of being built on a natural rock or hill. In all such constructions, regularity must be avoided, but care must be taken to have the grain of the stones uniform, either perpendicular or horizontal. To build a rockery skillfully requires a close study of rocks and a great taste for natural beauty.

Plants for Rockeries.

The most suitable plants for rockeries are those which thrive naturally among rocks or rocky ground, such as Fuchsias, dielytra spectabilis, clianthus puniceus, pentstemons; and all plants with hanging flowers look better to be up slightly from the ground. Plants for rockeries are of the shade and sun-loving kinds, the shade-loving being the most numerous, such as are commonly called Alpine plants, though but few of them have originated in the Alps; these include nearly all evergreen and perennial shrubs, and many bulbous plants. True, rock-plants which naturally grow among rocks and which we may call sun-plants are all semper vivum varieties, many Saxifragas, Erica carnea, Sedums, Aubrietias, Arabis, Erinus, Linaria, Mesembryanthemums, etc. If a rockery is located in an open sunny exposure, a collection of cacti and succulents set out tastefully is a pleasing object. I would strongly recommend the different varieties of Mesembryanthemum, as these make a very fine show. If a rockery is shaded by trees or is so large that the north side has sufficient shade, then ferns may be planted. A Dicksonia antartica, perhaps, on the foot; and smaller ferns, as Adiantum capillus veneris, Polypodiums, Pteris, Lomarias, Nephrodiums, etc., can be arranged so as to give the best effect.

On the sunny side, some of the small growing Cupressus, Retinosporas, Thujas, Juniperus, or some other evergreen shrubs, can be planted. A skillful gardener knows exactly what plants to use to make a pleasing picture, and should he be fortunate enough to have at hand a small stream of water dropping down the rockery, a pond could be made below which could be filled with Nelumbiums and Nymphæas, on the margin of the pond could be placed such moisture-loving plants as Cyperus papyrus, or C. alternifolius, Tritoma uvaria, etc. The shore being filled out with irregular patches of Callas, Farfugium, Dicularias, Caladium esculentum, Arundo Donax and some bamboo; then, let us imagine a tree near the lake, the branches of which are entwined with a Passiflora with its scarlet flowers drooping into the water. That would certainly make a picture to satisfy any lover of nature. The following are good climbing plants for rockeries: Ampelopsis Veitchii, Clematis, Hardenbergias, Plumbagos, Rhynchospermum, Smilax, Spergula rubra, Myrsiphyllum auriculata, Ficus repens, ivies, etc. Finca major variegata is also a fine plant for rockeries, but it should be planted in a place where it cannot spread; a large pot or box will do; if planted in the rockery, they will spread all over it and injure other more valuable plants. Grottoes, formerly so much esteemed, are out of fashion and are only made occasionally, where the proprietor possesses peculiar tastes. In large conservatories, however, a half grotto, half rockery and a pond for water plants is in good taste and ought to be more frequently constructed than it is. A conservatory on a private place ought not to be modeled exactly as the greenhouse of a nurseryman, with so many benches of uniform width. In a conservatory we ought to see more decorations and everything ought to look more natural.

Vases.

Vases are a greatly desired ornament for gardens, and particularly for terrace gardens. The use of vases is very old. In former times the Romans and Greeks chiseled vases out of stone to grow flowers in. At present we find more vases in the gardens of Italy than in any other country. Their gardens are laid out very symmetrically and the vases on both sides of the straight walk look very well. In a picturesque landscape garden, we have no use for them unless it be on some corner where a road makes a sharp bend, at the entrance of the garden or at the entrance of the house on each side of the steps. A terrace garden is the right place for vases. Small vases ought to be put on high pillars three feet high, and larger ones on pillars five to six feet high, as they never look well when standing too low. Plants for vases are either ornamental or flowering. Among the first we have those which have a regularity in their habit of growth, as palms, Dracænas, Yuccas, Agaves, Dasylirions, Dorianthus, Cycas, Panicum, etc. For flowering plants, Hortensias, fuchsias, verbenas, nasturtiums, geraniums, especially ivy geraniums, cannot be surpassed by anything as a vase plant, except it be Clianthus Dampieri. Unfortunately, the Clianthus does not succeed in San Francisco, but in the interior country, where the climate is warmer, it does well. Myrsiphyllum asparagoides is also a vase plant which has no equal; its small foliage is very graceful.

Fine decorative vases can be obtained by planting them with Amaranthus tricolor, or A. salicifolia, Zea Japonica var, Coleus, Achyranthes, Lobelias, etc. When Clematis or Convolvulus are planted on the pillars and twined round they will greatly help the effect. Ampelopsis Veitchii or ficus repens are also very suitable climbers with which to entwine the pillars. Twin vases at the entrance of gardens or at the entrance of a house should be planted alike. The plants chosen should be of like varieties and size. Before planting a vase, broken crockery or charcoal should be put into the bottom. The plants are supposed to remain in them for a long time, and if not sufficiently drained, the soil will become sour. Should the soil be exhausted, liquid manure can be mixed with the water once or twice a week.

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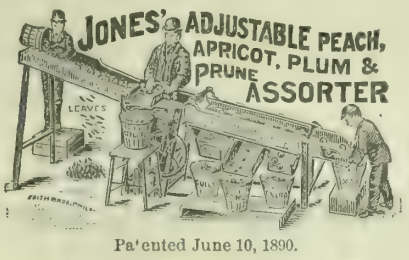
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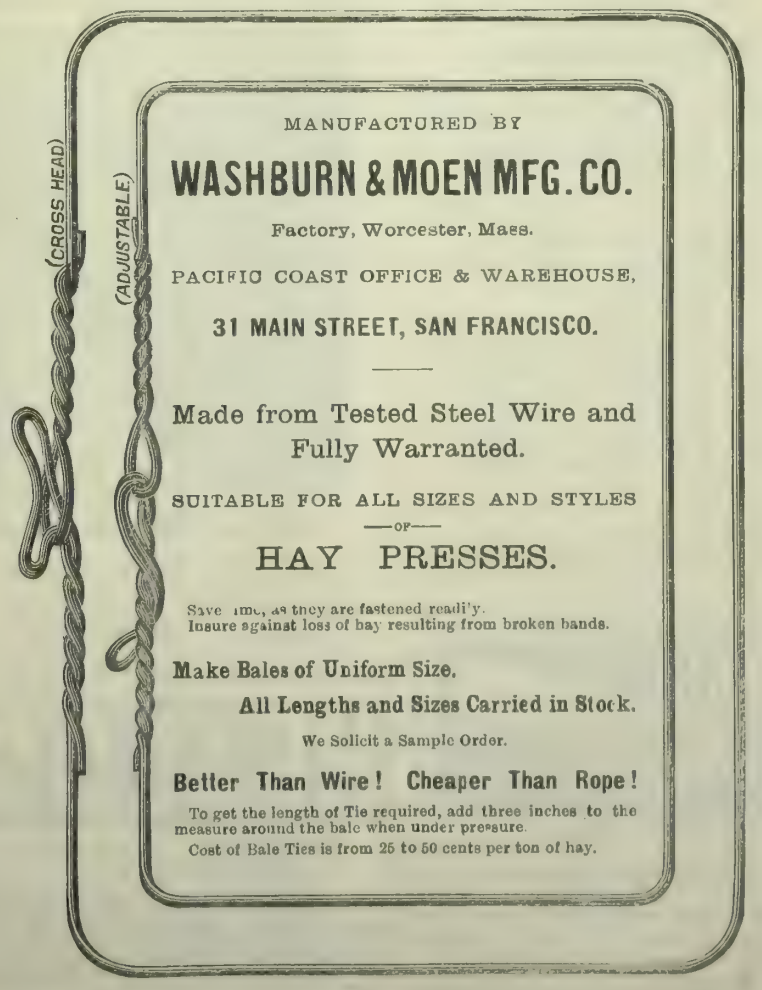
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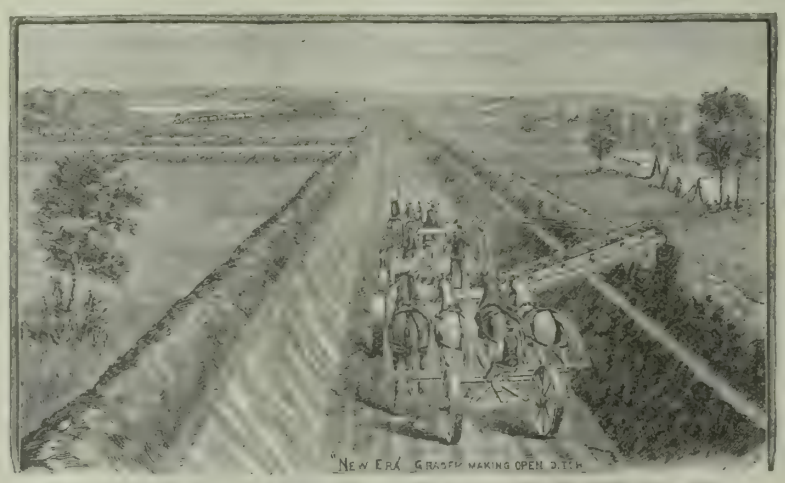
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FOR SEVENTY-FIVE DOLLARS THIS College instructs in Shorthand, Type Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business, for six full months. We have sixteen teachers, and give individual instruction to all our pupils. Our school has its graduates in every part of the State.
SEND FOR CIRCULAR.
E. P. HEALD, President.
C. S. HALEY, Secretary.

INVENTORS on the Pacific Coast should secure their Patents through Dewey & Co.'s MINING AND SCIENTIFIC PRESS Patent Agency, No. 220 Market St., S. F.



The Armstrong Automatic
PORTABLE
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The Best, Lightest, Cheapest Engine in the world. Can be arranged to Burn Wood, Coal, Straw or Petroleum. 5 or 8 H.P. Mounted on skids or on wheels.
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"Greenbank" 98 degrees POWDERED CAUSTIC SODA (tests 99 3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by
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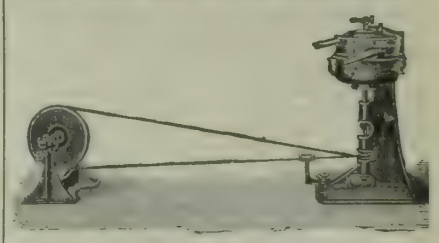
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Or the pure Mountain Breezes will soon invite your presence. Make your leisure twice the pleasure, by taking along our entertaining Music

(If you have no Guitar, Mandolin, Banjo, Flute or Violin, call or send for lists of fine instruments at our branch store, J. C. HAYNES & Co., 33 Court Street, Boston.)

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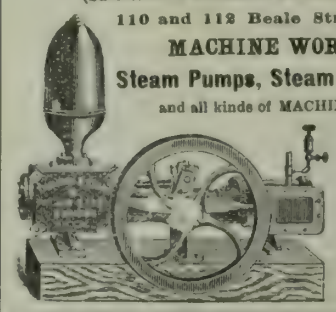


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Iron cut, punched and formed, for making pipe on ground. All kinds of Tools supplied for making Pipe. Estimates given. Are prepared for coating all sizes of Pipe with a composition of Coal Tar and Asphaltum.

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MACHINE WORKS,
Steam Pumps, Steam Engines
and all kinds of MACHINERY.



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AGENTS WANTED EVERYWHERE. Something new. The Smith Patent Improved Combined Kitchen Utensil consists of a can for baking powder, cream tartar, spices, etc.; a measure for sugar, flour, cornstarch, farina, rice, etc.; a grater for nutmegs, cheese, bread, potatoes, squash, lemon or orange rind; a dredge for spices, sugar, flour, pepper and salt; a biscuit, cake or cookey cutter; a doughnut cutter; a patty or tart cutter; also a nutmeg, stick cinnamon and mace holder. It is the handiest and most practical utensil that has ever been seen. Calculated to lessen the burden of the practical housewife. By mail, 50 cts. SMITH MFG. CO., Alameda, Cal. To any body sending us the correct solution to the following problem we will send a Utensil free: A liquor merchant has a barrel of whisky, but he only has a 5-gallon and a 3-gallon measure, and he wants to measure off 4 gallons. How is he going to do it? We, however, limit the amount of Utensils to 4 for each town for the correct solution. Those who are too late will not be answered.



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FRENCH COOKING RANGES
TINWARE,
Kitchen and Bakery Outfits, Grate Bars, Bake Ovens and Furnace Castings.
814 & 816 Kearny St., S. F.
Prop's Jackson Foundry.

Death of General Fremont.

(*Concluded from page 57.*)

return to the States. He selected a southeast route leading from the lower part of the Columbia to the upper Colorado, through an almost unknown region crossed by high and rugged mountain chains. He soon encountered deep snows which impeded his progress and forced him to descend into the great basin, and presently he found himself in the depth of winter in a desert, with the prospect before him of death to his whole party from cold and hunger. By astronomical observation he found that he was in the latitude of the bay of San Francisco, but between him and the valley of California was a range of mountains covered with snows which the Indians declared no man could cross and over which no reward could induce them to guide him.

Fremont boldly undertook the passage without a guide, and accomplished it in forty days, reaching Sutter's Fort, on the Sacramento, early in March, with his men reduced almost to skeletons, and with only 33 out of 67 horses and mules remaining, and those that survived so weak and thin that they could barely walk while led along. He resumed his journey on March 28th and got back to Kansas after an absence of 14 months.

Fremont was breveted Captain in January, 1845, and in the spring of that year he set out on a third expedition to explore the great basin and the maritime region of California and Oregon. The summer and until October was spent in examining the head-waters of the rivers, whose source was the dividing ridge between the Pacific and the Mississippi Valley. Leaving the shores of Salt Lake in October he proceeded to explore the Sierra Nevada, and in the dead of winter again crossed the range into California for supplies. He made his way into San Joaquin valley, where, leaving his men to recruit, he went himself to Monterey to obtain from the Mexican authorities permission to proceed with his exploration. Permission was first granted and then revoked, and he was ordered to leave the country without delay. This he refused to do, as his men were in no condition to move at the time. The Mexican Governor Castro prepared to attack the 62 Americans of the party, but Fremont took up a position 30 miles from Monterey and built a rude fort, where he hoisted the American flag. No active steps were taken by either party and shortly after Fremont started up Sacramento valley for Oregon, but he was recalled by advices from Washington directing him to watch over the interests of the United States in California, there being fears that it would be turned over to England. Fremont promptly returned and the settlers flocked to his camp, and in less than a month Northern California was freed from Mexican authority. He joined the naval forces at Monterey and organized the California Battallion, a mounted force of which he was appointed Major. He was also appointed by Commodore Stockton Military Commandant and civil Governor of the Territory. War having broken out between the United States and Mexico, he was engaged in suppressing insurrections by the Mexican inhabitants and preventing a war with the Walla Walla Indians. January 13, 1847, he concluded with the Mexicans articles of capitulation, which terminated the war in California.

He left for "the States" in June, 1847, and arrived in Washington in September. October 14, 1848, Fremont, at his own expense, organized an expedition to cross the continent. He had 33 men and 120 mules, and with these he made his way along the upper waters of the Rio Grande, through the country of the Utes, Apaches, Comanches and other tribes then at war with the United States. He had resigned his position as Lieutenant-Colonel, and was no longer an officer of the Government. His object was to find a practicable passage by this route to California. In crossing the Sierras his guide lost his way and terrible suffering ensued. All of his animals and one-third of his men perished. Cannibalism was resorted to. Finally, he succeeded in retracing his steps to Santa Fe, N. M. Gathering together 30 men he made another start for California, and succeeded in reaching Sacramento in the spring of 1849.

Fremont now determined to settle down in California. He had bought the Mariposa estate in 1847, and on this large tract were a number of valuable gold mines. His title to the property was contested and he was kept in litigation until 1855, when the suit was decided in his favor by the Supreme Court of the United States. In 1849, he received from President Taylor the appointment of Commissioner to run the boundary line between the United States and Mexico. In December, 1849, the Legislature of California elected him on the first ballot as one of the two Senators to represent the State in the United States Senate. He resigned his Commissionership and went to Washington by way of the Isthmus. He took his seat in the Senate September 10, 1850, the day after the admision of California as a State, and in drawing lots for the terms he drew the short term, which expired March 31, 1853.

Fremont returned to California on the first steamer that sailed after Congress had adjourned. For two years he devoted himself to his private affairs, visiting Europe in 1852. In 1852, while in the Senate, Baron Humboldt sent him "the great golden medal for progress in the sciences." A few months earlier the London Royal Geographical Society sent him the "Founders' Medal." While in Europe he learned that Congress had made an appropriation for the survey of three routes from the Mississippi valley to the Pacific, and he returned to the States immediately for the purpose of fitting out his fifth expedition on his own account. He left Paris in June, 1853, and in September was already marching across the continent. He found the pass on the line of latitude 38 and 39 degrees, reaching California in safety. For 50 days his party lived on horseflesh, and for 48 hours at a time were without food.

With such a record of travel in these unknown regions, he fairly earned the title of "The Pathfinder," which he has held so long. He was in 1856 a candidate for the Presidency of the United States, but was defeated by Buchanan. In 1858 General Fremont returned to California. When the civil war broke out General Fremont went to the front and did good service. He resigned his commission in 1862. In 1877, he was appointed Governor of Arizona by President Hayes. Since the expiration of his term of office he has lived in retirement and engaged himself in civil pursuits.

At the last session of Congress, General Fremont was placed on the retired list of the army, and then for the first time in several years began to enjoy a comfortable income. He was the author of several books detailing his work of exploration west of the Mississippi.

General Fremont was singularly fortunate in his domestic relations. In October, 1841, he married Jessie Benton, a daughter of the well-known Senator "Tom" Benton, and in her he found a true helpmeet, who ably forwarded his various plans. She is a lady of varied attainments, literary and other, and is well known in social circles in New York and Washington. She is at present in Los Angeles, in this State, with her unmarried daughter Elizabeth. Mrs. Fremont's friends will at once urge that a pension be given her, as the little she makes by her literary labors is entirely inadequate for their support. A movement is talked of by the Native Sons of the Golden West looking to the erection of a monument and the eventual burial of Fremont's body in Golden Gate Park, San Francisco.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING JULY 8, 1890.

431,550.—BROILER—Wm. Brooks, Oakland, Cal.

431,872.—HEADLIGHT FOR LOCOMOTIVES—W. J. Burke, Seattle, Wash.

431,554.—CAR TRUCK—C. C. Butterbaugh, Los Angeles, Cal.

431,717.—HORSE FOOT PAD—F. M. Dreibelbis, Los Angeles, Cal.

431,662.—COMBINATION TOOL—F. Kortick, S. F.

431,607.—PULP DISTRIBUTOR—F. E. Monteverde, S. F.

431,708.—DAMPER—S. S. Richardson, Happy Camp, Cal.

431,676.—OPERATING ELEVATOR HATCHWAY GATES—C. P. Stanford, S. F.

431,788.—AXLE NUT—J. M. Thorp, Santa Rosa, Cal.

432,001.—HORSE COLLAR—T. J. Thorp, Flagstaff, Ariz. Ter.

432,002.—RUNNING GEAR FOR WAGON—T. J. Thorp, Flagstaff, Ariz. Ter.

431,680.—CABLE SHEAVE—F. B. West, S. F.

431,790.—AIR BRAKE—G. B. Williams, Portland, Oregon.

The following brief list by telegraph for July 15, will appear more complete on receipt of mail advices:

California—Henry Casebolt, San Francisco, excavating apparatus; George E. Crocker, Oakland, window-case hinge; William Davis, Los Angeles, cultivator; Willis S. Gilstrap Pixley, washing machine; Robert C. Grimes, Santa Monica, attachment for lawn mower; Hiram H. Hanmore, Santa Cruz, covering for pipes; Alden D Kilborn, Oakland, safety relief valve; John B. Masters, Stockton, cotton harvester; Bartlett McIntyre, San Francisco, loading mechanism for wire rope transmission; Walter McQuille, Los Angeles, grass catching attachment for lawn mowers; Nathan W. Moody, Fresno city, fuse cap fastener; Orrin W. Parker, Oakland, windmill; Seggey D. Smolianinoff, San Francisco, assignor to the Americanite Manufacturing Company of Virginia, explosive compound; George A. Stom, Golden Gate, vehicle running gear; James Van Curen, Ferndale, sandband.

Oregon—Alice M. Miller, Ashland, fruit boiler.

Washington—Joseph M. Clark, Colfax, double-acting pump.

Arizona—Louise J. Depuy, Phœnix, device for supplying gases and liquids to moving vehicles.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

NEWSPAPER AGENTS WANTED.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to soliciting subscriptions and advertisements for this journal and other first-class popular newspapers. Apply soon, or address this office, giving address, age, experience and reference. Special inducements to old agents.

DEWEY & Co., Publishers,
No. 220 Market St., S. F.

SOME sheep men tried to pasture a large band on the Fort Ellis Reservation, Montana, recently, but the grass was doctored with saltpeter one night and 400 dead sheep were found the next morning.

The Regan Vapor Engine Company.

Attention is called to the advertisement of this company on another page. The Regan engine has passed the experimental stage, and the large number sold (over 150) within a year, and now in successful operation on this coast, is as good evidence of its practical usefulness as need be offered.

Where the original purpose of this company was to supply a small power, cheap and conveninent for light requirements, it has enlarged its scope by careful steps, until now engines are being built up to as high as 60 h. p., with a prospect of being able to furnish a still greater capacity. The great economy and safety of these engines, and the almost endless use to which they are adapted, make them deserving the careful attention of all who require a motive power for any purpose. While many testimonials of satisfaction from those who have their engine in daily use are in the hands of the manufacturers, a still greater evidence of the Regan Vapor engine's merits is the fact that it has been adopted by Thos. Kane & Co. of Chicago and Racine, the largest launch builders in the United States, after having experimented for years to secure a perfect motor for their launches. A large number of engines ranging in sizes from ¾ to 60 h. p. are now in course of construction. Send for illustrated catalogue. Regan Vapor Engine Co., 221–223 First Street, San Francisco, Cal.

Fruit Grading.

Fruit assorting, we are glad to see, is being recognized by most of our leading orchard men and driers and packers, as adding to the reputation of our fruit, also resulting in larger financial gain to them.

It is only within the last few years that much attention has been given to this important subject, principally from the lack of a practical grading machine adaptable to the great variety of our fruits, and one that will handle without bruising a large quantity in a short time; but the John A. Jones patent of June 10th, 1890, (Messrs. G. G. Wickson & Co. of this city inform us) has been found to be entirely satisfactory; and judging from the number of orders and testimonials they are receiving, we think they are right.

Among their sales made this week were five to San Jose Pkg. Co., making six now purchased by that firm. Among a few prominent fruit-growers who have purchased the Jones grader are John Bidwell, N. P. Chipman, G. W. Hinclay, R. W. Wing, W. J. Dobbins, J. W. Gates, Page & Morton and Warren Dutton.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none out worthy men.

J. C. HOAG—San Francisco.
R. G. BAILEY—San Francisco.
SAMUEL CLIFF—San Luis Obispo Co.
C. J. WADE—San Bernardino Co.
W. W. THROBALDS—Santa Barbara and Kern Cos.
E. B. TAFT—Central California.
JOHN B. HILL—San Diego Co.
E. H. SCHARFFLE—Calaveras Co.
FRANK S. CHAPIN—Solano and Lake Cos.
W. B. FROST—Alameda and Contra Costa Cos.
J. G. H. LAMPADIUS—Santa Cruz Co.
GEO. WILSON—Sacramento Co.
H. KELLEY—Modoc and Lassen Cos.
WM. M. HILLEARY—Oregon
R. G. PARSONS—Northern California.
JOHN SIMPSON—Oregon.
WM. HOLDER—Oregon.

FEATHER RIVER FRUIT LANDS—In the notice of the Feather river orchards in the last issue of the RURAL it should have been stated that Mr. S. R. Johnson of San Jose is a partner with C. W. Reed in the ownership of the orchard described, also the numbers of several varieties of fruit trees should have been as follows: Bartlett pears, 8500; 2500 each of apples, cherries and plums, not including prunes.

FISH BROS. WAGONS of pioneer merit and sold by the trade everywhere. Ask for them or write Frank Brothers, San Francisco.

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PATENT
SOLICITORS.
220 MARKET. ST. S. F.
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HOME INSTITUTION
—OF—
DR. JOHN A. MILLER,
For Surgical Treatment of Abdominal and Pelvic Diseases of Women and Men. Good nursing and home comforts Send for announcement.
236 Taylor St., San Francisco, Cal.



Strongest, Most Durable, Easiest Running, and in every way THE BEST FEED CUTTER made. All Sizes, for Hand or Power. Carriers any length. For Low Prices and Best Discounts, send for Illustrated Catalogue "E." Valuable "Ensilage Encyclopedia," free to all who mention this paper. Also Manufacturers of the Celebrated Centennial Fanning Mill, and a full line of Horse Powers and Horse Power Jacks. The Freeman Implement Co., Portland, Or.

Real Estate Directory.

SAN FRANCISCO.

GEO. BEEBE & CO., 230 Kearny St. Large tracts Timber lands for sale. Government locations made.

OAKLAND.

E. P. VANDERCOOK & CO., City and Country Real Estate, 458 Ninth St., Oakland, Cal.

ANTHONY & GILLIS, City and Country property. Loans negotiated at low rates, 466 Ninth St., Oakland.

O. C. LOGAN, City and Country Real Estate and Loan Agent. Office, 481 Ninth Street. Oakland, Cal.

M. J. LAYMANCE & CO., Auctioneers and Dealers in City and Country Real Estate, 466 Eighth St., Oakland.

SEMI-ANNUAL STATEMENT

—OF THE—

GRANGERS' BANK

OF CALIFORNIA.

Amount of Capital actually paid in U. S. Gold Coin, Surplus paid up and Reserve Fund.... $815,313 76

STATE OF CALIFORNIA, }
City and County of San Francisco. }

A. D Logan and A. Montpellier being each duly sworn, severally depose and say that they are respectively the President and Cashier & Manager of the Grangers' Bank of California, above mentioned, and that the foregoing statement is true.

A. D. LOGAN, President.
A. MONTPELLIER, Cashier and Manager.

Subscribed and sworn to before me this 16th day of July, 1890. JAMES L. KING, Notary Public.

SEMI-ANNUAL STATEMENT,

Showing the Actual Condition of the

GRANGERS' BANK OF CALIFORNIA,

And the value of its Assets and Liabilities at the close of business June 30, 1890, viz:

ASSETS.

Loans on wheat, real estate and other securities	$1,601,014 74
Due from banks and bankers	11,575 40
Real estate	32,085 04
Office furniture, fixtures and safe	7,600 00
Cash on hand	156 447 36
Expenses and taxes	15,675 93
Total	$1,824 338 47

And said assets are situated in the following counties in the State of California, to-wit: Alameda, Butte, Contra Costa, Colusa, Fresno, Merced, Monterey, Placer, Stanislaus, Sutter, Solano, City and County of San Francisco, Tehama, Tulare, Yuba and Yolo.

LIABILITIES.

Capital stock paid in U. S. gold coin	$ 700,000 00
Surplus paid up and reserve fund	115,313 76
Due depositors, banks and bankers	974 372 87
Interest accounts	34,651 84
Total	$1,824,338 47

STATE OF CALIFORNIA, }
City and County of San Francisco. }

A. D. Logan and A. Montpellier being each duly sworn, severally depose and say that they are respectively the President and Cashier & Manager of the Grangers' Bank of California, above mentioned, and that the foregoing statement is true.

A. D. LOGAN, President.
A. MONTPELLIER, Cashier and Manager.

Subscribed and Sworn to before me this 16th day of July, 1890. JAMES L. KING, Notary Public.

J. M. WELSH, President. M. D. BAKER, Secretary.

ALTA

Fire Insurance Company

OF CALIFORNIA.

CHAS. W. DOHRMANN,

GENERAL AGENT.

Head Office, STOCKTON, CAL.

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Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

HENRY HAMILTON, Westley, Cal., breeder of Kentucky Jacks and Jennies, Draft Horses and Holstein Cattle. Jacks, Horses and Mules for sale.

EL ROBLAR RANCHO, Los Alamos, Santa Barbara Co., Cal., Francis T. Underhill, proprietor, importer and breeder of thoroughbred Hereford Cattle. Information by mail. C. F. Swan, manager.

JERSEY BULL No. 468 P. C. J. C. C. for sale cheap. A fine four-year-old animal. Address Dellwood Poultry Yards, Napa, Cal.

IMPORTED REGISTERED CLYDESDALE Horses and Holstein-Friesian Cattle from the most noted families. H. P. Mohr, Mt. Eden, Alameda Co., Cal. Visitors welcome. Correspondence solicited.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

CHARLES E HUMBERT, Cloverdale, Cal., Importer and Breeder of Recorded Holstein-Friesian Cattle. Catalogues on application.

WILD FLOWER STOCK FARM, Fresno Co. A. Heilbron & Bro., Props., Sac. Breeders of thoroughbred strains and Cruikshank Shorthorns; also Registered Herefords; a fine lot of young bulls in each herd for sale.

PERCHERON HORSES.—Pure bred horses and mares, all ages, and guaranteed breeders, for sale at my ranch near Lakeport, Lake Co., Cal. New catalogue now ready. Wm. B. Collier.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. None better.

REGISTERED HOLSTEIN CATTLE. Also best thoroughbred Poultry and Eggs. Address Hibbard & Ellis, Santa Rosa Breeding Association, Cal.

P. H. MURPHY, Perkins, Sac. Co., Cal., Breeder of Recorded Shorthorn Cattle and Poland China Hogs.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

P. PETERSEN, Sites, Colusa Co., Importer & Breeder of registered Shorthorn Cattle. Young bulls for sale.

JOHN LYNCH, Petaluma, breeder of thoroughbred Shorthorns. Young stock for sale.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

M. D. HOPKINS, Petaluma, importer and dealer in Eastern registered Shorthorns, Red Polled Cattle, Holsteins, Devons and Shropshire Sheep.

GEO. B. POLHEMUS, Coyote, Cal. Holstein-Friesian cattle, comprising males and females on advanced register. First premium in great milking test at State Fair, 1889, was won by a member of this herd.

PETER SAXE & SON, Lick House, San Francisco, Cal Importers and Breeders, for past 18 years, of every variety of Cattle, Horses, Sheep and Hogs.

GEO. BEMENT & SON, Maple Grove Farm, Oakland P. O., breeders of Ayrshire Cattle & Essex Swine.

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CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

CHAS. R. HARKER, Santa Clara, Calif. White Plymouth Rocks, exclusively. None better anywhere, East or West. If you want the latest and best improvement in poultry, get *genuine* White Plymouth Rocks. Write for prices. Eggs, $3 per 13; packed to go safely any distance.

JOHN McFARLING, 706 Twelfth St., Oakland. Cal., Importer and Breeder of Choice Poultry. Send for Circular. Thoroughbred Berkshire Pigs.

R. G. HEAD, Napa, Cal., breeder of the choicest varieties of Poultry. Each variety a specialty. Send for new Catalogue.

O. J. ALBEE, Lawrence, Cal. Pure bred poultry.

SHEEP AND GOATS.

KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

L. U. SHIPPEE, Stockton, Cal., importer and breeder of Spanish Merino Sheep, Durham Cattle, Jacks and Jennys & Berkshire Swine high graded rams for sale

S. W. WOOLSEY & SON, Fulton, Cal., importers & breeders Spanish Merino Sheep; ewes & rams for sale.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Cross-bred Merino and Shropshire Sheep. Rams for sale.

R. H. CRANE, Petaluma, Cal., breeder and importer. South Down Sheep from Illinois and England for sale.

ANDREW SMITH, Redwood City, Cal.; see adv't.

SWINE.

JOSEPH MELVIN, Davisville, Cal., Breeder of Poland-China Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

TYLER BEACH, San Jose, Cal., breeder of thoroughbred Berkshire and Essex Hogs.

ANDREW SMITH, Redwood City, Cal.; see adv't.

BEES.

APIARIAN SUPPLIES for sale by Mrs. J. D. Enas, Napa City, Cal.

APIARIAN SUPPLIES.

Italian Queens, $2.50 each; Black Queens, $1 each. Swarms from $2.50 each; Smoker, $1. Comb Foundation, $1.25 per pound; V-groove Sections, $4 per 1000 Comb Honey wholesale and retail; Hives, etc. W. STYAN & SON, The Homestead Apiary, San Mateo, Cal.

IMPORTANT!

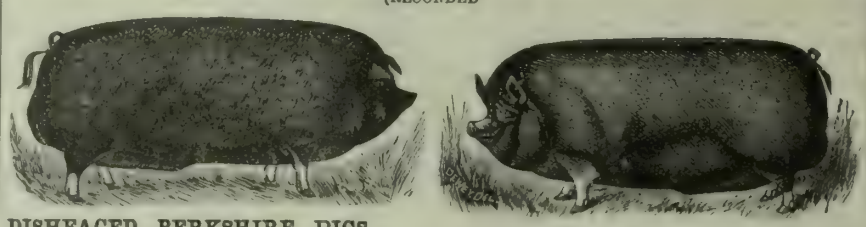
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San Francisco, Cal., Oct. 22, 1888. **PETER SAXE & SON, Lick House, S. F.**

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IMPORTER AND BREEDER OF THOROUGHBRED

(RECORDED



DISHFACED BERKSHIRE PIGS,
IMPROVED POLAND-CHINA PIGS,
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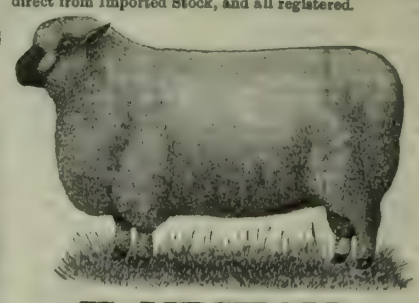
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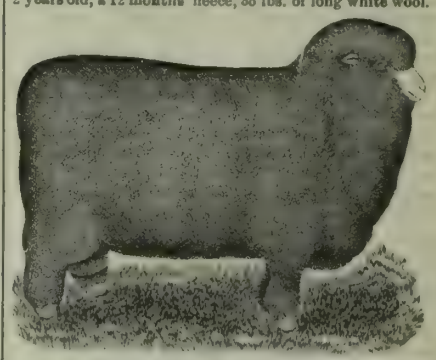


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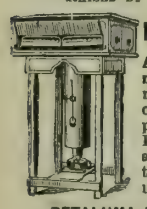
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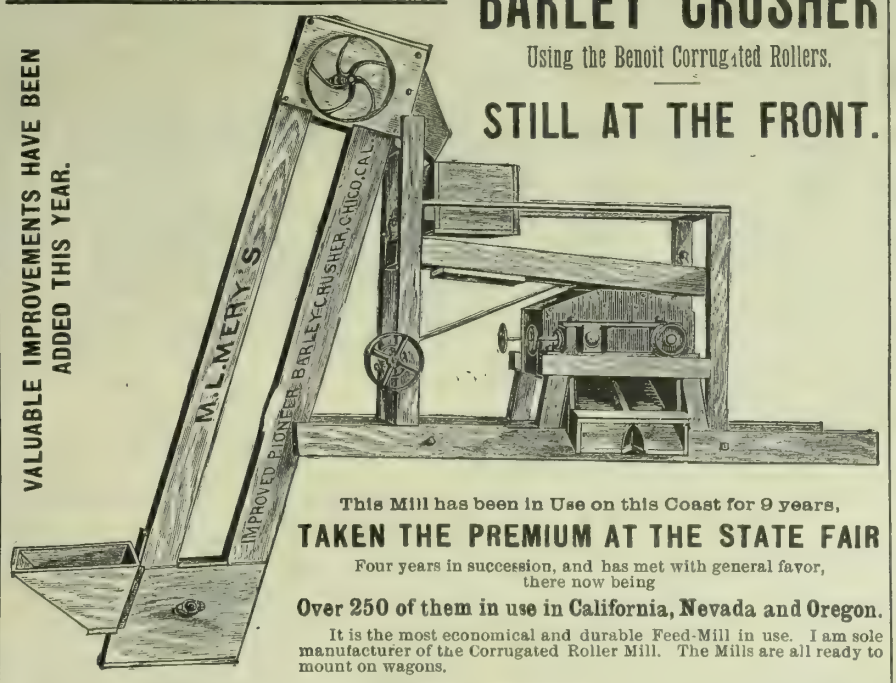
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Mr. M. L. Mery, Esq —DEAR SIR: The 9x14 Barley Crusher bought of you and used in the California Mills, gave entire satisfaction; have crushed 8000 pounds an hour. I have also crushed as much or more on set 10x20 when working for General Bidwell, which set he is using in his mill to-day. Yours truly,

GEORGE SHAND.

TRAVER, May 3, 1887.

Having used one of the Barley Crushers manufactured by M. L. Mery, of Chico, Butte County, I can say it will do all that is claimed for it, and to those wishing an A No. 1 machine, I would recommend it as the very best. I have crushed 35 tons in 11 hours' work.

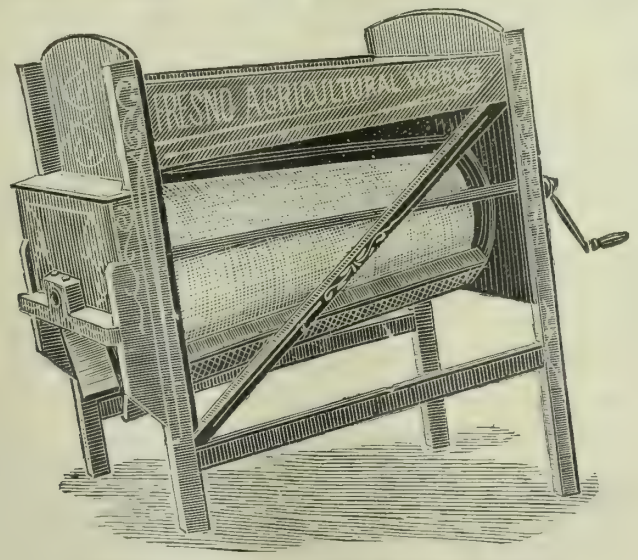
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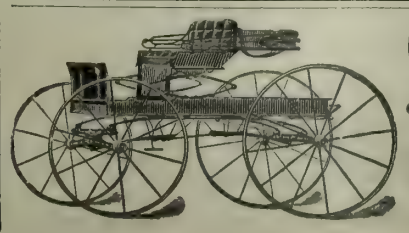
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC

SAN FRANCISCO, July 16, 1890.

Cool but clear weather still favors harvest work, which is well advanced in the different parts of the State. The cereal crops are still a matter of conjecture owing to the diversified yield, and also to the acreage seeded not being known. Even without the latter information it is safe to place the yield of wheat, barley and oats in this State at less than last year's, with the two first falling considerably short.

Money promises to be fairly easy which is an important consideration in moving the crops.

Trade in general produce has been fairly active, particularly in cereals. Wheat after advancing abroad began to set back, closing to-day as follows as reported by telegraph:

LIVERPOOL, July 16.—Wheat—Fair inquiry. California spot lots 7s to 7s 2½d; off coast, 23s 3d; just shipped, 37s 6d; nearly due, 38s; cargoes off coast, quiet but steady; on passage, rather easy; Mark Lane wheat, steady; Mark Lane maize, quiet; weather in England and France, very fine.

Foreign Grain Review.

LONDON, July 14.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: Continued rain renders the outlook less favorable. Ripening is backward and quite four weeks distant. English wheat is high r. Trade in foreign wheat is brisk. Californian wheat is 1s. higher. Large stocks of flour prevent an advance in that staple. Barley is 3d higher. Maize was also higher. To-day grain was hard to move at the advances. Foreign White was 9d. and Red 6d. dearer. The market closed 6d. dearer for Russian and 9d. dearer for heavy oats.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	July.	Aug	Sept.	Oct	Nov.	Dec
Thursday....	7s2¼d	7s3½d	7s3d	7s4½d	7s4½d	7s4½d
Friday	7s2¼d	7s3½d	7s4½d	7s4½d	7s4½d	7s4½d
Saturday	7s3d	7s3½d	7s4½d	7s5d	7s5½d	7s5½d
Monday	7s3d	7s3½d	7s4d	7s4½d	7s4½d	7s4½d
Tuesday	7s2½d	7s2½d	7s3d	7s3½d	7s4d	7s4d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	37s6d	37s0d	37s6d	Strong.
Friday.....	37s0d	37s0d	37s6d	Advancing
Saturday.....	37s0d	37s6d	37s9d	Improving.
Monday.....	38s0d	37 6d	38 0d	Quieter.
Tuesday	38s0d	37s6d	38s0d	Firm.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York for the past week:

Day.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday	95½	94½	94½	94½	95¾	96½
Friday.....	94½	94	93⅝	...	...	95¾
Saturday.....	95¼	94⅝	94½	94¾	95⅞	96⅝
Monday	95¼	94⅝	94½	95	95⅞	98¼
Tuesday.....	94½	93½	93⅛	93⅜	94½	94⅝

The closing prices for wheat have been as follows at Chicago for the past week:

Day.	July.	Aug	Sept	Oct
Thursday.....	...	89¼	90	...
Friday.....	88½	88⅞	89⅝	...
Saturday	...	88⅜	89¼	...
Monday.....	...	85⅝	89⅜	...
Tuesday.....	...	87⅛	88⅜	...

NEW YORK, July 16.—Wheat—90c for cash, 93c for August, 92⅝c for September, 94½c for December, and 98c for May.

CHICAGO, July 16.—Wheat—86⅜c for August and 88c for September.

India Wheat Crop.

NEW YORK, July 14.—Figures received here from the report of the Revenue and Agricultural Department of India give the details of the wheat crop of the Bombay Presidency for the season of 1889-90. The figures are up to May 5th last. The area sown to wheat was 2,874,000 acres or 4 per cent below that of last year or 2 per cent below the average. The crop as estimated will, however, show an increase of 12.35 per cent, owing to the better condition of the grain. There are large increases in the wheat acreage in the Scinde district. It is estimated at 56 per cent over last year and 73 over the average area. In Spikarpur the average has risen from 162,000 to 279.000. Of a total area of 691,891 acres, 24 per cent are returned under irrigated and 2,182,119 acres, or 76 per cent, under dry wheat. A report is also received concerning the central provinces dated May 29th, which places the wheat product of that section at 832,632 tons.

Condition of Crops.

WASHINGTON, July 10.—The winter wheat report of the Department of Agriculture for July represents the crop, as harvested, in all but its more northern latitudes. It shows some advance in the condition where it was lowest in June. In Michigan, Indiana, Illinois and Missouri there is a slight decline. In Ohio, Kentucky and the Pacific Coast and in the Southern States the general average is 76.2 against 78.1 last month. The spring wheat average is advanced from 91.2 to 94.4. The averages of the principal States are: Wisconsin, 93; Minnesota, 94; Iowa, 94; Nebraska, 98; the Dakotas, 93; Colorado, 90; Washington, 93. Taken together, winter and spring wheat makes an average of 82.1. A small increase in the area of corn is reported of about six-tenths of 1 per cent. There is a proportionate extension in the Northwest, and there will be nearly 1 per cent increase in the South. The condition of corn averages 93.1 per cent. There has been a severe decline in the condition of oats, which have fallen from 89.8 to 81.6. The condition of rye is 92, nearly the same as the last report. Barley advanced from 86.4 to 86.8. The acreage of potatoes has not appreciably increased. The average condition is 91.7. The condition of pasturage is high, averaging 96.

Chicago Market.

CHICAGO, June 13.—For beans there is a little better demand. Dealers have been holding off for some time. As their stocks have become reduced this in turn brings them on the market again. Holders, in view of this and the dry weather evince more firmness, and asking prices have been somewhat advanced. Buyers have consented to pay a shade over former figures, but are not in the mood to meet the full views of some holders. Beans are quoted as salable at the following prices: California Lima beans, choice, 5¼@5⅝c per lb; do, common, 2@4c. Hops are quiet for the offerings are small. Choice hops are reported firm and in fair demand and very scarce. There are ordinary and common grades, also some slightly damaged lots on the market and these rule dull. Prices are quoted as follows: Washington, choice, 22@23c per lb; prime, 20@21c; fair, 16@18c; California, choice, 20@22; fair to good, 17@19c; Oregon, choice, 18c.

Delaware Peach Crop.

DOVER (Del.), July 9.—This season not a single carload of peaches will be shipped from the entire Delaware peninsula. Few growers will save even a basket for their own use, and many not a single peach. In former times it was no extraordinary thing for 300 carloads to be shipped daily, and some stations sent off as many as 35 cars in a single day. The failure of the fruit crop is not confined to peaches, but apples, pears, plums, grapes and cherries are all short and scarce, so that a general dearth is inevitable.

New York Fruit Crop.

NEW YORK, July 13.—A *Tribune's* Kingston dispatch says: As the season advances the comparative failure of the fruit crop along the Hudson river becomes more apparent. The effect of the severe winter upon some of the orchards is now supplemented by dry weather. Cherries are a failure; early pears and apples are turning out badly; raspberries will fall below the average yield; plums are almost a failure; Bartlett pears, always so reliable in this region, are now far less promising than usual without any perceptible cause. Canners are already trying to secure crops, but they find a disposition to decline advance contracts. The apple outlook is a little better. Late varieties are dropping badly, and the fall and winter supply in the river region will be small. The general farmer is not dependent upon the fruit crop, though he is now hoping for rain to push along his late potatoes, corn and buckwheat. The crops of grain and hay are heavy and good.

Eastern Wool Markets.

PHILADELPHIA, July 11.—Wool is quiet. Montana, 17@25; Territorial, 16@22c.

BOSTON, July 11.—Territory wool is quiet with sales on a scoured basis of 60c for fine, 56@58c for fine medium, and 53@55c for medium. California and Oregon wools are dull and no sales of importance are reported.

NEW YORK, July 11.—*Bradstreet's* says: The feature of the wool market is its dullness, having nearly reached the stagnation point. The shutting down of many mills in New England, together with the disturbing influence of proposed tariff legislation has been effective in lowering the amount of sales to 1,231,000 lbs domestic and 321,000 lbs foreign wool. Michigan, Territory and pulled wools partake of the general dullness and inactivity, but Texas supplies have arrived in liberal amounts though sales have been small. Ohio manufacturers are said to have been operating a little more freely, mostly at 30c for fine grades. American competition at the London wool sales is very strong, maintaining about the same prices as at the last auction sales.

NEW YORK, July 14.—Heavy dealings in Texas wool prevent the market from looking as slim as it otherwise would in the present halting style of buying. The East stocks are enlarged, with decidedly more access to Western, but there is no large investing or speculative feeling. Prices hold about their own: 20,000 lbs of California scoured, 25,000 spring, and 150,000 do Texas, private terms: 357.000 lbs do, 18@22c; 93,000 lbs do, 21@23; 10,000 lbs Wisconsin delaine, 33½c; 10,000 lbs scoured Nevada, 57c; 10,000 lbs fine washed fleece, 29@30c; 20,000 lbs fine unwashed and unmerchantable, 22½@25½c; 10,000 lbs No. 1 pulled, 15c; 50,000 lbs German do, 18c; 71,000 lbs domestic, 408,000 lbs foreign at private terms. The Boston market has not recovered from the holidays. Few buyers of light grades; 2,119 000 lbs foreign and domestic, including 75 000 lbs spring California, 17@24c. Philadelphia reports limited business with a cautious feeling.

Miscellaneous.

NEW YORK, July 13.—Lima beans jobbed at $3.45. Dry hides firm and in fair demand. Full prices; 1000 California sold.

Ship honey in new cans only. There is a complaint about impure packages.

Hops continue strong. Four or five hundred bales changed hands, mostly stale, at 21c. The foreign crops are not encouraging. There have been London bids equal to 24½c. Washington contracts, new, named at 17½c The brewing demand is steady. State range from 18@22c; Pacific, 18@21c; 1888's, 12@15c; old, 4@6c.

Raisins—Dealers regard the policy of packers making delivery rates for December lower than September as a derangement to confidence.

The future of canned and dried fruits is as bright as ever, and it is generally conceded that the country cannot get along without all of the Pacific's surplus if the prices are not inordinately overstrained. Of the old crop, only apricots remain here, now worth $1.75.

Local Markets.

BARLEY.

	Buyer Season. H.	L.	*Buyer 1890 H.	L.	Buyer 1890. H.	L.
Thursday...	120	119½	116½	115	117	114½
Friday.....	121½	121½	117½	115	115½	116½
Saturday....	120½	120	115	115	116	115½
Monday.....	123½	120½	118	116½	118½	117
Tuesday.....	122½	122	...	...	118¼	117½

*After August.

WHEAT.

		S. S. Nov.	B. '90.	*B S. '90	S'90.
Thursday....	h.	140⅝	143⅝	....	....
	l.	140¼	143¼	....	....
Friday.....	h.	....	143⅝	148⅞	134½
	l.	....	142⅝	148⅛	134½
Saturday....	h.	....	143½	150	134½
	l.	....	143½	149⅞	134½
Monday.....	h.	....	143⅝	149⅝	....
	l.	....	143½	149⅜	....
Tuesday.....	h.	....	141⅞	148	....
	l.	....	141½	148	....

BAGS—The market is weak at a decline. The firmness reported in last week's issue was based principally on a demand from up north which, when met, gave way. Standard-size grain bags are quoted at 6½@6⅝c.

BARLEY—The sample market has shown more activity at steadily advancing prices. This advance was generally looked for by careful operators, and of which the RURAL PRESS patrons were duly informed. In futures, the market has been very active, the higher prices having drawn in more operators. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—100 tons, $1.17¾; 200, $1.17½; 100, $1.17⅞ ₩ ctl. Afternoon Session: Buyer 1890—200 tons, $1.18¾ ₩ ctl. Buyer 1890, after August 1st—200 tons, $1.18 ₩ ctl. May—100 tons, $1.18 ₩ ctl.

BUTTER—The market shows more strength with gilt-edged marked up one cent a pound. The cooler weather and gradually lessening local supplies at distributing points combined with free consumption are in sellers' favor.

CHEESE—The market is firm at a slight advance. The demand continues to improve while the supply is decreasing.

EGGS—The market is very strong for selected fresh laid but for other kinds it is easy. The stock in cold storage is being added to by daily overland receipts.

FLOUR—The market is firm at full quotations.

WHEAT—The market has held very strong, although at the close buyers are asking for concessions, which holders, unless pressed for money or else to save expenses, are not willing to concede. The advance in silver will tell still more in favor of wheat, for the higher silver advances the more it will cost to lay Indian and Russian wheat down in the European importing countries. On Call futures were quite active up to Monday when an easing off set in, which caused a dull market. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—400 tons, $1.41⅝; 200, $1.41¾ ₩ ctl. Afternoon Session: Buyer 1890—100 tons, $1.42 ₩ ctl. Buyer season—100 tons $1.48⅝ ₩ ctl.

COMMUNICATED

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending July 16.h, were as follows:

Flour, qr. sks....	84 874	Middlings, sks...	2,571
Wheat, ctls..	100,301	Alfalfa, " ...	....
Barley, "	44 537	Chicory, bbls..	144
Rye, "	2,033	Broomcorn, bdls..	....
Oats, "	2,011	Hops, bls.....	11
Corn, "	2,333	Wool, "	1,416
*Butter, "	1,158	Hay, tons.....	3.547
do bxs	702	Straw, "	30
do bbls	2	Wine, gals.....	181,939
do kegs	115	Brandy, "	2.880
Cheese, ctls	869	Raisins, bxs	117
do bxs	62	Honey, cs	4
Eggs, doz.....	42,000	Walnuts, sks	....
do " Eastern.	72,840	Flaxseed, sks	....
Beans, ctls.....	1,243	Mustard, sks	....
Potatoes, sks....	18,911	Almonds, sks	....
Onions, "	2,106	Peanuts, sks.....	....
Bran, sks.	17,322	Popcorn sks.....	....
Buckwheat, sks...	....		

*Overland 126 ctls.

Cereals.

The local wheat market has ruled quite active at slightly higher prices. In the interior, buyers have paid an advance on the bids made in this city. The higher prices are largely due to bad crop weather in England, which is evidently exaggerated; yet it is sufficiently bad to do a large amount of damage to the growing crops. Unless there is soon a change for the better in the weather in that country, then the gloomiest reports will be realized. The higher price of silver is in favor of wheat, for it will make Indian and Russian wheat cost more laid down in England and also on the continent. Among the better informed operators the opinion prevails that Congress made a serious mistake in not remonetizing silver by passing a free coinage bill; yet this can be remedied by farmers at the next election voting only for Congressmen favorable to the free coinage of silver. The bill which has become a law will still keep silver below par. With silver at par, which can only be secured by free coinage, wheat and other cereals will be largely advanced in price and the advance placed upon a more staple footing.

In this State, harvest returns are still conflicting from the Sacramento valley, but more uniform from the San Joaquin valley and the southern part of the State. From Oregon and Washington our advices are uniformly good.

Regarding tonnage for wheat, it is stated that there will be a sufficient supply for this State provided the usual number of vessels are added before January 1st to the fleet on the way. The tonnage on the way to Oregon and Washington shows a very large increase—fully double that on the way at this time in 1889. This will tend to keep charters up north to fairly low figures.

The barley market has ruled quite active at advancing figures. The well-informed hold to the opinion that this year's crop will not be enough to meet the demand, which, if the case, will of necessity bring about, later on, a still higher range of values. The grade this season is better than for years. It is said that there is quiet buying of the best grades of brewing for Eastern account.

Oats have exhibited a fair degree of strength, with trading light. The crop in Oregon will, it is reported, be above an average, but in this State it will be short.

Corn is strong at a slight advance. The demand is good. Crop advices are uniformly good.

Rye is strong at an advance. The crop is short when compared with last year's.

There has been some buying of corn, in the market, for Central America, and rye for Japan.

Feedstuffs.

For ground feed there is a continued free demand, but free receipts of bran keep that article from advancing. Ground barley is strong at an advance. The higher prices are calculated to lessen the demand.

Hay is reported unchanged. Receipts of new are fair. There is a growing impression among dealers that unless the coming winter is very severe the supply of hay will be large, and this, too, in the face of old hay being about all fed out. The crop in Nevada and up north is said to be large.

Fruits.

The receipts of fruits continue unusually light. It is claimed that they are lighter than for many years. This, as heretofore stated, is due to heavy shipments, larger than ever before, to the East, free canning and freer drying.

Crawford peaches are coming to hand more freely. Plums of the various varieties are in fair receipt. Pears and apples show an improvement in quality. Green gages are in better supply. Apricots continue fairly scarce. Currants and cherries come in semi-occasionally. Blackberries are in better supply, but the demand is free. Strawberries are in light receipt. Raspberries come in fairly free. Huckleberries sell high. Apples are in freer receipt with the quality showing an improvement. After selling at very low prices figs are now scarce and fetch more money. Watermelons and canteloupes show increasing receipts, causing prices to shade off.

Receipts of grapes are still light, with quality generally poor. The crop promises to be large, quality good, also the demand. Wine-makers will use increased quantities and pay good prices too.

The dried fruit market is strong, with slightly better prices obtainable. Light crops of green fruits at the East and also in this State are the primary cause for the high prices ruling for dried fruits. Peaches, apricots and prunes are in active demand with high prices paid. For bleached apricots, in bags, 14c is paid for the more choice by the more choice by the carload. Bleached peaches have been contracted for at as high as 16c for the more choice. Sun-dried and peeled peaches are slow of sale. Nectarines are coming into more general favor. Contract sales have been made at from 11½@13c. Prunes are selling at from 7@10c a pound.

A private circular reports that the supplies of raisins are very small at present, and it takes still two months before new raisins are ready for shipment. The coming crop will probably be larger, but prices will most likely rule as last year, or even higher, in consequence of the heavy demand and the high prices to be paid to the growers. Grapes will be higher this season, because last year's prices were to low to make the drying pay for the packers as well as the growers. This year larger quantities of green grapes will be sold to the wine-makers, and while last year there were a good many old dried grapes unsold in the different markets, at present there are no grapes unsold to speak of. The demand for them is therefore already now quite active, although they will not be ready for shipment before September.

Vegetables.

In garden truck, summer squash, cucumbers and tomatoes are lower. Beans are unchanged as is garlic. Okra continues to rule high. The green corn this year is mostly wormy, but notwithstanding this prices hold up well. The first consignment of this year's marrowfat squash came to hand the past week and sold at $20 to $22 a ton. Green peppers are weaker as are egg plants. Cabbages and root vegetables are unchanged.

Receipts of onions are only fair, which tend to keep a steady market. For shipping there is a fair inquiry for good keepers.

Potatoes have shaded off under free receipts. Buyers do not anticipate their wants, which causes a lower tendency. As the keeping quality improves, the demand for shipping increases.

Live-stock.

The market for bullocks continues in buyer's favor. Mutton sheep are firmly held under a good demand. With cooler weather the demand will again set toward bullocks. Hogs are essentially unchanged for packing, but for the block small-sized hogs fetch an advance. Milch cows are fairly steady. For fair-sized work horses there is a good demand, but small move slowly. There is a good demand for general utility animals, single-footers, matched teams and driving animals.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4½@4⅝c ₩ lb; dressed, 7@8c ₩ lb.; heavy, 3⅞@4½c ₩ lb.; dressed, 5¾@6½c ₩ lb. Stock hogs, 4½@4⅝c ₩ lb.

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¾@—c ₩ lb.; second quality 5@5½c ₩ lb.; third quality, 4½c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6@8c ₩ lb.; large, 4@6c.

MUTTON—Wethers, 7½@8c ₩ lb.; ewes, 7@7½c ₩ lb.; lamb, spring, 7½@8½c.

Miscellaneous.

Exports by sea the past week aggregate as follows: Wheat, ctls, Dunkirk, 55,760; Rio de Janeiro, 46,848. Flour, bbls, Central America, 2912; Mexico, 507; Panama, 375; Tuamaco, 172; South America, 790; Petropaulovski, 1100. Dried fruits, lbs, Victoria, 650; Winnipeg, 2500; Mexico, 500. Brandy, gals, 2327. Wine, gals. New York, 60,866; Central America, 639; Mexico, 2870; France, 300. Hops, lbs, 3000. Canned fruits, cs, Sydney, 1550.

Poultry has held fairly steady throughout the past week.

Beans are shading off under a lessened inquiry, with buyers bidding down. This is usually the case when the new crop begins to come in.

Hops continue to rule strong under an active demand. The supply of old is about exhausted. For new, contracts are being made at from 15@20c a pound.

Wool is reported in buyer's favor, although no lower quotations are given. Private advices are still of a discouraging character, owing to the depressed condition of the flannel and goods trade.

From the *Commercial News* of July 16th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	237.775	258,523
On the way to neighboring ports	21,269	28,781
In port, disengaged.....	14 249	21,349
In port, engaged for wheat....	40.330	51.751
Totals.....	313 623	360,404

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to July 10, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls.....	241 913	289.124
Flour, bbls.....	21 348	45 624
Barley.....	2,044	4.500

California Fruits East.

CHICAGO, July 11.—The Earl Fruit Co. sold two carloads of California fruit as follows: Bartlett pears, $3.10@3.55; peaches, small, $1.95@2.65; apricots, $1.65@1.85 for choice; Royal Native plums, $1 80@1.90; figs, 10-lb boxes, 65c@$1.15.

Porter Bros. sold one carload as follows: Apricots, $1.10@1.60; plums, $2; figs, $1.15.

CHICAGO, July 12.—California green fruits are quoted as steady and a fair demand exists. Apricots, 20-lb box, according to quality, $1.50@$2; Black Tragedy plums, 20-lb crt, $1.75; peach plums, $3.25@3 50; Bartlett pears, 40-lb box, $3@4; Red apples, $2@2.25.

CHICAGO, July 12.—The Earl Fruit Co. sold California fruit to-day as follows: Peaches, $2 25@2.60; peach plums, $2.60 ₱ box; Royal Native plums, $1.85@2.20; apricots, hf crts, $1.30@1.90; small box, $1.45; small prunes, 20-lb box, $2.50; figs, 10-lb box, $1@1.25.

Porter Bros. sold four carloads as follows: Pears, $2.50@3.30; peaches, $1.75, average, $2.60; plums, $1.80@3.30; prunes, $2.65@3 90; apricots, $1.30@2, average, $1.75.

NEW YORK, July 12.—At the auction rooms of E. L. Goodsell, one car of California fruit was sold this morning and brought the following prices: Apricots, $2 65@2.70; peaches, $3 30; peach plums, $3 45@3.55. One carload sold this afternoon as follows: Apricots, $1.75@2.60; peaches, $2.40@$2.70; figs, $2.50@2.80; Royal Native plums, $2.10@2.45.

NEW YORK, July 13.—Fresh Pacific fruit buoyant and active. Sales at auction: Six hundred boxes peaches and apricots, $1.25@$1.35; 77 crates, $1.70@4.80; 148 of cherries and plums, 65c@$1.40; 292 10-lb boxes of Royal Anne cherries, $2.10@2.9; 1365 boxes of peaches and plums, $2@2 80; fancy, $3.45@3 55; 545 boxes Gifford pears, $2.25@2.30; 208 boxes P. D. plums, $2.30@2.50; 240 boxes Tragedy prunes, $3.15@3.75; German, $2.65; Royal H. Plums, $1.70@2 40; green figs, $2.50@2.80; Astrachan apples, $2.10. A. T. Hatch's 800 boxes of apricots, the finest ever seen here, sold promptly at $2.65@2.70; others down to $2.40.

CHICAGO, July 14.—The Earl Fruit Co. sold four carloads of Bartlett pears at $2 90@3.50; peaches, $2@3.25; apricots, $1.40@1.70; plums, $2.15@2.50, Bradshaw, $2.15@2.60; German prunes, $2@2.50. The fruit in poor condition sold for less.

CHICAGO, July 15.—The Earl Fruit Co. realized the following prices to-day: Bartlett pears, $2.90@3.30; apricots, over-ripe, $1.05@1.50; figs, small boxes, 45c@$1.05.

CHICAGO, July 15.—Porter Bros. sold six carloads of Bartlett pears at $3@3.50, with the exception of some very small stock at $2.10@2 70; Crawford peaches at $2 40@3.60; Hale's at $1.75@2.75; plums at $1.55@3.25; prunes, $2 50@3.25; apricots (poor order), boxes, 80c@$1.30; half-crates, 65c@$1.20; grapes, half-crates, $3.

CHICAGO, July 16.—California green fruits are in fair request and steady, quotable as follows: Apricots, 20-lb boxes, $1.50@2; peaches, $2@3; German prunes, $2.75@3; purple Duane plums, $2.75@3; Royal Native, $2.50@2 75; Bartlett pears, $3.25@3.50; Sweetwater grapes, $3.50; Nectarines, $2; Red apples, ₱ bushel, $2@2.25. Old hops are in much reduced supply and those left, vary from fair to common. None of really choice grade are on sale. There is a fair demand for anything at all good, but poor grades are slow. The range of prices is as follows: Washington, choice, 22@23c; prime, 20@21c; fair, 16@18c; California, choice, 20@22c; fair to good, 17@19c; Oregon, choice, 18c ₱ lb. The demand for beans is very moderate. Usual buyers are taking beans merely to keep supplied for current wants. There is no buying in advance of requirements. The supply is fair but not heavy. Holders are inclined to be firm but the quotations given below are about all that can be realized: California Lima beans, choice, 5¼@5½c ₱ lb; do, common, 2@4c.

CHICAGO, July 16.—The Earl Fruit Co. sold California fruit to-day as follows: Fontainebleau grapes, half-crates, $3.70; peaches and plums, $2 95; Hative, $1.80@2.30; Hale's Early peaches, $1.75@2.35; apricots, $1.40@1.65; figs, 65c.

Porter Bros. sold five carloads as follows: Bartlett pears, $2.70@2 45; fancy French prunes, $3.34; Tragedy prunes, $3.10@3.25; Washington plums, half-crates, $2.75@3; Purple Duane, boxes, $2.20@2 75; Golden Drop, $3.05; German prunes, $2.40@2.65; Crawford peaches, $2.70@3.70; Hale's Early, $1.75@2.35; Foster, $2.20@2.85; grapes, $2.20@2.85, part of them in bad order; Magnum Bonum plums, $2.60@3.05; apples, $2.95; St. John's peaches, small, $1.65@2.10.

NEW YORK, July 16.—The agents of the California Fruit Union auctioned to-day one car of fruit as follows: Bartlett pears, $3.80@3.85; Peach plums, $3.55; Purple Duane, $2.40@3.15; Quackenbush, $1.80; German prunes, $2.35; Crawford and Hale's Early peaches, $1.15@2.20; Royal apricots, $1.25@1.50. Most of the fruit was in poor order, especially peaches and apricots.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 16, 1890.

Bananas, bunch	1 00	@	3 50
Cranberries	—	@	—
Limes, Mex	4 50	@	6 00
do Cal sml cases	75	@	1 50
Lemons, Cal., bx.	1 00	@	1 50
do Sicily, bx.	5 00	@	6 00
do Malaga	4 00	@	6 00
do do Seedling	1 50	@	2 50
Pineapples, doz.	3 00	@	3 50
Strawberries	—	@	—
fair, chest	5 00	@	8 00
choice, chest	10 00	@	15 00
Apricots, lb	3	@	4
Raspberries do.	6 00	@	8 00
Blkberries, do.	3 50	@	5 00
Figs, box, black.	65	@	85
do white	45	@	70
do Smyrna	—	@	—
Plums, lb	2½	@	3½
Peach plums	1 00	@	1 25
Pears, bx	75	@	—
do Bartlett	1 50	@	2 25
Peaches box	75	@	1 00
do choice	1 25	@	1 50
Grapes, box	50	@	1 50
Apples com box	50	@	75
do choice	1 00	@	1 50
Nectarines, Red	50	@	80
do White	1 00	@	1 25
Waterm'l'ns	100	12 00	@15 00
Cantaloupes crt	1 50	@	3 50
Crabapples, box	50	@	75

VEGETABLES.

Okra, dry, lb	6	@	10
do green	10	@	20
Parsnips, ctl	1 25	@	1 50
Peppers, dry, lb	12	@	—
do green, bx	75	@	1 00
Turnips, ctl	75	@	1 00
Beets, sk	75	@	1 00
Cabbage, 100 lbs	75	@	1 00
Carrots, sk	50	@	60
Mushrooms, Cultivated, lb	—	@	—
Wild, lb	—	@	—
Cucumbers, box	25	@	90
Tomatoes, bx	10	@	50
Garden peas, lb	2	@	3
Sweet do do	1½	@	2
String Beans	1	@	1½
Wax, do	2	@	3
Fountain do	1½	@	2
Squash, summer, bx	40	@	60
Garlic, lb	4	@	5
Green corn doz	12½	@	25
do do com sk	75	@	1 25
Egg Plant, lb	8	@	12

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE, July 9-15.	Olympia. Rain	Temp.	Wind	Weather.	Portland. Rain	Temp.	Wind	Weather.	Eureka. Rain	Temp.	Wind	Weather.	Red Bluff. Rain	Temp.	Wind	Weather.	Sacramento. Rain	Temp	Wind	Weather.	S. Francisco. Rain	Temp.	Wind	Weather.	Fresno. Rain	Temp.	Wind	Weather.	Keeler. Rain	Temp.	Wind	Weather.	Los Angeles. Rain	Temp	Wind	Weather.	San Diego. Rain	Temp	Wind	Weather.
W.	.10	66	SW	Cl.	20	64	N	Fr.	.00	60	N	Cl.	.00	86	Nw	Cl.	.00	86	Nw	Cl	00	66	W	Cl.	00	88	Nw	Cl	.00	90	S	Cl.	.00	74	W	Cl.	00	72	Nw	Cl.
T.	.00	66	W	Cy.	.00	76	SE	Fr.	.00	58	N	Cl.	.00	94	Nw	Cl	00	88	Nw	Cl	10	64	SW	Cl	00	92	N	Cl	.00	88	W	Cl	.60	74	W	Cl.	.00	66	SW	Fr
F.	.01	66	SW	Cl.	.00	72	Nw	Fr	.00	60	Nw	Fy	.00	98	S	Cl.	00	90	S	Cl.	00	62	SW	Cl.	30	102	S	Cl.	.00	88	SW	Cl.	.00	78	SW	Cl.	.00	68	W	Fr.
S.	.00	64	N	Cy.	.00	66	N	Fr.	.00	58	N	Cl.	00	98	SE	Cl.	00	88	SW	Cl	00	58	SW	Fr	00	100	W	Fr.	.00	86	SW	Fr.	.00	72	W	Cl.	.00	70	W	Cl.
S.	.00	70	Nw	Cl.	.00	76	Nw	Cl.	—	—	—	—	00	92	SE	Cl	00	88	S	Cl	00	58	SW	Fr	.00	98	N	Cl.	.00	94	W	Cl.	.00	68	W	Cl	00	70	W	Cl.
M.	.00	72	W	Cl.	.00	72	Nw	Cl.	.00	58	N	Fr.	.00	94	SE	Cl	.00	80	SW	Cl.	30	62	W	Cl.	.00	98	S	Cl	.00	94	S	Cl.	.00	68	SW	Cl.	.00	68	Nw	Fr.
T.	.00	74	Nw	Cl	.00	76	N	Cl.	.90	58	Nw	Cl.	.00	92	SE	Cl.	00	84	SW	Cl	00	60	SW	Cl	.00	96	W	Cl	.00	94	S	Cy	.00	74	W	Cl	.00	72	Nw	Cl
	.11				.20				.00				.00				00				00				.60				.60								00			

EXPLANATION. Cl. for clear; Cy., cloudy; Fr., fair; Cm., calm; – indicates too small to measure. Temperature, weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.



TRUMAN, HOOKER & CO., SAN FRANCISCO, AGENTS FOR PACIFIC COAST.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 16, 1890

BEANS AND PEAS.			
Bayo, ctl	3 50	@	4 00
Butter	1 90	@	2 00
Pea	2 20	@	2 30
Red	2 25	@	2 75
Pink	2 75	@	3 00
Large White	—	@	—
Small White	2 12½	@	2 25
Lima	4 00	@	4 50
Fld Peas, blk eye	—	@	—
do green	—	@	—
do Nies	2 00	@	2 25
Split	6½	@	—
BROOM CORN.			
Choice to Extra	80 00	@	95 00
Fair to Good	70 00	@	75 00
Poor	50 00	@	60 00
CHICORY.			
California	6	@	6½
German	6½	@	7
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair, lb	10	@	13
do good to choice	14	@	16½
do Giltedged	17½	@	18
do pickled	—	@	—
do in kegs	—	@	—
do Creamery in rolls	18	@	19
CHEESE.			
Cal. choice mild	9	@	9½
do fair to good	7	@	8½
Young America	—	@	
N. York Cream.	13	@	14½
Western	8	@	11
EGGS.			
Cal. ranch, doz.	21	@	22½
do do sel'cted	23	@	24
do. store	17	@	19
Est'n, old storage	—	@	—
do fresh	15	@	17
do selected	19	@	20
do to arrive	—	@	—
FEED.			
Bran, ton	14 00	@	15 50
Feedmeal	20 00	@	22 00
Gr'd Barley	26 00	@	27 00
Middlings	22 00	@	24 00
Oil Cake Meal	25 00	@	—
Manhattan Food Per 100 lbs	7 50	@	—
HAY.			
Compressed	10 00	@	14 00
Wheat, per ton	8 00	@	10 00
do choice	12 00	@	14 00
Wheat and Oat	10 00	@	14 00
Wild Oats	8 00	@	11 00
Tame do	8 00	@	10 00
Clover	8 00	@	10 00
do ch'ce red top	—	@	—
Barley	7 00	@	10 00
Barley and Oats	—	@	—
Alfalfa	—	@	—
Stock Hay	—	@	—
Alfalfa C'mpr'sd	—	@	—
Straw bale	45	@	55
New hay, Wheat	—	@	-
do do Oats	—	@	—
FLOUR.			
Extra, City Mills	4 10	@	4 35
do Co'try Mills	4 05	@	4 30
Superfine	3 10	@	3 75
GRAIN, ETC.			
Barley, feed, ctl.	1 07½	@	1 12½
do Choice	1 15	@	1 17½
do Brewing	1 17½	@	1 20
do do Choice	1 20	@	1 22½
do do giltedg'd	1 25	@	—
Chevalier case	—	@	—
do com to good	—	@	—
Buckwheat	1 25	@	2 00
Corn, White	1 00	@	1 10
Yellow	1 10	@	1 25
Oats, milling	1 65	@	1 75
Surprise	1 70	@	1 75
Choice feed	1 60	@	—
do good	1 55	@	—
do fair	1 50	@	—
do Gray	1 45	@	—
do Black	1 40	@	1 50
Rye	90	@	93½
Wheat, milling, Gilt edged	1 41½	@	1 42½
do Choice	1 40	@	—
do fair to good	1 38½	@	—
Shipping, choice	1 36½	@	1 38½
do good	1 33½	@	1 35
do fair	1 31½	@	1 34½
HIDES.			
Dry Ight to h'vy	8	@	9

Salted	5	@	8
HOPS.			
Oregon, 1889	14	@	20
Cal 1889 Choice	18	@	20
do Fair to G'd	13	@	16
ONIONS.			
Silver Skin	1 25	@	1 50
NUTS - JOBBING.			
Walnuts, Cal. lb	7	@	8
do Ch'ce	9	@	11
Almonds, hd shl.	5	@	6½
Softshell	9	@	10
Paper shell	12	@	14
Brazil	11½	@	13
Pecans	9	@	14
Peanuts	5½	@	7½
Filberts	11½	@	12½
Hickory	6	@	9
Chestnuts	14	@	—
Pine nuts	7	@	8
POTATOES.			
New	1 00	@	1 25
do choice	1 50	@	1 70
Early Rose, sks.	75	@	1 00
Chile	1 00	@	—
Peerless	75	@	1 00
River Reds	—	@	—
Humboldt	—	@	—
Petaluma	—	@	—
Burbanks	1 00	@	1 75
Sweet	—	@	—
POULTRY AND GAME.			
Hens, doz	6 00	@	8 00
Roosters, old	6 00	@	7 00
do young	6 50	@	9 50
Broilers, small	2 50	@	3 50
do large	4 00	@	5 00
Fryers	5 00	@	6 00
Ducks, tame	3 50	@	4 00
do young	4 50	@	5 50
Geese, pair	1 00	@	1 25
Goslings	1 50	@	1 75
Turkeys, Gob'r	20	@	22
Turkeys, Hens	17	@	19
Pigeons	2 50	@	3 00
Rabbits, doz	75	@	1 25
Hare	1 50	@	1 75
Venison	9	@	12½
Dove	75	@	1 00
EGG FOOD.			
Manhattan, ₱ lb	12	@	—
PROVISIONS.			
Cal. Bacon. Heavy, lb	10½	@	11
Medium	12	@	—
Light	13	@	—
Extra Light	—	@	—
Lard	9	@	12
Cal. Sm'k'd Beef	11	@	12
Hams, Cal	12	@	13
do Eastern	12½	@	13½
SEEDS.			
Alfalfa	9½	@	10
Canary	4	@	4½
Clover, Red	12	@	13
White	20	@	22
Cotton	20	@	—
Flaxseed	2	@	2½
Hemp	8	@	8½
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German	5	@	6½
do Common	5	@	6
Mustard, yellow	1½	@	2
do Brown	2½	@	3
Rape	1½	@	2
Ky. Blue Grass	14	@	16
2d quality	13	@	14
Sweet V. Grass	75	@	—
Orchard	12	@	14
Hungarian	7½	@	8
Lawn	27½	@	40
Mesquit	6	@	
Timothy	6	@	6½
TALLOW.			
Crude, lb	3	@	5
Refined	6	@	
WOOL, ETC. SPRING—1890.			
Humboldt and Mendocino	19	@	24
Sac'to valley	15	@	22
Free Mountain	18	@	24
S Joaquin valley	12½	@	17
do mountain	17	@	22
Cala'v & F'th'll	15	@	24
Oregon Eastern	13	@	22
do valley	20	@	25
So'n Coast, def	10	@	14
So'n Coast, free	12½	@	19

Rope.

Baling, Duplex, lb	12
" Manilla, lb	15
Twine, for hops, balls, tarred, lb, Manilla	16
" " grape vine, balls, lb "	16
" " " coils, lb "	16
" spring, lb "	18
" binder (600 ft. to lb), lb	16

Duplex twine 3c per lb less.

TO SUFFERERS.—Attention is called to the advertisement of Dr. J. A. Miller of 236 Taylor street, in this city. Dr. Miller is a graduate of the Medical Department of the University, and has recently taken courses in Europe. His specialty is diseases of the abdominal and pelvic regions.




Important Auction Sale
— OF —
Standard and High-Bred Trotting Horses
— AND —
THOROUGHBRED HOLSTEIN CATTLE
Property of J. H. WHITE, Esq., Lakeville, Sonoma County, Cal.
On Thursday and Friday, September 4th & 5th, 1890.
At RAILROAD STABLES, Cor. Turk and Steiner Sts., San Francisco.

On account of a contemplated change in business, we are authorized by Mr. White to dispose of all the high-bred stock upon his noted breeding farm at Lakeville, Sonoma County. This comprises over forty head of high-bred Trotting Stallions, Brood Mares, Colts and Fillies, most of them standard and all exceptionally fine individuals. They consist of the get of Stallions by Electioneer, Director, Antevolo and other noted horses. Most of the brood mares are with foal by Hernani, one of Electioneer's most prominent sons. Several have been bred to Director. Taken collectively they are, in size and form, the finest looking lot of trotters yet off red in California, and their breeding is upon the most approved speed lines

The Cattle comprise over one hundred head of thoroughbred registered Holstein Cattle. The progenitors of this herd were selected of the choicest strains upon the famous breeding establishments East, and have been judiciously crossed with a view to develop to the fullest extent the milking strains. Mr. White has expended a large sum of money and great care in perfecting this band of cattle, and can justly claim it as one of the superior herds of the United States.

Catalogues are being prepared and will be sent on application only. Horses and cattle may be seen at ranch, six miles from Petaluma.

KILLIP & CO., Auctioneers, 22 Montgomery St., San Francisco.

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THE MOST DELIGHTFUL SEASIDE RESORT OF THE WORLD!
SURFSIDE!
Is the most beautiful tract of land in Santa Cruz. It commands charming views of the whole of Monterey bay, of the Pacific ocean and of the Santa Cruz mountains. It lies on a handsome, elevated plateau, fronts on the famous Cliff Drive, at the wildest and most picturesque part of the bay shore, and adjoins Garfield Park, where the Christian Church of California is now erecting a $15,000 tabernacle and where thousands of people will summer annually from this year on.
LOTS, 50x125, $200 TO $400,
Fronting wide and beautiful avenues, on easy terms.
Maps of Santa Cruz and Surfside, price lists and descriptive matter mailed free to any address.
CARNALL-FITZHUGH-HOPKINS CO.,
E. A. ORENNAN, Resident Manager, 624 MARKET ST., San Francisco.
127 Pacific Avenue, Santa Cruz.



Holds a Broom either end up; is never out of order. After scrubbing hang your broom with brush down, and it will dry out immediately and not mold or rot, and always keep its shape. Sample mailed and perfect satisfaction guaranteed on receipt of 15c. Boys and girls can more than double their money selling them. Send 2c. stamp for terms. 1 doz. postpaid on receipt of 90 cts. Address ENCLE SPRING CUN CO., Manufacturers of Patented Specialties, Hazleton, Pa.

HARNESS.
Take care of your HORSE. Civilized Man advances rapidly and the Horse will "Keep up with the Band" if well cared for. Horse Boots, Robes, Blankets, etc Saddles, $5 to $75 each. Harness, $8 to $250 per set. American and English Saddlery Goods.
W. Davis & Son,
No. 410 MARKET STREET,
Between Sansome and Battery, SAN FRANCISCO.


Send 3c stamp for Catalogue of
GUNS AND FISHING TACKLE!
Including list of SECOND-HAND GUNS and other articles that have accumulated.
GEO. W. SHREVE,
525 Kearny Street. San Francisco, Cal.

DIVIDEND NOTICE.

The German Savings and Loan Society,
526 California Street.

For the half-year ending June 30, 1890, a dividend has been declared at the rate of five and forty-hundredths (5 40-100) per cent per annum on Term Deposits, and four and one-half (4½) per cent per annum on Ordinary Deposits. Payable on and after Tuesday, July 1, 1890.
GEO. TOURNY, Secretary.

Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

FRUIT-GRADER.—Geo. W. Thissell, Pleasant Valley, Solano county. No. 431,176. Dated July 1, 1890. This grader has grading-bars, which may be adjusted laterally. Bars or levers are also arranged so as to be turned upward between the inclined bars, and lift and move the fruit and prevent its sticking in the spaces between the grading-bars.

CAN-PRINTING DEVICE.—Chas. R. Hay, S. F. Assignor of one-half to R. H. Marchant. No. 431,165. Dated July 1, 1890. This is a novel device for printing upon the exterior surface of cans, and it is especially applicable to take the place of labels upon cans containing fruit, fish, or other substances, which are usually packed in hermetically sealed cans and afterward labeled by pasting paper labels upon them. By means of this device the inventor is enabled to print in colors upon cans with great rapidity, and the expense and time for putting on paper labels is avoided.

VEHICLE-AXLE.—Jacob G. Kenyon, Port Kenyon, Humboldt county, Cal. No. 430,317. Dated June 17, 1890. This is an improvement in that class of vehicles to which a patent has already been granted to the same inventor, and in which each wheel is provided with its own separate or independent axle, to which it is made fast so that wheel and axle rotate together, said axles passing one above the other and journaled in separate boxes on each side of the vehicle frame. The object of this invention is to avoid the necessity of making the wheel on one side of greater diameter than the wheel on the other side, to enable its axle or spindle to pass above the axle or spindle of the smaller wheel, and also to provide bearings for said axle or spindle of a simple and durable character.

TREAD FOR WHEELS.—Thos. Williamson, Collegeville, San Joaquin county. No. 430,309. Dated June 17, 1890. This is a device which the inventor calls a "tread for wheels." It is especially intended to give a broad support for wheels on soft ground, said support being made flexible and yielding, so that the sections of it will take successively the position of a horizontal or flat platform beneath the convex portion of the wheel and the surface of the ground, as the successive portions of the wheel-rim are brought to that point. It consists of a series of short platforms hinged to the wheel-rim having the adjacent ends beveled so that they will fit together when brought into bearing position and having the rear ends curved upwardly to prevent digging into the earth when the wheel is moved backwardly.

GATE.—John Mason, Petaluma. No. 430,605. Dated June 17, 1890. This invention relates to that class of gates which are adapted to be opened and closed by means of ropes and cords extending along the roadway, thereby avoiding the necessity of the traveler alighting from his conveyance. The object of the invention is to provide a simple and effective gate of this "self-operating" class.

HARNESS.—Joseph C. Simpson, S. F. No. 430,303. Dated June 17, 1890. This is an improvement in light harness such as is specially adapted for road-driving or for use on trotting-tracks. The object is to do away with the traces and breeching ordinarily used upon harness, and substitute therefor a harness that will permit free use of the shoulders and quarters, and thus increase the speed. It consists of a peculiarly constructed saddle, with two independent girths, either with or without the other parts of the harness, elastic connections for the girths, means for securing the shafts, and certain other peculiarities of construction.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, *or beyond the time he intends to pay for it*, let him not fail to write us *direct* to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

OCEAN SPEED.—An ocean steamer has been projected which, it is claimed, will cross the Atlantic between Queenstown and Sandy Hook in about three days and 13 hours, averaging a speed of 21 to 24 knots an hour.

Consumption Surely Cured.

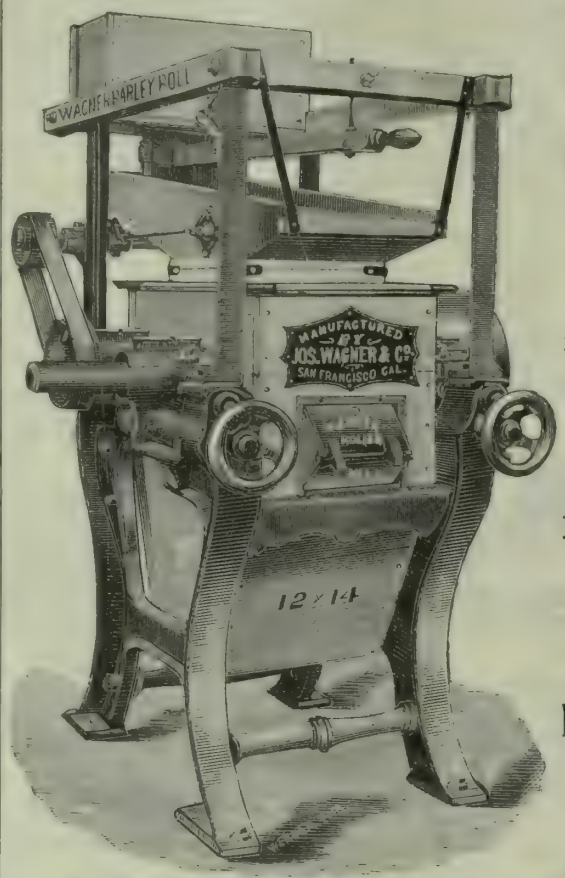
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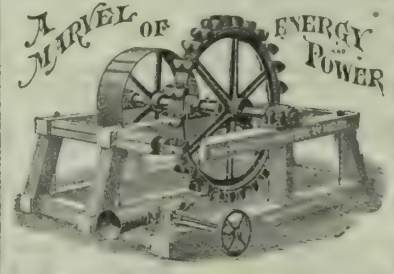
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BRANCH: 26 NORTH FRONT STREET, PORTLAND, OREGON.

THE PELTON WATER MOTOR



Affords the cheapest and most convenient power for Ranch, Vineyard or Dairy purposes, as well as for running dynamos for electric lights, pumps and every other variety of machinery.

It possesses in the same degree the wonderful energy and power that has made the Pelton Wheel famous in all parts of the world.

These motors are made of varying sizes, with capacities ranging from the fraction of one up to 15 and 20 H. P., enclosed in iron cases, all ready for pipe connections, and are warranted to develop a given amount of power with one-half the water required by any other wheel.

The cost, considering capacity and efficiency, is fully 50 per cent less.

Circular, giving full information, sent on application.

Parties writing for information should give full particulars as to power wanted, source of water, supply, with head or pressure. Address

THE PELTON WATER WHEEL CO.,

121 Main Street, San Francisco, Cal.

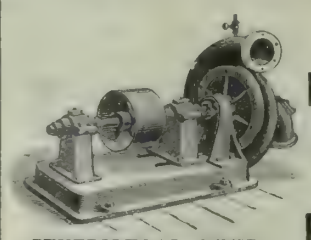
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Patent Water Tube Steam Boilers.

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Coupled with Patent lead-lined Couplings. Dipped ready for laying. Circulars and prices furnished upon application.

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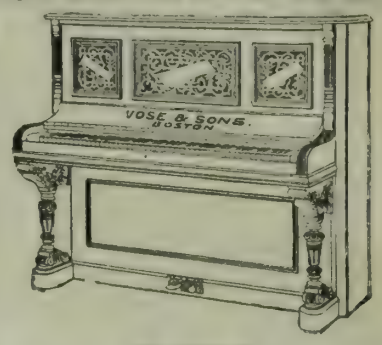
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IMPROVED SCRAPER.

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MANUFACTURED BY

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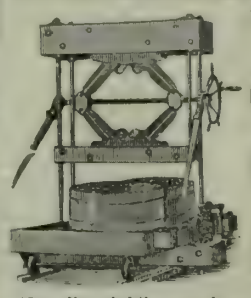


For Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making.

This implement will take up and carry its load to any desired distance, carrying 15 to 20 cubic feet, according to dirt. It will distribute the dirt evenly, or deposit its load in bulk as desired. It will do the work of Scraper, Grader and Carrier. Can be used with two or four horses, although best results obtained with four horses. ONE MAN ONLY required to handle this Scraper. Address

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Combined Screw and Toggle Lever

WINE, CIDER

— AND —

OLIVE PRESS

Have discarded the second pressing, as I only got one-half gallon of wine. Every person who has seen the press working is satisfied that it is the best wine press for work, strength and durability.—WALTER PHILLIPS, Bennett Valley.

The wine press has given entire satisfaction.—E. E. MEYER, Wright's P. O., Santa Clara county.

We think your press is one of the most powerful presses ever made, and very simple to operate. A boy of ten years can run the press and do better work than a man on any other press we have ever seen.—J. & F. MULLER, Windsor, Cal.

Can press two tanks—2000 gallons capacity each—a day, and have plenty of time before 5:30 o'clock to clean everything, with one of your small size wine presses.—R. C. STILLER, Guberville, Cal.

Every wine maker should have one, especially when he does not distill his pomace.—VACHE FRERES, Old San Bernardino, Cal.

The working of your press has been fully up to your representations.—J. F. CRANK, Sierra Madra Vintage Co., San Gabriel, Los Angeles county.

The wine press worked quite satisfactory.—JAMES FINLAYSON, Healdsburg, Cal.

The wine press bought of you gave entire satisfaction. WM. HILL, Petaluma, Cal.

We take great pleasure in attesting the true merits of your wine press. The one in our winery gives the utmost satisfaction. We cheerfully recommend it as good as the best.—DOWNEY FRUIT AND WINE CO., Downey, Los Angeles county, Cal.

Can cheerfully recommend your press as being the most powerful and durable press I have ever seen, and can warrant its giving satisfaction.—WILLIAM PALMTAG, Hollister.

The small wine press bought of you gave entire satisfaction. Would recommend it for small cellars of 25,000 to 35,000 gallons capacity.—A. BURNHAM & SONS, Bennett Valley, Santa Rosa P. O.

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All Teeth faced with superior steel imported by myself. Satisfaction guaranteed. Will refer to all persons using Houser Machines having teeth with my name on them.

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Of Japanese growth, in lots to suit purchasers, at lower rates than ever before offered to the public. Catalogue prices include packing, boxing and transportation to the ship.

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SEEDLESS GRAPE ROOTS.

These Grapes make the finest seedless raisins known For sale by J. P. ONSTOTT, Yuba City, Cal.

Important to Fruit Growers.



Protect Your Trees from Sunburn, Borers, Rabbits, etc., by using

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We also make a specialty of Fruit Paper for packing Fruit for shipment East. Send for samples and prices.

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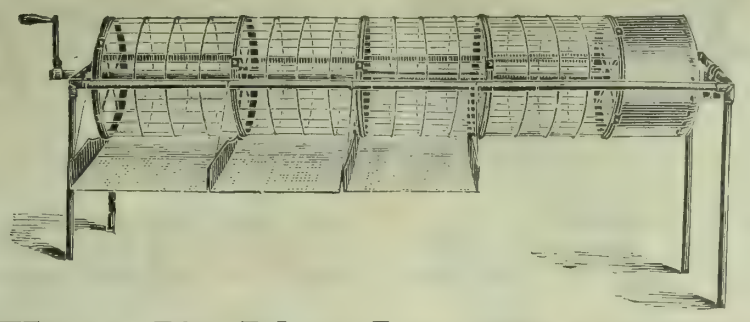
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Will entirely clean an Orchard in two years. ORCHARD RIGHTS SOLD. Satisfaction Guaranteed. Write to

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Has proved the most rapid working machine for GRADING PRUNES, BOTH GREEN AND DRIED, that has ever been introduced. Wherever it was used last season it gave perfect satisfaction, both in the quantity of fruit graded and the way it did the work. The capacity is practically unlimited, as it will grade the fruit perfectly as fast as it can be shoveled into the machine.

I make all sizes of this Grader, from the large 30-inch cylinder down to a small hand machine for the use of growers whose crops are small. I furnish the Grader mounted complete, or the Cylinder alone if, as is often the case, the purchaser prefers to mount it to suit himself.

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ONGERTH'S INSECTICIDE
—AND—
DISINFECTANT POWDER
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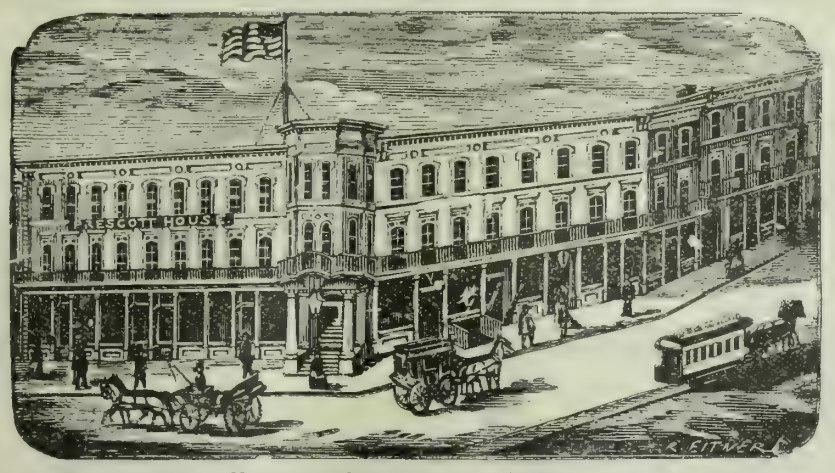
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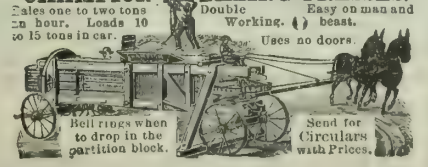
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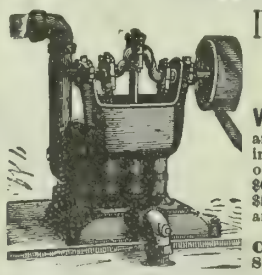
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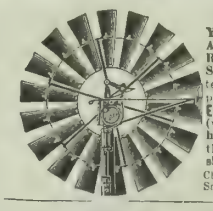


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AT THESE ANNUAL EXHIBITIONS the visitor may combine business with pleasure, as the Board of Dirrctors provides for all kinds of recreative amusement in the varied program of events.

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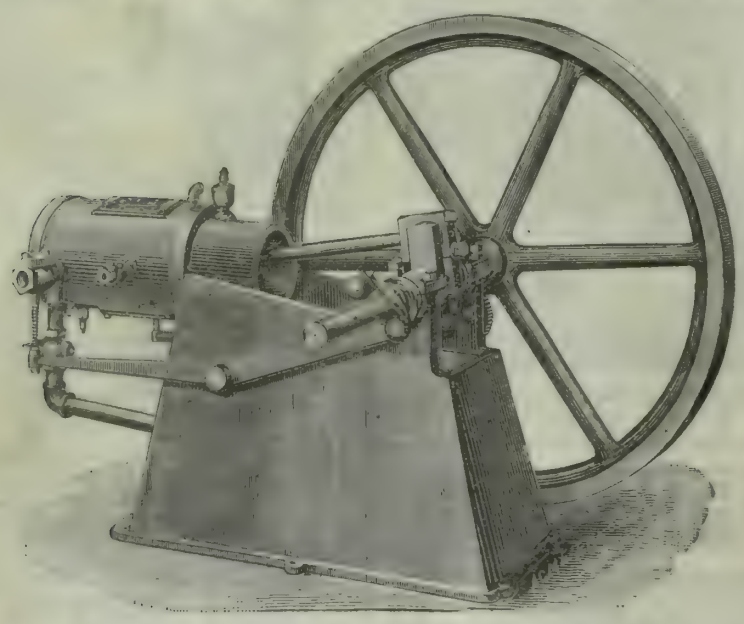
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PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XL.—No. 4. SAN FRANCISCO, SATURDAY, JULY 26, 1890. { DEWEY & CO., Publishers, Office, 220 Market St.

A Bird's-eye View of the Yosemite.

The Yosemite season is at its hight and the valley is receiving its annual throng of visitors from all quarters of tho world. To those who have visited the valley and to those who contemplate pilgrimages thither the relief map which we present on this page will be welcome. So far as we know it is the first presentation in a newspaper of this unrivaled method of portraying this grandest feature of California to-



RELIEF MAP OF THE YOSEMITE VALLEY AND ADJACENT COUNTRY.

pography. We reproduce the engraving from original sources by the photo-facsimile process of the Dewey Engraving Co. To one who studies closely the picture new excellencies continually appear. Like all relief maps it gives impressions and knowledge of conditions which are, by the nature of the case, wholly lost in a flat map, and it conveys a knowledge of the collocation of the features of the country which cannot be learned by series of isolated views no matter how excellent they may be. In fact it supplements admirably the impressions gained by personal inspection of the valley, for no one can obtain a point of view which will yield a knowledge of the topography such as the topographers have patiently created by their methods of almost countless measurements. The sources of information employed in the representation and the persons engaged in the honorable work are stated in the upper left hand corner of the picture.

The student of the valley will gain from this map both actual knowledge of facts and impressions of the grandeur of nature's handiwork. It discloses the general trend of the main valleys and its tributary gorges. It shows the water-courses, the trails to reach notable points, and the manner in which the visitor gains giddy hights by practicable routes. It gives also the elevation of the most noted points, and by implication as well as by the shadows the depth of the depressions below them. It will prove of permanent value to all acquainted with the valley as a skeleton around which they can place the firm flesh of their experiences and adorn with the garments of their imagination.

GRADING OF GRAIN.—Representative Comstock of Texas has introduced a bill authorizing the Secretary of Agriculture to establish uniform grades of all kinds of grains transported from one State to another or to any foreign country, which shall be known as American grades.

A HUNDRED carloads of wheat go East to the Lakes from Eastern Washington by rail, instead of going to Puget sound to be shipped on the Pacific.

The Southern California Experiment Station.

We stated in our issue of July 19th that the Regents at their last meeting decided to locate the experimental station for Southern California near Pomona. In pursuance of this decision and to save time as much as possible, Prof. Hilgard visited Southern California to determine definitely the site of the station and complete arrangements for the erection of the buildings, so as to render it possible to occupy the station in time for the coming season's operations. After careful examination, he has recommended to the Regents' committee in charge of the matter the acceptance of one of the three alternate offers of land made by Richard Gird, the proprietor of the Chino Ranch. The 40 acres will be divided into two bodies, viz.: 30 acres of dry land, representing the reddish mesa soil, with a few acres of gray, gravelly land or "wash;" and a 10-acre tract of naturally moist land, a dark loam extensively represented both in the interior valleys and along the coast line, and especially adapted to forage and other field crops. The buildings will, of course, be erected on the main tract of 30 acres, which lies about two miles distant from the town of Pomona on the northern line of the Chino ranch, and to which water will be conducted from the reservoir of Mr. Gird at the rate of one inch to 10 acres, the water being included in the donation.

It is understood that the Pomona people will proceed at once to collect the funds subscribed, and let a contract for the erection of the buildings so as to permit of the occupation of the station by October 15th.

After his return from the South Prof. Hilgard and family left Berkeley for their farm in Southern Alameda county. Here a change of scene and climate will be secured, though hardly a rest, for the Professor took his writing materials along and expects to prepare reports upon recent field and laboratory work for publication. As is usually our advice at this time of the year, we suggest that the sending of matters requiring Prof. Hilgard's attention be deferred until the opening of the University in September although subjects of immediate concern should not be withheld. Arrangements have been made for their reception and treatment by assistants as far as possible, also for transmittal to Prof. Hilgard, if necessary.

STUBBLE FIRES were raging Tuesday night on the lands of the Crocker-Huffman Water Company, west of Merced.

NEVADA'S POTATO CROP is reported to be uncommonly large this year.

CORRESPONDENCE

Correspondents are alone responsible for their opinions.

San Diego County Notes.

EDS. PRESS:—Leaving the business portion of the city of San Diego, a short drive north brings us upon the mesa in the upper part of the city's limits, whence can be seen the bay, Point Loma, Old Town, Coronado and National City, and far out at sea the Coronado Islands resting as shadows upon the bosom of the ocean, while at our very feet lies the famous city of "Bay'-n'-Climate." Here are many of the finest residences of the city. To the north and east, tier upon tier the rugged mountains rise thousands of feet above the sea, seemingly a stony waste. Leaving this scene of beauty and continuing northward, we soon descend to the Mission valley where, nestling close to the foot of the grade, stands the County Home, a comfortable looking place of refuge for the unfortunate. Having thus come over the hill to the poor house, we cross the valley and a mile further are ascending the grade on the opposite side. From the top of this grade a backward glance shows some of San Diego's mesa homes, while ahead, mile after mile, thousands and tens of thousands of acres of mesa lands unfold to the eye. Upon this great expanse, within an hour's drive of San Diego, there is not a single house visible.

The mesa is simply waiting for water, the king of Southern California. Two water companies have an eye to this land, and the prospect for it being supplied is good.

Some 15 miles on our way we enter the Linda Vista. This, a small valley, has some improvements, but is evidently, for the most part, newly settled. Crossing a narrow, ridgelike divide, we descend to the Poway, one of the best known valleys of the county. Of the several grades passed over, special mention should be made. Although Nature did but little here for the road-maker, yet around these precipitous mountain-sides roads have been graded that would be a credit to any community. The secret of these splendid grades is found in the matter of never losing an inch by running levels while making the ascent. Many of our county roads on which thousands of dollars have been squandered are, when finished, a disgrace to the engineers who surveyed them, and in their careless, slipshod building, a disgrace to the supervisors who accepted them. Some of these roads were apparently surveyed by moonlight, if we judge by results attained.

But to return to the valley. Poway contains several thousand acres, but owing to its peculiar form, a full view cannot be obtained from any place. Near the center of the valley are situated the Poway Nurseries, owned by Messrs. Chapin & Meeker, who have a choice lot of trees, both citrus and deciduous. Mr. O S. Chapin, who is an old-time reader of the PRESS, in addition to his nursery business, is owner of the only hotel in the valley. Although 12 to 15 miles from rail, the valley has made considerable progress in fruit-growing. Over 14,000 trees are in the orchards of the valley, of which the following lead in the order named: Peach, apple, olive, apricot and pear. Of grapes a showing is made of about 88,500 vines, mostly raisin grapes. The fruit crops, as a rule, are very good. For the above fruit items I am indebted to Dr. L. N. Hilleary, who is one of the largest fruit-growers of the valley. Good land (unimproved) ranges in price from $50@$150 per acre. J. B. H.

Poway, Cal

Lake County.

EDITORS PRESS:—As Benjamin among the tribes, so is Lake very small among the counties. Territory is not her boast, although many square miles are piled up in the form of mountains, embracing broad and fertile valleys, vales, uplands, foothills and wide mesas. The beautiful lakes that adorn her greatly diversified surface, are fed by numerous mountain stream that wind through the valleys, and their many wooded glades.

These high ranges have secluded from the outside world the rich and charming country they surround, but we trust a quick and ready way of ingress and egress will soon be provided for us. The air is rife with railroad rumors. Commercially we deem ourselves of too much importance to the outside world to be much longer left to waste our sweetness on the desert air. Routes are being surveyed which we hope herald the building of the long-wished for road.

Clear lake, a noble body of water 30 miles long, is 1300 feet above the sea level. This elevation with the protection of the long, high ranges at the west which screen us from the ocean winds and fogs make a climate most favorable to health and vigorous vegetable growth.

Climate, the famed boast of California, is here so nearly adapted to our wants, that most of the year we exist in it as unconscious of it as one in perfect health exists unconscious of the body.

The rapid and vigorous growth of the fruit trees and grape-vines prove their complete satisfaction with climatic conditions.

Until within a few years, sheep and cattle raising, the growing of wheat and other cereals has been the chief pursuit of the settlers, but more recently vineyards and orchards have been planted and many acres of small fruits cultivated. All the fruits of Northern California succeed as well here as elsewhere. The growing of the orange and lemon is not a specialty, although near the lakes are trees loaded with a very fine quality of these fruits.

Almonds are a pronounced success on the mesa and foothill lands and also in the valleys where the attempt has been made to raise them. They require no hulling, as the hills open and drop their nuts, and no bleaching, being of a uniform color, and so far as can be learned, the trees have no off years. A similar good report might be given of all the other kinds of fruit trees, the fruits of which grow of an unsurpassed size and quality. The olive trees, although but recently planted, have surpassed expectation in their rapid growth. The same is true of fig trees. The Adriatic and other more recent and superior varieties seem especially to rejoice in the soil and climate of the foothills and mesas.

The fruits and other productions of the soil are not the only attractions of Lake county.

Many are the springs that gush and bubble among the hills, the waters deliciously infused with those minerals which restore the invalid to health and make buoyant those who have no ailments. These many springs are famed far beyond our borders, and are visited by many thousand persons yearly.

Much of the land on the foothills and mesas of Lake county is still waiting the home-seeker. There is but little land available for cultivation that is not appropriated.

Those who have taken the more desirable tracts of government land are in many cases wishing to sell a portion of their farms, and offer land at very reasonable prices.

There is much chapparal on what was once Government land, but when cleared and cultivated, it proves the best land for fruit-growing.

Much might be said of the scenery here which is of the kind to inspire the most poetic sentiments in those poetically inclined. The artist is charmed with the great variety of form and color in the landscape. The many lakes here and their wooded shores are the sylvan retreat of beauty and her ethereal sisterhood of graces, which so often seek the wildwood and the limpid wave for their enchanted home.

MRS. H. MILLARD COFFIN.

Kelseyville.

THE APIARY.

A Transaction in Bees.

EDITORS PRESS:—I have just arrived home and find your letter awaiting my arrival. I will first quote the letter you send me and then give my answer to it. Following is the letter:

Mr. S. L. Watkins, DEAR SIR:—We desire your judgment as an unprejudiced expert on the following statement: One of our readers living in Nevada, sent the money early last spring for two swarms of bees to a California bee-keeper. He writes that up to July 3d, he has received nothing but a letter explaining the delay, as follows: "Dear Sir—It is to your advantage that we are keeping the two swarms. We could have sent them sooner, but if we had we could not have guaranteed that the queens were purely fertilized so early in the season. Very few dealers can guarantee this before May, and most of them not until June, and then not until their progeny hatch out. We send out young queens guaranteed purely fertilized with all young colonies, and the only way to test them is to wait until their progeny hatch out. We will forward them to you as soon as possible."

The party who ordered the bees received this explanation of their non-shipment and wishes to know whether he is fairly dealt with—in other words, whether the explanation is a reasonable one or not.

You may answer this question for publication or give us the information, which we can send to the enquirer in a personal letter, whichever you choose. EDITORS RURAL PRESS.

Now for my answer: No, the Nevada man has not been fairly dealt with. Queens in this climate can be raised and fertilized by February 1st, and now it is July, long after all swarming has ceased. There is something wrong about that "California bee dealer," and I advise the Nevada man to try and get his money back.

The explanation given is not a reasonable one by any means—far from it. No queen breeder in California would tell you that he could not tell whether queens were purely fertilized until June; because two-thirds of the natural queen rearing is over by that time, and most of the very latest raised queens are mated and their progeny hatched out; artificial queen rearing though can be kept up the entire season.

Such a thing might be that the "California bee dealer" spoken of was out of queens, and was just starting to raise some, and probably their progeny had not hatched out yet; but saying that very few dealers could guarantee this before June is not so, as any queen breeder will tell you.

In about 25 days after the young queen commences to lay, by opening the hive and examining the young bees, you can tell if she has been purely fertilized; no matter whether it is June, July, August, September, or any other month. When I raise queens for sale, I generally have them ready to send out by the 1st of April, and can continue the whole season until winter comes on. It may not be out of place here to state that I have no bees or queens for sale this season.

The RURAL PRESS must have an immense circulation among people interested in bees, for I generally receive a half-dozen letters every mail, making inquiries in regard to bee culture, and they all mention seeing my name and address in the RURAL PRESS. To all who inclose a stamp I give an answer; to those who do not, of course, I cannot answer by letter, but will give an answer in a future article to the RURAL PRESS. S. L. WATKINS.

Grizzly Flats, Cal.

[The above relates to the affair of one of our subscribers living in Nevada, who sent money for bees to a California beekeeper, as described above. We stated the facts (as our letter quoted above shows) without giving Mr. Watkins the name of either of the parties and his answer is therefore wholly without prejudice. We described the same facts to W. A. Webster, the Kern county beekeeper who happened to call upon us. We did not give him names but merely the facts. His answer was like that of Mr. Watkins, that the California bee-dealer did not give a valid reason for his delay in shipment. We give the matter without thought of persons, but merely for the facts involved.—EDS. PRESS.]

Bee Buzzings.

EDITORS PRESS:—I will give you a description of "Anti-Smoker:" Fill your smoker with excelsior, shaving tow, rags, or any loose porous material, sprinkle a solution of carbolic acid on the material, filling your smoker and "proceed to business." This carbolized air is to be preferred because there is no fire to make and no danger from fire. It is always ready and does not "go out." There is no smoke in your eyes and throat, no singed bees and discolored or melted comb, and no ashes or cinders falling out of the smoker when you wish to blow directly down between the frames. It is not patented and as I am the only one using the idea, not likely to be. See to it that the solution of carbolic acid used is fresh, and has a decided carbolic smell. "Calverts's Solution" can be relied upon. Keep the acid where the children cannot reach it, as like all other acids it is a corroding poison.

This season has convinced me that every hive should have a space for storing honey equal to, or in excess of, the room in the brood chamber. In those hives that have but one tier of two-pound sections, the bees, for want of storing room, filled the frames in the brood chamber almost solid with honey. In consequence the queen was cramped and for want of egg cells the bees soon decreased in numbers. Where the hive had an abundance of storage room the bees went to work overhead and left the brood chamber to the queen for egg-laying. As fast as the bees matured they found a surplus of space overhead and so kept out of the queen's way and she continued uninterruptedly to lay eggs and keep the hive in almost a swarming condition. No robber-bees cared to call upon those "hives of industry," and the result in pounds of honey has been double that of the hives, with moderate space overhead for storing.

I put the zinc "queen excluders" on all of my hives this season, and after a month's trial removed them. I found that the bees were very reluctant about going to work; in fact, almost all of the bees refused to. Once the excluders were removed, all of the bees went at it with a rush. The only hive that has proven a success with the queen excluder was Root's "Dovetailed hive." The bees filled in the space between the frames and excluder with burr-comb, and with this for a ladder have worked continuously, turning out 25 one-pound sections a week to the hive.

My spring flow of honey is about over, and I have the choice of moving my bees up the mountains or leaving them in their present locality until the fall flow begins. I have experimented with a number of robber traps of my own and other beemen's inventing, and so far the result has been the same. I melted down the comb and lost my bees. In consequence I content myself by closing the entrance, so that but one bee can enter at a time, and cover that entrance with a handful of loose grass, taking care that the hive is shaded and ventilated. I have bored an inch-and-a-quarter hole through every hive, just below the rabbit that the frames rest on and in the back of the hive. This ventilator I cover with wire netting. In the Dovetailed hive I bored two holes. I find that this ventilation keeps my bees at work on very hot days, when otherwise the heat would drive them out and cause them to bunch in idleness on the outside. Then, again, in our long wet spells, the hives that are not ventilated become damp, and if not opened, moldy. I put 30 ventilated hives on the stands last fall and three that were not ventilated. The 30 all came out strong this spring; the three unventilated hives were dripping with moisture and effected with mold. In cold locations the ventilators could be covered in dry, cold weather. A smaller opening than one inch the bees close up, but I have not had one of the inch-and a quarter ventilators closed by the bees.

In many of the mountain apiaries the "honey-boxes" are put on in the spring and taken off in the fall. The bees fill the boxes within a a month after they are put on, and during the balance of the season are in idleness, and their owner shakes his head and declares that he "don't see how you get so much honey when he gets only moths." A stand of good bees, properly cared for, will put up an average of 200 pounds of comb honey in this section. Of course there will be "off years" when they will have to be fed. While the bee is always demonstrative and never affectionate in disposition, yet she always repays us with her excess of sweets. E. H. SCHAEFFLE.

Murphys, Cal

THE DAIRY.

Forage Plants in India.

[Written for the RURAL PRESS by DR. LORENZO G. YATES, F. L. S.]

In the third volume of "The Dictionary of Economic Products of India," Mr. John F. Duthie, F. L S., Director of the Botanical Department of Northern India, and the author of several valuable works on Indian botany, under the head of "Food and Fodder for Cattle," has tabulated an interesting list of trees, shrubs, herbs and grasses known to afford food or fodder for cattle in various parts of India.

In the present sparsely populated condition of California, our people can perhaps afford to be wasteful and unthrifty in the matter of the fodder question, but the time is coming when, with an increased population and corresponding increase in the demand for food for domestic animals, the people will be forced to practice economy, and include among their food plants a great many products of the vegetable kingdom which are now regarded as absolutely useless in the economy of animal life.

Mr. Duthie divides his list according to the climatic conditions of the country under consideration. Thus he notes under the head of "Fodder Plants of the Plains," the tropical portion of the region, 313 species of plants, exclusive of the grasses; under "Himalayan Fodder plants," exclusive of grasses, 129 species.

As showing the thrift of the inhabitants of the densely populated plains, it may be noted that such trees as Tectona grandis (teak), sterculias, poplars, Persian lilacs and elms are lopped and the twigs and leaves fed to the cattle; and in the temperate regions of the Himalayas, the twigs and leaves of the walnut tree, *Juglans regia*, and some of the conifers are mixed with hay and stored in the boughs of trees for winter use. The *Ipomœa aquatica* is dried and smoked in Bengal, and in this condition is considered lactiferous. The rinds and stones of the mango (*Mangifera indica*) are also used. The stones of the fruit are swallowed entire, and after becoming soft in the stomach they are brought up as a cud; the kernels are then pressed out and eaten and the refuse rejected.

It seems somewhat strange to us to read that some of our choicest conservatory plants are classed as fodder. The "Fodder Grasses of the Plains," foot up 119 species. Those of the Himalayas are divided into "sub-tropical" and "temperate." Of the first there are 63, and of the latter 130 species enumerated; the entire list under the various divisions amounting to 754 species being used as food for the various domestic herbivorous animals.

Forage Plants in Oregon.

EDITORS PRESS:—In making note of the progress of different varieties of grasses and clovers this season, there are none more promising than orchard grass (*Dactylis glomerata*), fall oat grass (*Avena elatior*), and medium red clover. While others have done well and are worthy of recommendation and extended trial, those mentioned seem to take the lead, especially for hay. Good crops of hay were cut from these plats early in the season and a second crop has gotten a good start. All of the early grasses did the best this season. Timothy is below the average. Red top did fairly well.

Observations this season have led me to believe that those grasses which grow rapidly, maturing in May or the first of June, will prove the most successful in this valley. The clovers and grasses mentioned came to maturity without the aid of any rain. They simply drew upon the supply which was held in the soil from last winter's rainfall. The later varieties, such as timothy, requiring more time to mature, were cut short of their needed moisture. The supply was exhausted before they were ready to need it most.

Clover sown on College farm with winter wheat, during February, is all right so far, and promises to hold through the dry season. That sown the last of March stands a much poorer show; in fact, much of it has given up the ghost already. We shall try seeding in the fall this season. A single failure should only teach us to try the harder, for we must have clover and grass. H. T. FRENCH.

Agricultural College, Corvallis, Or.

THE longest railroad bridge span in the United States is the cantilever span in the Poughkeepsie bridge over the Hudson river, 548 feet.

HORTICULTURE.

Fruit Notes.

EDITORS PRESS:—The success of shipping in other than refrigerator cars seems to depend on securing the most ventilation and the least jarring possible. To effect this, openings in bottom and top of each end of the car are protected by screens, and posts are used to keep the piles of fruit about a foot away from the ends of the car. Then four crates or five boxes are laid side by side against the posts leaving a few inches space between them and a little wider space on the outside. Strips about 1x$\frac{3}{4}$ and nearly as long as the car is wide, are nailed on top of each end of the row of boxes, at least one nail striking each box. The first row of cleats will have the ends touching one side of the car and the next the other. So they keep on loading from each end as long as there is room for a man to pass between the ends of the piles. Then they put up posts at the ends and wedge between them until no jarring of the cars can move a single box any more than if each was a part of the car.

A few of these cars are being constantly loaded and growers are expressing the opinion that the question is nearly solved. The trouble has been in the keeping quality of the fruit after its removal from the ice. It is hoped that this can be remedied by gradually raising the temperature, say at midnight, before arrival, begin to open the car doors and open them a little wider every time the train stops.

Suggestions in Shipping Fruit.

I have been hunting around among our old Vacaville friends, who are now leading shippers of California fruit, for suggestions that might prove of value to those of less experience.

From E. R. Thurber we gained the advice: Don't ship unless you mean to keep at it through the season. One car may encounter hot weather *en route*, may be delayed, may reach a glutted market, or may not have been in condition to carry well. If you lose your fruit and are drawn upon for expenses, don't wince, but take your medicine like a little man. The next car may bring you out all right. It is important to have a succession of shipping fruits, so as to keep expert packers employed for as long a season as possible; also to keep the teams and wagons busy. If your four-horse fruit wagon and team costs $1000, it makes quite a difference whether you have 20 or 100 days work in a year.

From M. R. Miller we gained the idea that little was to be made, in the long run, by running after the fruit or the market that happens to be best to-day. The fruit that may not be wanted this year may be in great demand the next. The chances are that a market that is glutted may soon be bare, and *vice versa*. There are always so many ready to jump from one thing to another in hope of striking the best, that they make rather more than a balance-wheel. That man has the advantage whose goods are best known in market to be choice and reliable. Few produce in so great a quantity as to be able to have their brand well known in more than one market.

Upon asking Mrs. W. W. Smith to tell us all about shipping fruit she said: "I've been at it long enough to find that I know nothing about it." In other words, she had learned that success with fruit depends on careful attention to so many details and involves so many elements, both within and beyond our control, that it seemed to her as though she knew nothing about it after all. Still, her bright eye was watching every movement in the packing shed and quietly correcting many a mistake. Very few in the valley are looked upon by their neighbors as better authority on fruit.

It seems that apricots that are packed without wrapping require just a little pressure from the cover to keep them in place; this will cause the top and bottom to bulge just a little. Peaches must be wrapped and the cover must touch very lightly if at all. To know just exactly in what stage to pick fruit for shipping, it is a good thing to lay away a sample of each shipment and then examine it when the lot reaches market. In the peach, a good sign is the beginning of ripening at the pit and the clearing of the skin preceding the coloring; in apricots, the white shade that follows the green and precedes the yellow.

Fruit grown on the hills or on a comparatively poor soil, ships better than such as is grown on rich bottom land. This year, contrary to expectation, fruit ships remarkably well. This is accounted for by absence of rain during the time that the fruit was forming and ripening. The usual rain that comes to spoil the hay may do quite as many dollars damage to the fruit.

At Frank Buck's place we noticed that they were putting up the fruit in 50 box lots. It seems that they are sold at auction in that way in Chicago. They were making two grades of ripeness as they packed, one greenish white and the other just turning yellow. You see, the agent of a New York or Philadelphia dealer comes into the auction room and wants something that will be in good shape for a week yet. The Chicago or Milwaukee dealer wants something to put on the stand to-morrow or next day. Nobody can pick fruit so as to have it exactly alike, and by thus packing both customers are better suited. Folks pay for that.

It is astonishing how they move these loads of fruit. Mr. Buck's packing-house is four miles from the depot, and the regular load for the big wagon is 7000 pounds; yet the driver says that he has, when hurried, made the drive in 30 minutes. We heard some very large figures named, on pretty good authority, as to what Mr. Buck was likely to realize for his present fruit crop, but hesitate to repeat them, as such figures, even when correct, are so likely to mislead.

The way many people go into the fruit business reminds us of Sambo's plan of investing his pension money. He had decided upon building in town and concluded that groceries, barber-shops, etc., were attended with too much work and risk, but he would use his building for a law office as the business was so clean and brought in so much money. So in fruit many start in to experiment on soils, varieties, cultivation, marketing, etc., and display far more confidence in their infallibility than these veterans of fruit culture. One friend told us that for the first few years he planted two or three trees of every variety he heard of. As the gentleman is quite deaf, he accepted the consolation that it was lucky he could hear no better.

The Jones Grader.

We found our old friend, Dr. Dobbins of Vacaville, busy grading his apricots for the Benicia cannery with his new Jones grader. He was so delighted with its speed and accuracy that he named a very large sum of money that it would take to buy it, if the machine could not be replaced. The man who carried the 60-pound boxes of fruit to the machine had to hurry, and so did the one who carried the boxes of fruit away, but the girl who fed and propelled the grader was just having fun. It is thought that eggs could be safely graded and they did have some down at the warehouse that they run through the machine to show how it worked.

The doctor says that if he had his orchard to plant over again, every tree would be a prune. A few years since, when four or five leading growers contracted with the Benicia cannery for apricots, peaches, plums and pears, at an average of a little better than two cents a pound for a term of five years, it was thought that they had made a great bargain. Mr. J. A. Webster, president and manager of the California Fruit Association, tells us that he don't think one of those contracts could be renewed at the same figure. It was thought that it would break up any cannery. But it seems that the cannery has done well.

Iron for Trees.

In a pleasant hour passed with J. M. Bassford, Sr., of Vacaville, we learned some points that seem too good to keep. Near the house, in hard ground, he showed us a Bartlett pear tree, about ten inches in diameter, from which which he picked two boxes last year and then weighed 1340 pounds of the balance of the crop, making 1420 pounds from that one tree. It is now well set with another crop of pears, and is remarkably luxuriant in foliage. Mr. Bassford says the secret of this and other remarkable yields is in fertilizing with iron filings or copperas. This tree had a pint cupful of iron filings about it; nothing else unusual. Mr. B. had known for a long time that driving nails or spikes into trees would induce fruit-bearing, and afterward noticed that where a sink had been disinfected with copperas its drainage had produced wonderful fruitage. Last winter he contracted for copperas by the ton to apply to his trees, but the wet weather and bad roads interfered with his plans. At his son's place in Napa county, he experimented with a few trees, without letting them know. Now they are wondering why these few trees bear so much more than the others.

An Opinion on Pruning.

Mr. Bassford seems to think some of his neighbors have carried system in pruning too far. He says that when you cut the end of a limb, Nature seeks to repair the damage, and will send out two to four shoots. Thus you turn the strength of the tree to producing wood and foliage, and it cannot go, at the same time, to the fruit. While it is all very well to so prune as to develop a healthy, strong tree near the ground for the first two or three years, there are many mistakes made in cutting back after the tree has reached bearing age. If you have a peach or apricot to deal with that is sure to set more fruit than it can mature, it may be well to cut back severely. But the case is different with the pear, prune or cherry. With such trees his idea would be, cut back while forming your top; thin out when you are ready to produce fruit.

In Berryessa Valley.

A ride of 16 miles from Winters over a fine mountain grade through the canyon of Putah creek, brings one to a beautiful valley, 3 by 13 miles. The soil is very rich, as shown by the great oaks and the wheat and corn crops. There at J. W. Quittle's place we saw a prune and pear orchard of six years that would be considered a good growth even in Vacaville for eight years. Last year the rain caught him out but he has a fine crop again this year. He greatly prefers the French to the silver prune. The holdings are growing larger in this valley and the town going down the same as at Butte City. It is pretty hard when you find one crowd complaining that they can't do anything without a railroad and another grumbling because the railroad takes all they make. Here in Berryessa they are waiting for a railroad, and in Capay the railroad is waiting for something to do. Nobody has any better shipping facilities than A. T. Hatch at Suisun, yet it is supposed that his almonds have paid him better than any of his fruit for a term of years. Dr. Dobbins is about the nearest of anybody to the leading fruit-shipping station on the coast, and yet he says if he had to plant again every tree would be a prune. Now, it costs no more to haul almonds or prunes from Berryessa to Winters than to haul wheat. They can get their fruit to market within one day as soon, and if Dobbin's or Hatch's land pays big interest on $500 or $600 per acre the Berryessa land ought certainly to be worth more for some kind of fruit or nuts than for wheat. In some places it may be too frosty but testimony of inhabitants and appearance of land indicate that in only a few such favorable places as Pleasant valley would there be less trouble. F. S. C.

TRACK AND FARM.

Notes at Random.

It is likely that several of the stables now running in the East will be at home in time to race at the State Fair.

The Australian mares that came by the last steamer for Mr. L. J. Rose, have arrived at the Rosemeade ranch in good condition.

The horses on the Napa track are going well. Among the well-known flyers are Nona Y, 2:25, Oakville Maid, gold medal, and Josie S.

The track at Petaluma is full of horses, and from the class of events offered by the Association, the fair will be one of the best of the year.

J. P. Sargent of Sargent's station has sold the stallion Little Brown Jug to M. Love for $2500. Little Brown Jug is by Nutwood, dam by Budd Doble.

Two Elector youngsters have been added by James Dustin to the string that he is training at the Bay District track. They are the property of William Funck.

The gelding Homestake, by Gibraltar, dam Kate by Volunteer, went into the 2:30 list at Helena, Montana, the other day, winning the first heat of a race in 2:28$\frac{3}{4}$. Ed Lafferty, the man who had Hugh Kirkendall's stable here during the winter, drove him.

The Electioneer mare Wamba, was driven in a race at the Bay District track Saturday to get a record in the 2:30 list, but she failed to do it. She was suffering from a strained hip and was not at herself by any means. She will have another try for a mark before long.

From the way the La Siesta filly Mariquita trotted in the special race at the Bay District track last week, she should be a dangerous one in her class this year. She is not ready for fast work yet, but when she is she will cut out some hard work for the youngster that beats her.

The running horses are entered quite well at Los Angeles, but the trotting horse owners have not been so liberal, and there is not a single entry from the northern part of the State. The fair will be a success anyway, for there are enough trotters at Los Angeles and on the surrounding ranches to make a fast meeting.

Maggie E showed a mile in 2:25 and Wanda a mile in 2:26 at the Bay District, Friday. Both of them were in fifth heats. Maggie stands up to her fast work in good shape, and she will be a race mare by the time that her first engagement comes on. Wanda will be there too, and the La Siesta people seem to have a chance for some of the good things of the year.

The Pleasanton horses have been measurably successful in their trip East. They won several races, but Margaret S, the crack filly, was defeated in slow time the other day at one of the Michigan race meetings. The horses will be at home in time to take part in the Oakland meeting. The fourth payment has been made on Margaret S in the four-year-old stake at Sacramento.

The San Diego Fair will be held this year at Escondido. The program of the racing events is: Trotting, 2:40 class, purse $250; running, one and a quarter mile dash, purse $150; mixed race, pacing and trotting, purse $250; San Diego derby, one and one-half miles, purse $200; free-for-all trot, purse $300; running, half mile and repeat, purse $100; trotting, three-minute class, for county horses, $150; running, three-fourths of a mile dash, $75.

There were six of the entries paid up in the State Fair two-year-old stake on the 1st of July, three in the three-year-old stake and four in the four-year-old stake. In the four-year-old stake the entries are Lillian Wilkes, Margaret S, Ladywell and Ariana, the last two being Palo Alto fillies that have never trotted in public. One of them is by Electioneer, and the last-named by Ansel. The three-year-old stake has Regal Wilkes, Millie Wilkes, a new one, and Alxira by Ansel, also a new candidate. There is some fast talent in these two stakes and they will furnish interesting races if all of the horses are kept in.

Two more of the California colts made a showing for themselves last week when Homer and Rinfax, of the Undine stable, ran first and second in the Friendly stakes at Chicago. The starters in the race, seventeen in number, were the very best two-year-olds in the West, and yet these two Palo Alto bred youngsters simply galloped away from the field and raced home alone, winning an event that is worth considerable money to their owner, and also one that gives great honor to both of them. Though the season opened in a bad way for the Californians, they bid fair now to eclipse all form records on the Eastern tracks and to come back in the fall with more money to their credit than ever before.

FORESTRY.

Trees for Profit.

EDITORS PRESS:—Testimony from Australia has established with us the reputation of the Jarrah to withstand the teredo. An experiment in the harbor of San Francisco, however, with supposed Jarrah piling shows this wood to be quite as subject to the teredo as any other. The contradiction between the Australian and Californian experience is so great that the genuineness of these Jarrah piles has been called in question. I am glad to say that another experiment will be tried with piling of the *Eucalyptus marginata* (Jarrah) under the supervision of the Harbor Commission at San Francisco. Special care has been taken to secure the true Jarrah piling. Until this experiment is completed, it will be wise to suspend judgment on the value of this tree. If it be found that Jarrah will withstand the teredo, no tree plantation will bring so great a profit to the grower. If, however, such should not be found the case, other trees will bring a quicker and better return.

Of these is the *Acacia decurrens* or black wattle. This is a rapid grower, reaching its highest market value between its fifth and tenth years. It is valuable for tool handles, carriage-work, etc. For firewood it is of the best, but its great value lies in its bark, which contains a larger proportion of tannin, with one exception, than that of any other known plant.

This acacia comes from the seed easily, and is one of the few trees in our State that can be planted by the seed in the place where it is to grow. Arid and sandy places seem to suit this tree better than good soils, and consequently it is especially suited to waste lands. The bark contains from 29 to 40 per cent of tannin, averaging about 35 per cent. Limestone formation is the least favorable to the development of its tannin. The bark should only be stripped during the spring months. In planting by seed, the ground should be prepared as for a crop of corn and seeded much as corn would be, thinning out later. The seed is very hard, and to germinate promptly should have boiling water poured on it and then be allowed to soak until soft. It may be safer to have the water at a temperature a little less than boiling when first poured on the seed. The water must not be kept hot. [At the State University the seed has been actually boiled in a cloth bag with good results.—EDS. PRESS]

The short time required by the *Acacia decurrens* to come to its perfection, the waste lands upon which it will thrive, the cheapness of planting, together with its high commercial value and the presumption that tanning bark will increase in value, make this tree one that may be safely planted for profit.

The *Acacia pycnantha* carries a somewhat higher percentage of tannin, but does not produce so large a crop of bark per acre as the *decurrens*.

I recommended both these trees some years ago while chairman of the State Board of Forestry, but discouraged their planting shortly after on account of the ravages of the white cottony cushion scale. The introduction of the vedalia has destroyed this scale, and it need no longer be feared. The time now seems ripe to call attention again to these valuable trees.

Returning for a moment to our piling it may be well to mention the fact that a pile of any kind of wood driven in a harbor opposite or near the discharge of gas-works waste, or in fact at the mouth of any sewer, may be taken out one, five or ten years after, without showing any signs of the teredo. The teredo cannot live in very foul water. It is therefore clear that great care must be exercised in experiments to ascertain the value of piling.

A Good Eucalyptus.

Perhaps one of the best all-around trees introduced some years ago by the State Board of Forestry is the *Eucalyptus corynocalyx* (sugar gum). This tree is symmetrical and attractive in appearance; of rapid growth and produces a valuable timber. It is being largely planted in the southern part of the State. It stands frost as well as the blue gum, but not so well as the *Eucalyptus viminalis* (manna gum). This rapidly growing and graceful tree has been largely planted in this State as "red gum." The error was due to the dishonesty or incompetence of seedsmen. This incompetence as to this tree still exists and seed recently purchased for *E. rostrata* (red gum) turned out to be the manna gum. Both are good trees and both have proved successful over wide ranges of soil and climate in California.

Suitable trees in suitable localities have proved profitable in California and to an extent sufficient to encourage an enlargement of this industry. We must never forget, however, that safety from torrents, from increased winds and extremes of temperature, and above all security for our summer supplies of water depends on an intelligent forest policy looking to the preservation of the forests on our mountain water-sheds. If we expect to enlarge the area of irrigated lands, if we desire to see the State maintained and increase its productive power we must protect the mountain forests. ABBOT KINNEY.

Santa Monica.

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

Watsonville Astir Betimes.

Preparations for State Grange.

EDITORS PRESS:—A special meeting of Watsonville Grange has been called for Saturday, July 26th, at 2 o'clock for the purpose of receiving a number of applications from persons who desire to become members of the Order in time to entitle them to attend the State Grange, which will ere long convene here; also for officers' drill, as visitors from various Granges will be present at the next regular meeting, August 2d, to witness the initial ceremony of the largest class ever received by a subordinate Grange—a distinction in which this Grange feels a pardonable pride. A last opportunity is thus given those farmers and their families who have not realized how near the time approaches for the State meeting. Any names presented before the close of the "special" will yet be in time.

Weekly notes will appear of the busy movements of Watsonville Grange between now and the meeting of the State Grange October 7th.

Reduced rates have been secured on the railroads under conditions already published in the RURAL, while arrangements for a number of excursions are under advisement. An opportunity will thus be given people from all over the scorching interior to feel the cool breezes and feast their souls (some for the first time) on the vastness and grandeur of ever-changing old Pacific.

Besides the delegates, visitors from all parts of the State, and fraternal delegations even from Oregon and perhaps Washington, have promised to be present. H. E. Hayes, Master of Oregon State Grange, will doubtless address our farmers on the vital issues of the day.

Notwithstanding it is an "off year," every effort will be made to render the coming State Grange session the best ever held. Watsonville, fully alive to the honor conferred on her in being selected as the place of holding the State conclave of the bone and sinew of the land—when such places as San Jose, Marysville and Oakland offered their attractions and boundless hospitality—will respond nobly to the demands of the occasion. Her cereals, fruits and flowers will fill to overflowing the cornucopia of progress and plenty, and after the meeting shall have adjourned it will be the general verdict that the holding of the State Grange so far from its old headquarters proved a gratifying success.

Watsonville Grange will hold meetings as follows: A special meeting Saturday, July 26th, at 2 o'clock; a regular meeting Saturday, August 2d, at 1:30 o'clock sharp, when the first and second degrees will be given; a regular meeting August 16th, when the third and fourth degrees will be conferred; August 23 a special meeting at 10 o'clock in the morning, to conclude with a grand Harvest Feast at 12 o'clock; and at 1:30 P. M. a select program will be rendered, with addresses by W. M, Davis and others.

You farmers who have been undecided, here is your golden opportunity, which, if now let slip, will never return. If you have not time to attend to the matter in person, hand some friend the small fee of $3 for yourself or son, or $1 for your wife or daughter, with your plain, honest name and age, and become actively enlisted in a cause as great as it is just.

A. P. R.

The Grange in Lake County.

There are favorable prospects of organizing a good Grange at Middletown and another at Kelseyville within a short time. The Secretary of the State Grange met a number of farmers and husbandmen at the school-house in Middletown last Saturday, but not enough to effect a reorganization. A Republican primary held in town during the afternoon and the smoke of a forest fire discerned in the home neighborhood of some who had come in town to attend the meeting, lessened the number of attendants.

The meeting was organized by the election of Messrs. Connolly chairman, Whittinger secretary and Abbey treasurer, who were also appointed a committee to arrange for another meeting at 4 P. M., August 2d. There are some earnest old Patrons, as well as other farmers, who seem desirous of establishing and maintaining a good Grange at Middletown and we hope they will have an early success.

FREIGHT CHARGES ON GRAIN.—A telegram from Washington announces that the Interstate Commerce Commission has decided to issue an order making a reduction in the grain rates from Iowa, Nebraska, Kansas and Missouri to St. Louis and the Mississippi river, and to Chicago. The food-product rates east of the Mississippi, not involved in other suits before the Commission, are not found to be excessive.

RECEPTION.—We learn from J. D. Hollister, W. M., that Eden Grange will tender Bro. and Sister A. Adams, recently returned from the East, an ice-cream reception Aug. 9th. E. W. Davis, W. M., has been invited to be present.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

There are indications that the rate of State taxation will be higher this year than it was last year. How long, oh, how long will the farmers of California allow this imposition to continue? Let us have more practical men in the Legislature. Don't you say so? Then look to the man you vote for. Be sure he is *the* man for the place. Don't be in doubt! Help nominate and elect a man who will ask: "*Why?*" before voting the people's money away. That will give us lower taxes, better laws and more social, financial and general prosperity.

Don't you think it is worth the time of every farmer in California to plant a few nice shade trees every year? The Sisters of the Grange will look well to the planting of flowers and blooming vines. Arbor Day ought to be encouraged and patronized by every Grange in this State.

If every member of the Grange in this jurisdiction will but add one new name before the State Grange convenes, the membership will thus be increased one hundred per cent. Who can't bring out one new name? Try each one, for *one new number*.

The English farmer is faring much worse this year than his brother on this side of the Atlantic. While we of the farm have short crops, we will receive a fair price. In Great Britain hay is rotting on the ground, wheat is mildewing, fields are turned into ponds and the fruit crop is an utter failure. Gloom has enwrapped the agricultural classes of England, if reports are true.

Produce from the brain as well as from the soil, if you want success on the farm.

Three conditions of success are: good health, good habits and good education. Get these, and most other elements of success are at your command.

The Grange asks none to join it who cannot see good in their fellow-beings; but to all interested in agriculture, who have generous hearts and open hands to help the needy and aid in making the labor of this life cheerful, we say: "Welcome to the Grange." Don't you indorse the above sentiment? Then why not join the Grange?

If there is no Grange in your locality, write to A. T. Dewey, Secretary of the State Grange, 220 Market St., San Francisco, and he will furnish you with all the blanks and full instructions how to organize. You may make $15 by getting up a charter-list. Try it, fellow-farmer! The one safe guide to success is: "Be sure you are right." Do we always so act?

Do you ask yourself for a reason why such a thing should be done? Do you stop to think that Reason is the lever which elevates man? Do you know that the more you study, the more you will want to study, reason and inquire? There is no harm in knowing, "why?" Tell us *why* you plow, sow, eat, sleep, converse, have a home, a wife, friends? Tell yourself *why* you want *all money* and none of the comforts and blessings of the home, with its library, music, friends, happy children, loving wife, and joys too numerous to mention. Don't you know, fellow-farmer, it is a good thing to ask *yourself*, as well as others, "Why?"

Know the facts, and you will know enough to be President. Better have a fact than a fancy.

Be just to all! Have an ambition to be, and *be*, an industrious, frugal (but not stingy), intelligent, useful citizen.

Remember the school-house. It is the twin companion of the Grange hall. America needs and must support both. Good manners, good morals, good thoughts reside therein.

Bro. J. H. Brigham, Worthy Master of the National Grange, under date of June 30, 1890, says: "I have no doubt of the ultimate ratification of the amendment reducing membership fees; yet the arrangement has not yet been made."

Governor Waterman will soon have to name eight representatives to the Farmers' Congress, which is to meet at Council Bluffs, Iowa, Aug. 26th to 29th.

The Grange takes no part, as an Order, in any political convention; but it is safe to assert that the members of the Order will do some telling work on undeserving candidates when election day arrives.

Some one has written an article on "Lack of Conscience as a Means of Success." No doubt the writer is now, has been, and probably always will be, a politician. Those are the fellows who find it most easy to succeed when conscience is *not* consulted.

Patrons, don't forget, now that conventions are being held, to nominate men for the Legislature who will pass some sort of legislative bill for the relief of an overtaxed people who *insure* their property against damage or loss by fire. The insurance laws of this State need to be modified and amended. See to it!

The Executive Committee of the State Grange will be expected to have their report ready for the *first day* of the session. So, too, it is hoped that each officer will have a written report ready for the first day. Heretofore our work has always crowded us the *last* days of the session. Let us reverse the rule this time and crowd the work the *first* day. The Master sincerely hopes that each officer and representative will answer "Here!" at the first call of the roll. Though *others* may be tardy, don't *you* be one of the tardy. If all will do this, no one will be behind time and the work of the session will be done both harmoniously and promptly. Won't you be "on time" all through the session? I am sure I hear you say "Yes."

Plumas Grange is to hold an agricultural fair at Beckwith, Oct. 1-3, and Bro. D. Flint is to deliver the annual oration. Bro. Thos. McConnell of the Executive Committee is expected to be there too, and we miss our guess if the Patrons of Plumas don't have a rich treat. Wit, wisdom and philosophy are always attendants of Brothers Flint and McConnell.

Sonoma County Pomona Grange.

EDITORS PRESS:—The regular meeting of the above Grange was held at Hahman's hall, Santa Rosa, July 16th.

Report of Committee on Revision of Constitution and By-laws was considered *seriatim*, and amendments adopted as recommended by committee.

The preamble and resolutions of Creston Grange were read and indorsed by this Grange.

The communication from San Joaquin Pomona Grange, relating to the proposed ballot law, was referred to the following committee: S. T. Coulter, Santa Rosa; G. N. Whitaker, Bennett Valley; M. Litchfield, Sebastopol.

The report of the Legislative Committee of the National Grange was read, and on motion the following was adopted:

Resolved, That the report of the Legislative Committee of the National Grange receive the approval and indorsement of this body, and that the Secretary be directed to send each member of said committee the thanks of this Grange for the zeal, ability and fidelity with which their duties have been discharged.

A Communication from the Legislative Committee of the National Grange, under date of April 24th, was read and referred to a committee consisting of E A. Rogers, G. N. Whitaker and W. P. Crane, who submitted the following report, which was unanimously adopted:

We, the special committee appointed to consider the questions contained in the report of the Legislative Committee of the National Grange, beg leave to recommend that our represetatives in Congress be requested and urged to vote for and secure the passage of such bills as will bring relief to the farmers of America, and as are recommended by the Legislative Committee of the National Grange.

A communication on women's special work, by Sister C. E. Kinney, was referred to a special committee, consisting of Sisters F. L. Gamble, G. N. Whitaker and S. T. Coulter.

Bro. E W. Davis, W. M. of State Grange, gave some well-timed remarks.

Crop reports from the different sections of county are not very encouraging.

Bennett Valley reports fruits about one-half crop; hay mostly volunteer; grapes fair.

Santa Rosa—Prune crop poor—about one-half crop—prices good; peach crop nearly a failure.

Sebastopol—Fair crop with most all kinds of fruit, and good prices; hay scarce.

Two Rock—Cereal crop not very flattering; potatoes good; fruit, except apples, a failure; dairy interests on the decline. Fraternally,

DON MILLS S.o'y.

HYDRAULICKERS HEAVILY MULCTED.—On Monday last, Judge Sawyer fined the Omega Water and Mining Co. of Placer county $3000 for contempt of court. Some time ago suit was brought by Edwards Woodruff against the North Bloomfield Mining Co. et al. to prevent the dumping of debris into the Sacramento river, the result of hydraulic mining. The Omega Water and Mining Co. was also made one of the defendants. The decree of the court enjoined the defendant from carrying on the work of hydraulic mining. A bill of exceptions was filed by the O. W. and M. Co., and the matter was referred to Master in Chancery Houghton. The report of the Master in Chancery showed that the company was in contempt, and the report was confirmed by the court. The court thereupon ordered the fine of $3000 recorded against the company. This is the heaviest fine ever ordered by the court. The usual amount was $500.

THE attention of farmers outside of the Grange is called to the communication of "A. P. R." of Watsonville in another column. The farmers not of Watsonville only but all over the State, should make a note of the opportunity offered themselves and families for being richly benefitted at this time. Especially should there be a revival of interest in all the Granges in Santa Clara, San Benito, Santa Cruz and Monterey counties. Every Patron in the State should prepare for a good time at Watsonville.

The Grange and What it is For.

[By Gov. CYRUS G. LUCE, Master of Michigan Stat Grange.]

[Leading Grangers can often do the Order good service by expounding the aims, purposes and principles of the Order for the benefit of the masses without the gates. Such an effort is that of Bro. Luce of Michigan, which appeared lately in the *Rural New Yorker*. Worthy Master Luce is a Patron of good repute for solidity and steadfastness and has often used his great influence toward the righting the wrongs under which farmers have suffered. His visit to California to attend the meeting of the National Grange last November, gave many Californians the pleasure of personal acquaintance with him, and he won much favor by his dignified bearing and genuine cordiality.]

The Grange organization is now and has been in active operation for about 18 years. It was organized and is maintained for five distinct though kindred purposes: First, to improve the farmer, his wife, sons and daughters intellectually; second, to improve him morally and strengthen and unify the moral forces found in the rural homes; third, to elevate and improve socially; fourth, to protect and benefit him financially; fifth, to increase his political power. It has certainly accomplished much in all of these lines of action. The farmer is educated by coming in contact with his fellow farmers. He can and does through the influence thus exerted become more successful and prosperous. The success achieved in this direction is perceptible in every neighborhood where a good live Grange exists. Its meetings are conducted and governed by the same parliamentary rules observed by deliberative bodies everywhere, and in this way members become somewhat skilled in the methods adopted by conventions, associations, etc. They are also taught to think, speak and write, and in this way broaden and deepen thought, and stimulate action in a way that shall make them wiser and better citizens.

The mothers, wives and daughters become active members and are endowed with all the rights and privileges of the fathers, husbands and brothers. The Grange has accomplished wonders for the farmers' wives; it has relieved toil to a great extent, of its drudgery. It has elevated and stimulated their ambition and aspirations. By families coming in contact with families, husbands have been compelled to think in relation to the burdens borne by the wives. The farmer's calling in and of itself does not stimulate the mental activities to the extent that many other vocations do, and hence an organization that shall aid him, or even compel him to think, is required by him to a greater extent than by other men.

The Grange, in its Declaration of Purposes, pronounces strongly in favor of the highest morality. It teaches this in the Grange room. It tries to concentrate and utilize the moral forces. While not claiming that the farmers are all saints and other people all sinners, the members generally, as I believe society does everywhere, concede that the highest average of morality is found out in the country where the temptations are fewer. It has struggled long and faithfully to stimulate and elevate all social life, and in many places it has accomplished wonders in this direction. The bright-eyed boys and girls in the country have the same social aspirations, the same desires for association with their fellows that actuate their brothers and sisters in cities. There has been no duty imposed by parentage oftener neglected than that which demands of parents opportunities for the social enjoyment and improvement of their sons and daughters, and the Grange came in to use its influence, and operates to supply this long-felt want. And again, the isolated condition of the farmer renders him too often a fit subject for the wiles of the speculators and sharpers, and the Grange comes in with its words of admonition to aid and protect its members from imposition and loss. It also invites all to study the market values of their products, as well as of the implements, goods and wares which they purchase, and while it has not made a specialty of doing business to any great extent, it stands ready at all times to protect its members from extortion. Its great mission is not to tear down, but to build up; not to destroy, but to create; not to oppress, but to protect, and in doing this it opposes laws that open wide the doors for extortion. In this State it has done much to avoid the payment of royalty to shysters and patent-right speculators. It has achieved a great success in the courts, and has protected the farmer generally from speculators in royalties. It stands ready to buy implements in quantity where the dealers will not supply at fair rates.

It encourages the building up of manufactures and the growth of towns by encouraging its members to become better farmers so that they will be enabled to become better customers for manufacturers, merchants and commerce. It is non-partisan politically. It has united its forces with none of the political organizations, and yet it has endeavored to influence legislation. It has generally been ready to oppose those who were arrayed against the agricultural interests. It is the eternal foe of trusts and combinations that have for their purpose the imposition of burdens upon the people. It carefully watches the candidates that are nominated; and its members are urged at all times and under all circumstances to become active politicians—politicians in a better and wiser sense if necessary; to attend conventions, to become a power in the party where their judgment and conscience have taken them. It exists in 36 of the States of this Union. In some

it is very strong; in others it is weak, but it has through its precepts and example, through the spoken words and printed pages promulgated the desire for agricultural association. Though many are uniting with other somewhat kindred associations, it is stronger in power and influence to-day than ever before. While it possibly has not as much faith in the efficacy of legislation to cure *all* the evils which confront us as some others of the active farmers' associations may have, yet it does believe an enlightened public can dictate legislation that will protect and benefit. It believes, universally I think, that while the policy of protection to American industries remains in force, agriculture is entitled to its fair share of protection. It believes that the cotton of the south and the wool of the North and West are no more raw materials than anything else that is produced by toil. Its membership comes from all political parties and from nearly all of the Christian churches. It has enlisted the active efforts of the patriotic and the ambitious.

Agricultural and Industrial Training.

In regard to the bill recently introduced into the U. S. Senate by Senator Morrill of Vermont, to apply a portion of the proceeds of the public lands to the more complete endowment of the colleges for the benefit of agriculture and the mechanic arts, established under the provisions of an Act of Congress, approved July 2, 1862, Bro. J. H. Brigham, W. M. N. G., has lately written as follows:

When this bill was pending before the committee, I, as the head of a great farmers' organization, was invited to appear before the committee at the hearing. I was present and stated that if there was placed in the law a limitation, requiring the money so obtained to be expended only in the teaching of such branches as relate to agriculture and the mechanic arts, then I would not oppose the passage of the bill. Without such limitation, I did not think our members would indorse the bill. It was agreed that such limitation be placed in the bill, but, when pending in the Senate, all such limitations were stricken out, and an effort has been made to rush the bill through before the knowledge of this amendment reaches the farmers.... I look with some suspicion upon bills introduced and pressed to passage in the name of agriculture, which have never been asked for or indorsed by any farmers' organization, and I fear that much of this fund, if obtained, will be expended as dishonestly as was the original land-grant fund.

I give you the above facts that you may understand the situation and use your influence for or against the passage of this bill, as may to you seem right and in the interest of agriculture. If you desire to be heard, I suggest that you at once telegraph to the Congressman from your district and also to James O'Donnell, Chairman of Committee of Education. Follow telegram with letter.....Act promptly if you desire to influence the passage of this bill.

The Superintendent of Public Instruction.

As the present State Superintendent of Public Instruction, Bro. Ira G. Hoitt of Sacramento Grange, was endorsed by a convention of Patrons four years ago, the following creditable record of his work and its results may be of interest to those who supported him.

He has done much toward establishing Arbor Day among the schools, and in causing the American flag to be raised over school buildings. He has devoted himself assiduously to the duties of his office, and during the fiscal year ending June 30, 1890, besides attending the meetings of the various educational boards of which he is a member, he traveled in the discharge of his duties 17,274 miles, visited 13 orphan asylums, attended 30 county Teacher's Institutes, visited 240 classes, delivered 255 educational lectures and addresses, and turned back to the State Treasury $198.70 of the $1500 appropriated for the traveling expenses of his office. The following figures are interesting as indicating progress in the schools:

Increase in number of children in the State between 5 and 17 years in 1889 over 1888	4,802
Increase in number of children belonging to the public schools in 1889 over 1888	12,103
Increase in average daily attendance in 1889 over 1888	11,506
Increase in number of teachers who subscribe for some educational journal in 1889 over 1888	595
Increase in number of teachers who attended Institutes in 1889 over 1888	447
Increase in number of school visits made by County Superintendents in 1889 over 1888	821
Increase in number of school visits made by Trustees in 1889 over 1888	3,427
Increase in number of school visits made by other persons in 1889 over 1888	18,012
Number of new school-houses erected in 1889	218

The *New England Journal of Education*, May 29, 1890, says of Bro. Hoitt: "Few men have planned more sensible reforms in educational administration than he, and few have accomplished that which they planned so uniformly and completely. He has great capacity for hard work, riding farther, talking and writing more, and visiting more schools, than would be possible for most men. He has business elements with which few are gifted. He knows what is being done in every department of education in every other State; wherein his State is weak or strong, and is always planning to strengthen the weak places."

Rambling Thoughts.

EDITORS PRESS:—It is with much pleasure and profit that one reads in your valuable columns reports of the doings and sentiments from all over the Pacific Coast and also from the "States," as we used to call our old homes beyond the Rockies.

Just think of it! When the writer in 1852 came the "plains across," the country lying west of the Missouri river and east of the summit of the Sierras was a howling wilderness inhabited by the Indian, the buffalo and the cut-throat, and now there exists a cordon of States the entire distance of nearly 2000 miles. No mortal man, since the world was sent on its ceaseless round, has seen such progress as the adult population of to-day. But this spread and progress of civilization is more than matched by the march of invention and discovery.

The writer is familiar with farm life for half a century, as it appeared in the old Middle States and as it moved westward until stopped by the Pacific ocean. Toward the close of the century some one, perhaps many, will attempt to sketch the progress and achievements of the centennial, when the material will fill a library.

It is not my purpose to dwell on what everybody knows, but when I contemplate the advance in agriculture, I fairly envy the man on a gang-plow or the pilot of a modern harvesting outfit. Fifty years ago I was a lad big enough to carry water and whisky to the reapers, who cut the grain by hand with great sickle-hooks, and while they rested to refresh themselves, I tried my hand with distressing effect and will carry the scar through life. I have also seen much thrashing with flail, and rode on horseback the unceasing rounds over the barn floor, tramping out the grain while father shook up the beaten straw.

Thus a glance at present methods shows the wonderful progress of the age, and the great distinction enjoyed by this generation over all former periods of the world's history.

Steam Harvesting.

These thoughts forced themselves anew to the front when, a few days since, I witnessed the steam-harvesting in operation on the farm of Henry Best, about eight miles southwest of Yuba City, in Sutter county. A traction engine did the plowing, drawing 16 plows and was performing the work of at least 30 animals in pulling an 18-foot cut header and separator, equal to the task of thrashing and cleaning 30 to 40 acres of wheat in a day. What a sorry figure, thought I, would father's reapers and methods cut alongside this monster machine.

But enough of this, for the tale has been told a thousand times from town and hamlet by the lightning current, thus discounting the 30 to 40 miles an hour of the iron horse.

Crops in Sutter.

The harvest of our county is nearly over and the crop is a light one, though most excellent in quality. One of those untoward seasons, of which we have read in other lands, though never experienced in California before, has touched us, and for a while stayed our onward march. Not half the acreage was planted on Nov. 16th, when all field operations were closed by excessive rain, and practically remained closed until too late to make amends. Thus it is the short acreage and slight damage has reduced the volume of our crop, but it has left us a good quality with fair prospects of an enhanced price over the past year or two.

Now if it is asked: "What shall be done about it?" let the answer be in the old adage that may be considered more forcible than elegant: "Grin and bear it."

No country or clime has escaped unfriendly visitations, and none has been more favored than our own cherished California. Having in the past dealt so lavishly with us, let us not chide her for this uncommon season of weeping.

Lessons of the Year.

But there is in this a purpose of an overruling Providence, and its wisdom will doubtless in due time be made apparent to our benefit. One is already plainly to be seen, which is—plant your orchards upon high and well-drained soil, and in future avoid the consequences of excessive wet. This is the more applicable now because our fruit interests are yet in their infancy, but rushing forward with giant strides. We shall also learn to be more economical and to more carefully husband our resources. Possibly we may find less necessity to go to the springs or watering places for health. We may even find more enjoyment than we thought possible at home and among our friends and neighbors. We may also learn how to curtail our wants in other ways and still be content. Other generations and peoples have had similar lessons and human nature is still the same. Let us be thankful for the blessings we have; there is plenty for all and a surplus for the needy of other lands.

Truly yours, EUREKA.

Yuba City, July 20, '90.

RAILROAD LANDS.—In the House, 21st inst., the Committee on Public Lands reported a resolution calling upon the Secretary of the Interior to inform the House by what authority and why he authorized and directed the issue of patents to the Union Pacific Railway Co. for lands granted the company prior to the payment of the debt due to the United States from said company; that he also report to the House the amount of land patented or certified to each of the land-grant corporations of the U. P. R. system up to this date. Adopted....On the same day, the Senate Committee on Public Lands ordered a favorable report on the House bill to amend the Act of June 22, 1874. It extends the privileges granted by that Act, subject to the provisions and limitations and restrictions thereof, to all persons entitled to the right of homestead or pre-emption under the laws of the United States who have resided upon and improved for five years lands granted to any railroad company, but whose entries or filings have not for any cause been admitted to record.

Two Weeks in Tulare.

EDITORS PRESS:—This is a fine, prosperous county. I was fortunate on entering this region to fall in with my old friend, J. C. Russell of Traver. He gave me every possible aid, in showing me the fine fruit raised in his locality, his own orchard not being behind as to culture and fruit.

Next I was fortunate in meeting Major T. J. McQuiddy of Hanford who cheerfully consented to take a seat in my buggy and show me the finest and most prosperous orchard and vineyard section that it has ever been my privilege to behold. Apricots, 800 to 1300 pounds to the tree; peach-trees loaded with all they could bear up under, and that of the finest quality, and to make the joy of the owners complete, the prices obtained for their fruit are all they could ask.

I next headed for Waukena and there received a hearty welcome from our old and tried friends and Grangers, Mr. and Mrs. A. J. Woods, who have done all that could be done to make it pleasant and profitable to a representative of our PACIFIC RURAL PRESS. I went with him to his fine field of wheat and there witnessed the best work that I ever saw done with a harvester. He has Holt Bros.' machine, which, under the management of the able men he has to run it, turns out from 300 to 360 sacks per day, weighing on an average 148 pounds.

Mr. Wood has taken me to all places of interest, among others the famous estate of Page & Morton. They have 600 acres in orchard and 900 acres in raisin vineyard. They employed 225 hands to handle their apricots. Wages made, $1.90 to $2 per day. Will realize some $300,000 this year from their best tract.

Tulare Grange.

With Brother and Sister Woods I attended Tulare Grange last Saturday. The busy season prevented a large attendance but those present were alive to the interest of the cause.

All have done their best to aid me in my work for the PRESS, and will please accept my thanks. E. B. TAFT.

Tulare, July 22, 1890.

The National Master on the Tariff.

In a letter to the Cincinnati *Grange Bulletin*, dated Delta, O., July 14th, W. M., Brigham, says:

I, as Master of National Grange, have never issued an appeal to the Grange to use its power for the passage of the McKinley bill as a whole, but I have repeatedly urged our members and farmers generally to insist upon the provisions contained therein, which are particularly favorable to farmers.

We must look after our own interests in both State and National Legislation, and we must recognize the results secured at the polls if we are to accomplish anything of practical advantagtage for our class. The revision of the tariff by the present Congress will necessarily be from the protective standpoint, and we should ask for all the benefits for our industry which that policy can afford. We need not be modest in our demands, because there is no danger of obtaining more than a fair share for the farmers. When the people reverse their decision (if they do reverse it) then we must conform to the changed conditions and guard well from unjust discrimination, our great industry.

I think the members of our Order are substantially agreed upon this line of work, as an Order. Individually, however, we are free to act with any party, or to support any policy which seems to us best adapted to the wants of the people. It is my opinion that the McKinley bill will pass in some form and will remain the law for several years, unless the party now in power shall undergo a change of views upon the subject of tariff, as such party seems certain to hold some branches of the law-making power for a considerable period of time.

Believing this, I have been very anxious to obtain all the direct protection for the farmer which can be afforded under this policy. It is possible that what is called the free trade policy would be better on the whole for the farmer, and whenever manufacturers and their employees are ready to make a fair trial of such policy, I, as a farmer, am also ready but I am not willing to have one policy for the above named classes and another for the farmers.

IN NORTHERN COUNTIES.—There is talk of organizing the Grange in Modoc and Lassen. Farmers who feel interested and desire to aid in the movement may address H. Kelley, Adin, Cal., who is supplied with the petition-blanks and other documents.

A Good Patron Gone.

Stockton Grange, No. 70, P. of H., at their meeting July 19th, passed the following resolutions:

In Memoriam.

WHEREAS, The Divine Master of the Universe, in his unerring wisdom, has permitted death again to enter our Grange circle, removing from our fellowship on earth our worthy and estimable brother, W. D. ASHLEY, a charter member, and one of our oldest and best, therefore

Resolved, That in his death Stockton Grange has lost a worthy, faithful and consistent member, who won the regard of his fellow Patrons by his modesty, calm judgment and candor. We will miss his cheerfulness, his courteous deportment toward his brothers and sisters in the Grange.

Resolved, That his many good qualities are worthy of imitation.

Resolved, That his family has lost a tenderly devoted husband and father, the community a moral, upright and substantial citizen.

Resolved, That we extend to the family of our deceased brother our heartfelt sympathy, knowing how futile is human aid in this painful bereavement. We commend them to the loving kindness of the All-Father, without whose Divine behest a sparrow does not fall to the ground. He has promised to care for the fatherless and widow. We pray that in the beauty of Christian resignation they will rest in the promise.

Resolved, That these resolutions be spread on the minutes of Stockton Grange, and that a copy be sent to the family of our departed brother, and a copy to the PACIFIC RURAL PRESS.

MRS. J. B. BOODY,
L. E. OVERHISER,
J. M. BARBER,
Committee.

Grange Hall Stockton, July 19, 1890.

THE PRESIDENT TO THE PATRONS.—In a letter written by President Harrison in response to an invitation to attend the National Grangers' exhibition, he says: The tariff question is the most important of the day, and the people should be thoroughly educated on it. As there is no doubt that the farming element is the backbone of this or any other government, it is necessary that they should understand this question so that they can choose between free trade and protection. The free trade question is a dangerous one to handle, and if it should win in 1892 it would cause great distress throughout the land, something never experienced by the American people. [It will take a greater man than the President of the United States to make the farmers of this country think alike on the tariff question before the next Presidential election.—EDS. PRESS]

THE FARMERS' ALLIANCE in Minnesota went into joint convention with the United Labor party, last week, adopted resolutions and nominated a State ticket, which it is hoped they will elect.

OVERSEER A. P. ROACHE gives us a loud boom from Watsonville this week.

Fairs of 1890.

Los Angeles (6th Dist.), Aug. 4-9
Ione (26th Dist.), Aug. 5-9.
San Jose (5th Dist.), Aug. 11-16.
Willows, Aug. 12-16.
Napa (25th Dist.), Aug. 18-23.
Red Bluff, Aug. 19-23.
Nevada City (17th Dist.), Aug. 19-23.
Petaluma (4th Dist.), Aug. 25-30.
Chico (3d Dist.), Aug. 26-30.
Placerville (8th Dist.), Aug. 26-30.
Oakland (1st Dist.), Sept. 1-9
Marysville (13th Dist.), Sept. 2-6.
S. L. Obispo (16th Dist.), Sept. 2-6.
Auburn (20th Dist.) Sept. 2-6.
California State Fair, Sacramento, Sept. 8-20.
Oregon State Fair, Salem, Sept. 15-20.
S. F. Mechanics Institute, Sept. 18-Oct. 25.
Nevada State Fair, Reno, Sept. 22-27
Stockton (2d Dist.), Sept. 23-Oct. 4.
Rohnerville (9th Dist.), Sept. 22-26.
Quincy (11th Dist.), Sept. 22 ——.
Lakeport (12th Dist.), Sept. 23-27.
Independence (18th Dist.), Sept. 23-26.
Redding (27th Dist.), Sept. 23-26.
Bishop (Eastern Slope), Sept. 23-26.
No. Pac. Industrial, Portland, Sept. 25-Oct. 25.
Fresno (21st Dist.), Sept. 29-Oct. 4.
Escondido (22d Dist.), Sept. 29-Oct. 2.
Yreka (10th Dist.), Oct. 1-5.
Watsonville (24th Dist.), Oct. 1-4.
Walla Walla, Oct. 6-11.
Susanville (Lassen Co.), Oct. 6.
Visalia (15th Dist.), Oct. 7-11.
Arroyo Grande, Oct. 8-10.
Santa Barbara (19th Dist.), Oct. 21-25.
Salinas (7th Dist.), Oct. 30-Nov. 4.

STANISLAUS ORCHARDS.—Messrs. Lelong and Rice, of the State Board of Horticulture, returned last Saturday from a tour of inspection among the orange orchards of Stanislaus county, all of which they found in a thriving condition, especially those around Oakdale and Knight's Ferry. They distributed about 200 of Australian ladybugs in that neighborhood.

A FINE APRICOT.—E. Wolleb places on our desk an apricot from his "Botheration Ranch" in the hills back of Fruitvale, south of Oakland, which is a grand specimen of its kind. Its greatest diameter was three inches and its weight six ounces.

CROPS IN MODOC.—Our agent at Adin writes: We have had no showers since the middle of June, and it is hot and dry. Spring-sown grain will not fill well, as the weather is too warm. There will be considerable grain cut for hay.



The Lesson of the Rose.

Would pause the rose, its perfume
To stay or speed its flight
'Twere idle, for move on it must,
However rich or rare.

No charm it holds. Can it possess
No property its own?
With ceaseless aim Dame Nature's claim
Must ever *first* be shown.

As catch we from the rose
The perfume as it goes,
So heart must deeply drink from heart
While inspiration flows.

The fountain that to-day is flush,
To-morrow may be dry;
For hearts must move with the roses
At nature's ceaseless cry.

Look well the beauties of to-day
To harvest as they pass;
To-morrow's sun may scorch and fade
The green upon the grass.

—*A. P. Reed.*

The Real Good.

"What is the real good?"
I asked in musing mood.

Order, said the law court;
Knowledge, said the school;
Truth, said the wise man;
Pleasure, said the fool;
Love, said the maiden;
Beauty, said the page;
Freedom, said the dreamer;
Home, said the sage;
Fame, said the soldier;
Equity, the seer—

Spake my heart full sadly:
"The answer is not here."

Then within my bosom
Softly this I heard:
"Each heart holds the secret—
Kindness is the word."

Cleaning House.

In Sapping Time.

The man folks wuz all orf down to the sap orchard, and they'd taken their dinners along, 'cause they dassent leave the sap for fear 'twould bile over. I thought 'twould be a grand chance fur me to clean house, and I'd take the fore room and spare chamber.

The rag carpet in the best room hedn't ben took up for two year, for sense Maria Jane wuz married we hedn't much call for a parlor, but I thought I'd ought to git it up this year; then, too, 'twas sich a good windy day to put it out on to the line and beat it.

I wuz orf up garret a lookin' over a chest o' woolen things to see 'f the morths hed ben agnawin' of 'em, when I heerd a knock at the back door, so I runs down, and there stood Jake Penniman, the tin peddler. I told him I wuz dreffal busy, but I wuz asufferin' fur a long-handled dipper and a three-pint basin, so I fetched out the paper ragbags ('cause he sed 'twant noways like that he should be 'round agin under four weeks), but rags is so cheap now that I hedn't enough to pay inter tew and a quarter cents, so I hed ter hist inter the garret agin and hunt up some more rags, for I allus hed better calkerlation than to be apayin' out the money fur tinware.

Then I went to work up chamber agin, and hed got the spare room about into shape, when there come a knock to the front door.

I peeked out o' the winder, and 'twuz a dretful slick lookin' chap, with a leetle bit of a mustache, and glasses on. Thinkses I, 'taint nobody that I know, but he's got a carpet-bag; looks z ff he wuz gwin' to stop a spell. Maybe he's a connecshun o' Hezekiah's fust wife, that's come to pay us a visit. They're allus a aturnin' up in my porridge dish. So I went to the door, and he shook hands with me, and called me Miss Henderson zif he'd allus knowed me.

"Wal!" sez I, "walk rite inter the parlor, but you've completely got the hands of me, for who in the old cat and Tom Walker you be I hain't no kind of an idee. You hain't a kin o' Mirandy's be ye, she that wuz Hezekiah's fust wife? Pears to me you do favor the Shinnersees. I hope you'll excuse my looks, fur I'm a cleanin' house."

"O, certainly," sez he, "and I'm very sorry not to be able to claim relationship, but I am an agent for the most remarkable book that was ever published—the sermons of the learned Dr. Bixenberry of New York," and he talked to me a blue streak for about 15 minutes, a showin' me the picture and the different kinds o' bindin', and tellin' of me where to write down my name. I couldn't git a word in edgeways, but at last I riz, and sez I: "Hezekiah an' me goes over to the brick meetin' house to the village every Sunday, when the goin's sost we can git there, and we pays Elder Wadkins 50 cents a Sandy, if he don't do but half a day's work now, but he preaches 'mazin' powerful sermons, and all that Hezakiah and me is a needin' of in that ere line jest now."

He hung on a spell longer, but when he found 'twant no use, he asked all about the folks down to the next house, and went on.

Then I tackled the fore room in annest. I'd got the carpet out onter the line, and wuz jest wipen' up the floor, when the stage come along. I vum! if it didn't stop rite agin the house, and out jumped Sairy Ann Jenkinson, she that wuz Sairy Ann Doolittle, in the day of her, Hezekiah's step-sister Jermimy's darter, and the twins and the little boy. They come a pilin' in pell mell, as I stood there in the entry, like a statute, a wringin' out my mop.

"How do you do? Aunt Patience," sed Sairy Ann. "We're awfully glad to see you. We're come to get some sap sugar!" yelled the children.

Now I wuz a plannin' to take a lettle cold bite to the cupboard, and not git no dinner, the man folks bein' all gone, and here wuz this rigermunt ter feed. We wuz a takin' of our meals out in the back room tew, fur I'd jest painted the kitchen floor the day before. Wall, I jest dropped everything, and went to work to cook 'em some taters, and fry 'em some ham and aigge, and that made me think of the bacon that I wuz a smokin' out in the back yard. That agent hed pestered me so that I'd clean forgot all about it, and the berrill hed ketched fire and burned all up, the ham fell inter the coals and wuz burnt to a crisp. "So much," sez I, "fer hevin' so many irons inter the fire." After a while I got 'em somethin' to eat, then Sairy Ann, she thought she'd take the children and go down across lots to the sap place, and liker nuff they'd find some Mayflower blows out.

I wuz glad to git rid on 'em, though I thought Sairy Ann might hev offered to wipe up the dishes, but she keeps a hired gal, so I 'spose she never thought on't.

I hedn't more'n begun to wash up the fore-room floor agin, when who should drive up inter the dooryard but Elder Calvin Wadkinses folks, he and his wife and all four young uns, on a buckboard.

"Wal," sez I, "you've ketched me in the suds this time; the man folks is a sappin," and I'm tryin' to clean house; so you'll hev to visit in the foreroom without erry carpet, and eat in the back kitchen."

The elder sed he'd ben a promisin' the children to take 'em out here to git some sap sugar, and Miss Wadkins she sed I needn't make no excuses, 'cause the place she hed to eat in warn't never so much account to her as the vittles she hed to eat, no how.

I knowed she wuz a dretful feeble woman, hed to hire all her work done, but she hedn't never seen nobody a sappin', so she sed she'd go over with father and the children and git some warm sugar. I knowed if the sap didn't bile over Hezekiah would when he see all that caravan a comin', but, of course, I couldn't say nothin', so I finished a wipin' up my floor and put my carpet down, then I flaxed round and got on a clean geeum gownd and made cup custards and warm biskits, and hed the supper ready fur 'em 'ginst they got home.

They got ketched in a April shower, and bein's they hedn't no ambrils, they wuz wet's drounded rats. In they all cum a trackin' the mud onter my clean floors. The elder sed they'd been glad to stay and set with us a spell in the evenin', but he sh'd be obleeged to be back to prayer-meetin', so jest as soon as supper wuz over they started off.

When Sairy Ann and the children wuz gone to bed, me and Hezekiah sot by the fire, nigh onter an hour, talkin' over our troubles. He sed 'twuz the last run o' sap, and he wuz glad on't, and I told him I shouldn't never try to clean house agin till sappin' wuz over.

RAPIDITY OF THOUGHT.—Prof. Donders of Utrecht recently made some interesting experiments in regard to the rapidity of thought. By means of two instruments which he calls the neomatachograph and the noernatachometer, he promises some important and interesting results. His experiments up to date show that it takes the brain one .067 of a second to elaborate a single idea. Writing in regard to this, Donder says: "Doubtless the time required for the brain to act is not the same in all individuals. I believe, however, that these instruments may be perfected until we will be able to determine the mental caliber of our friends without our friends knowing that we are testing their aptness." The professor says: "For an eye to receive an impression requires .077 of a second, and for the ear to appreciate a sound .149 of a second is all that is necessary which, however, shows that it acts with nearly double the rapidity of the ear."

POTT & KETTLE is the odd name of a wine-making firm that has been formed at Cucamonga. Robert Pott and Geo. P. Kettle are the members of the firm. A few years ago the firm of Sadd & Gay of Santa Barbara attracted some attention on account of the oddity of the firm name.

ENGLISH as she is advertised in a Japanese paper: "This teeth powder is not a common thing, as be selled in the world; it is powerful to hold the health of teeth, and recover the teeth from its sick. If you only examine, should find that it never tell a lie."

A First Glimpse of the Pacific.

[Written for the RURAL PRESS by MAUDE S. PEASLEE.]

Having never seen the ocean, it was with feelings of expectation akin to awe that I prepared for a trip to the Cliff House and Sutro Hights.

On the Jackson-street cable line we passed many fine residences and noticed much improvement going on. Streets were being repaired and new buildings in process of erection were to be seen on every hand. On the outskirts of the city the sandlots were being constantly reclaimed from the shifting winds for building purposes. Changing to the steam cars at the neat little station, I took a seat on the side indicated as the "ocean side."

Steaming along on the narrow road that skirted the bay, suddenly a broad expanse of gleaming water spread out before my eager eyes. We had just passed the "Golden Gate," famed in song and story—a gateway in truth giving entrance to the land of gold. The old fort stands on one of the points grimly guarding the approach to the bay. The lighthouse on Point Lobos still warningly rears its head to guide the belated sailor.

In front of us and gradually widening to the view spread the placid dimpling waters of the Pacific, now glistening with a million diamond-points in the morning sun.

Whirling along the narrow way, listening to the faint thud of the breakers heard above the din of the train, we sped through a tunnel out in the rock, out again into the welcome sunlight and soon reached Sutro Hights. After a short stroll through the well-kept walks of this pleasure resort, we sat down on the terrace facing the water.

The wind had not yet come up, and the soft balmy air swept over us like a breath from heaven, bringing healing on its wings. A few fashionable women near us were chattering noisily of topics dear to their hearts, but with that exception all sat quietly and blissfully drinking in the beauties of the scene. How could one read, talk, write or do aught but thank God for life and this beautiful world? I wondered if Italy had more to boast of than this sunny land of ours.

Our time was limited, else I would have gone no further for that day. Being restricted to a few hours, however, we wended our way to the Cliff House proper. The roar of the seals was plainly heard, and as we sat on the broad veranda we could see them playing and basking in the sunshine on Seal Rock.

Down on the beach to the left, dozens of children, with their parents or nurses, played in the sand and among the waves that even now began to break more violently on the beach. Here and there groups reclined lazily in the warm, dry sand, watching the little ones digging and mound-building. On one of the large rocks in front of us, huddled hundreds of birds, making the rugged surface black. Suddenly, from a small boat out in the ocean, a shot rang out, and with a deafening noise, screeching and calling, the birds took wing and circled round and round in terror. The gunner secured his prey and the boat was rapidly rowed away to the great relief of the birds and seals. The crowd of spectators and tourists assembled on the broad veranda watched the sight with disapproval, not, however, unmixed with interest.

We noticed a change coming over the face of the waters—the wind was rising, and the old peaceful feeling gave way to one of unrest. I was no longer content to sit and idly dream.

Rising, we paced the length of the platform, watching the panorama before us. The ocean wild, restless in its motion, its brilliancy all gone, covered with the white caps of the angry waves that swept its surface, appealed to the wild, restless, unsatisfied part of one's nature, with an even stronger force than the peace of the morning had touched the diviner chords of the heart.

The people who had children in charge withdrew one by one, the health and pleasure-seekers dwindled down to a few tourists and novelty-lovers like myself. The wind was blowing a perfect gale; we instinctively clutched at our draperies and bowed our heads to its power.

The tide was coming in. The waters seethed about the rocks, where a short hour before the seals had sported in the sunshine. The green surges came in, laden with sea-weed, to cast themselves furiously against the unyielding rock, only to recoil upon the next incoming wave.

Farther down on the beach, where the children had erected their mimic forts, the waves rolled in more quietly, breaking in foam over the work of a happy idle hour.

Having already overstayed our time, we gathered lunch-basket and wraps together, and started to catch the next train.

Casting a parting look of regret at the angry sea, I recalled the exclamation of the poor woman who exclaimed at first sight of the ocean: "Thank Heaven there's a plenty of something!"

MINUTENESS IN ASTRONOMICAL WORK.—When Sir John Herschel was defending the character of astronomical science, in view of an error of nearly 4,000,000 miles in estimating the sun's distance, the correction was shown to apply to an error of observation so small as to be equivalent to the apparent breadth of a human hair at a distance of 125 feet.

"The Lord's Prayer in Old English."

EDITORS PRESS:—In your issue of June 28th, under the above caption a fair correspondent says: "The study of the growth of our English language of to-day is a most interesting one." It is truly so, and few scholars even, are aware of the great changes through which the English language has passed in successive centuries. The Lord's Prayer as given by your correspondent, is not "old English" but Anglo-Saxon, pure and simple; it is to be found in the first translation of the New Testament into Anglo-Saxon, A. D., 940.

The English spoken in Chaucer's time (A. D., 1328–1400) was very different: *vide* the Lord's prayer A. D. 1300. Also the English language spoken 300 years ago was altogether different to that in common use 600 years previously.

Our language was in a transition state for several centuries. You will readily perceive the gradual change by the following examples:

A. D. 1158.—Fader ur heune, haleweide beith thi neume cumin thi kuneriche, thy wille beath idon in heune and in earthe. The euyren dawe rieud, gif us thilk dawe. And vorz if uer detters as we yorsiten ure dettoures. And leue us naught into temptation, but delyvor eus of evel. Amen.

A. D. 1300.—Fader ure in heavene, halewyn be thi name, thi kingdom come, thy will be done as in hevene and earthe. Ona urche days bred give us to daye. And forgive our dettes as we forgive our dettoures. And lead us not in temptation, bute delyvor us of yvil. Amen.

The foregoing have been copied from ancient missals of the respective dates. A. D. 1384. From Wickliffe's Bible. It was the first translation made into the English language, but never printed, though there are manuscript copies of it in several public libraries:

Ours fader that art in heunes hallowid be thi name, thi kingdom come to, be thi wille done in earthe as in heune, geve to us this day oure breed, oure other substances, forgeve to us our dettis as we forgauen to our dettouris, lede us not into temptation, but delyeur us yvel. Amen.

A. D. 1526.—William Tyndale printed the first Bible in the English language. The following is verbatim from the first edition of his New Testamant:

Ooure father which arte in heven, hallowed be Thy name. Let Thy kingdom come. Thy wyell be fulfilled as well in earth as it is in heven. Give us this daye our dayly brede, and forgive us our trespaces even as we forgive our trespacers, and leade us not into temptation, but delyver us from evell. Fyr thine is the kingdome and the power and the glorye forever. Amen.

A. D. 1568.—A new translation of the Bible was ordered by Archbishop Parker. It is called the "Bishop's Bible." In it the Lord's prayer is as follows, showing considerable progress in the language:

Our father which art in heven, sanct fied be Thy name. Let Thy kingdom come. Thy will be done, as in heaven, in earth also. Give us to-day our substantial bread, and forgive us our dettes as we forgive our detters, and lead us not into temptation, but deliver us from evil. Amen.

This is a forcible example of the effect of the Elizabethan age in improving our language.

A. D. 1611.—King James' Bible, the version now in use by Protestant churches, was brought out. The reading of the original edition is:

Our father which art in heaven, hallowed be Thy name. Thy kingdom come. Thy will be done in earth as it is in heaven. Give us this day our dayley bread, and forgive us our debts as we forgive our debtors, and lead us not into temptation, but deliver us from evil. For Thyne is the kingdom and the power and the glory forever. Amen.

Pray excuse me for trespassing so much on your valuable space, but these people are very apt to ride their hobbies to death.

JNO C MOORE

Pleasanton, Otay, July 4, '90.

Chaff.

DIPLOMACY.—Wayfarer: Did you make this coffee yourself, madam? Good Samaritan: No; the servant made it, of course. Wayfarer: I thought not. If you had, I would not be obliged to ask for more sugar.—*Munsey's Weekly.*

"What shall I call this cigarette?"
The maker asked his boy.
The boy replied: "The doctor's pet
And undertaker's joy."

—*Life.*

HE wrote: "I luv you. You have throne a spell around me;" and she replied: "Why don't you use it?"—*Boston Transcript.*

A MAN should be sure he's right, then follow his knows.—*Yonkers Statesman.*

YOUNG WIFE: Charley, darling, are you perfectly satisfied with married life? Young Husband (enthusiastically): Well, I should say so. Why, if you were to die to-morrow, I believe I would get married again next week.—*N. Y. World.*

BRE'R SAM: Whatcher move yer bo'ding place so soon fur, Mr. Toney? Colored Swell: Oh, jist for a little change, my deah sah, a little change! Bre'r Sam: Yas; dat's what yer lan'lady tole me. She 'lowed it wuz jist on account ob a "little change" she could n't collec' o' you.—*Texas Siftings.*

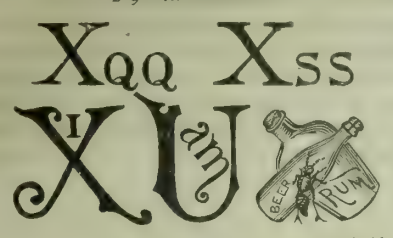
HE: Why do you break the engagement She: Because pa's dog bit you last night, and I wouldn't run the risk of bringing hydrophobia into the family for the whole world.—*Epoch.*

YOUNG FOLKS' COLUMN.

Tangles.

Enigmatic Snarls, Both Hard and Easy, for Young People of all Ages to Untangle.

209.—AN APOLOGY.



D. M. H.

210.—ANAGRAM.

A *whole* one day inquired of me
My views of his philosophy;
And then he talked in way so blind
About the power of mind on mind,
And of his potency and skill
To subjugate the human will,
And such outlandish words he used
As got me mentally confused.
I listened till I heard him through,
Then told him that I little knew
About the science he proclaimed,
And which he said was much defamed,
Or those whose names were on its lists,
But that I thought their views "mere mists."

NELSONIAN.

211.—ARITHMETICAL.

A gentleman divided $2.40 among his three sons, but generous Tom gave to his brothers as much as each had received from their father, and then he had only 20 cents remaining. Dick, equally generous, gives to Tom and Joe as much as they now have, leaving only 40 cents in his possession. Finally, Joe gives to his brothers as much as each one has, and they are pleased to find that financially they are equals. How much did each receive from their father.

RETLAW.

212.—TRANSPOSITION

He who boldly shapes his *first*
Cannot be by *first* accursed,
For he holds that destiny
Never is by *first's* decree.
'Tis a *two* to be admired
When by right ambition fired;
Poverty or humble birth
Cannot chain a man to earth.

BITTER SWEET.

213.—HALF SQUARE.

1. To sever. 2. Internal. 3. Ones who beat with stones. 4. To threaten. 5. To raise. 6. To set in mud. 7. A genus of quadrupeds. 8. A termination. 9. In the Press.

X. L. C. R.

ANSWERS.

203.—"A bad workman quarrels with his tools."
204.—Stab.
205.—1. Madison. 2. Dallas. 3. Galveston. 4. Leavenworth. 5. New Orleans. 6. San Francisco. 7. Denver. 8. Baltimore.
206.—Tape, ape.
207.—

NUCLEOLUS
UPREARED
CREATED
LEAVES
EATER
ORES
LED
UD
S

208.—Head-work.

Louie's Gold Piece.

"Five dollars! Oh, dear! Isn't it nice to have five dollars? Mamma, did you ever know before of a little girl no bigger than me having so much money?"

"Not very often," said mamma, with a smile.

"How kind Uncle George is. I wish he would come to visit us every summer."

"So he would give us money? You ought to be ashamed of yourself, Lou," said her brother Dick.

"Of course I don't mean that," said Louie. "Mamma, what would you do with all this money?"

"Keep it carefully until you decide on what will be the best way to spend it," said mamma.

"I'll be sure to do that," said Louie.

"Of course she will," said Dick, in a teasing tone. "As careful as when she lost the quarter out of the hole in her pocket."

"Now, Dick, there's no use talking about that. I paid back the quarter out of my own money, to punish myself."

"Or as when she carried the ink to the window seat and left it there and it was thrown down," went on Dick. "You can't pay that back, for the big black spot will last as long as the carpet."

"Dick, you needn't keep on at me so. You know I said that was going to be a lesson to me every time I saw it."

"You ought to see it a little oftener then," persisted Dick. "Mamma had better skew the carpet round and get it right out here in the middle of the floor. Then, perhaps, you'll remember to mend my gloves as you promised a week ago. I'll bet you five cents you'll never spend that money, that you'll lose it."

"I don't bet," said Louie, with dignity.

"No, I guess you hadn't better."

He ran out with a provoking laugh, while Louie turned to her mother with a mournful face.

"I really am trying to cure myself of being so careless, mamma. A month ago I began fining myself a cent for anything I forgot and everything I lost or broke. And it took every cent I had. For I put them in my missionary jug, you know, and for two or three weeks it kept getting heavy very fast. Just lift it, mamma."

She brought to her mother the little earthen jug in which the Sunday-school children put their savings for the missionary fund.

"I think it will be full by the time it gets broken," went on Louie. "But I'm being more careful now, so it won't fill up so."

She took up her gold piece again.

"Dick needn't say I'll lose this. I'm going to be as careful. I'll tell you what, mamma, I'm going to make you a promise. I am going to make my gold piece teach me to be careful. I won't spend it until you can tell me you really and truly think I'm getting over being careless."

"Very well, dear," said mamma, "that will surely help you to remember."

Louie kept the gold piece in a blue, satin-lined corner of her writing-desk, very often going to take a look at it, with many a calculation as to how it should be spent. As Christmas drew near she formed enough delightful little plans to have used up a dozen five-dollar pieces.

"Haven't spent it yet, hey, Lou?" asked Dick one evening.

"No, I promised I wouldn't till I got over being careless."

"But I think you may do it before long, dear," said mamma.

"And haven't lost it?" continued Dick.

"No, indeed. You'll find yourself mistaken about it, Dick."

"Well, I shan't feel sure about that until I know it is safely spent,' said Dick teasingly. "Are you really sure you have it yet?"

"Of course I am." Louie opened the cover of her desk and took out the gold piece.

"I wouldn't have believed it," said Dick, raising his hand in pretended amazement. "She actually knew where to lay her finger exactly on it. I tell you, Lou, it's a good thing for me that you wouldn't bet. I should have lost my five cents. How much bigger is it than a five-cent piece?"

He drew one from his pocket to measure by, then took a pencil, and, laying the coin under a piece of paper, began rubbing a facsimile of it. Louie brought some paper and produced a very clear impression, first of one side, then the other, of her gold piece.

"There's the doorbell," said Dick.

The visitors proved to be some friends of their own, and both went to the parlor to meet them.

And not until she was in school next day did Louie remember that she had forgotten her money, and left it on the library table.

Hurrying home at noon she made hasty, anxious search on table and carpet but no shining gold piece rewarded her efforts. She drew the shades as high as possible, moved chairs and stools, but all to no purpose. Where could it be?

"What are you looking for?" asked mamma, who entered the room, followed by Dick.

"For my five dollars, mamma," said Louie, a little color rising to her cheek. "I left it here when Clara and Archie came last night."

"We must ask Jane about it," said mamma, ringing the bell for the girl whose duty it was to keep the room in order.

"Jane," said Louie as the girl appeared, "did you see any money when you swept here this morning?"

"Yes," said Jane. I found some lying on the floor and I picked it up and put it in there, where I've often seen you putting money. I knew 'twould be safe there."

She pointed to the little earthen jug which stood on the mantle-piece.

"Safe!" exclaimed Dick with a shout of laughter. "O Lou! I'll have to take it all back. You haven't lost it. And you can't. It's in safe keeping, sure enough."

Poor Louie stared in astonishment and dismay.

"Why, mamma, what can I do about it? How can I get it?"

"Only by breaking the jug, dear, of course," said mamma.

"But we all promised not to open them till we took them to church."

"Never mind," said Dick mockingly. "You've given a lot of money, more than any one else will, so you can take comfort in that."

"But," said Louie bursting into sobs, "I didn't mean to give it; it went in spite of me, just because I was careless, and it won't count as a gift. I meant to give some of it when I changed it, but not all."

She cried and went to her room, refusing to be comforted, refusing to eat her dinner, and returning at length to school in a very unhappy frame of mind.

"May I come in?" Dick tapped at the door of Louie's room after she had gone to it in the evening.

"Come in," she answered.

"Look," he said, "here is your money."

He placed the gold piece in her hand.

"Why, Dick, how did you get it? Where is my jug?"

"Here," he said, giving her a jug. "All the rest of your money is in it."

"But how could you get this out?"

"Well," said Dick, "I'm not going to be mean to you any longer, Lou, so I'll right out with it. *You* promised not to break it, but I didn't. I hunted all over town this afternoon after I came from school to find a jug exactly like yours—"

"Why, I thought you had a base ball game for this afternoon."

"So I had, but another boy took my place. I tell you, Lou, I'm sorry I've been so hateful and teasing, and I'm not going to keep it up any longer."

"O Dick, you are so good to give up your play for me. "But," she added, looking doubtfully at the $5 piece, "I don't know that I ought to take this back, Dick. I was trying, and trying with all my might, to give it willingly."

"That's all nonsense," said Dick bluntly. "As if you had to give it just because Jane slipped it in the jug. Next thing you'll be telling me you're sorry I got it out. Good-night."

Nothing more was said about Louie's money until one evening she had a talk with her mother.

"So you really think that I getting over my carelessness, mamma?"

"Yes, dear. I think your ugly little fault is losing its hold on you."

"Well, I told you the gold piece would help me. Ever since I was careless about it and it went into the jug because of that, and it seemed so dreadful when I did'nt mean to give it, I have thought of it every time I was going to be careless. And I'm glad you think it has been a help to me. And now, mamma, see—I am giving it with all my heart now."

Into the consecration fund slipped the gold piece, and when the jugs were opened only mamma and Louie and One other knew from whom had come such a liberal gift.—*Sidney Dayre, in the Advance.*

DOMESTIC ECONOMY

COOKIES.—One cup each of lard and sour milk, two cups of sugar, one teaspoonful of soda; flavor with lemon, add flour to knead well, and bake in a quick oven.

CREAM PIE.—One pint milk, the yolks of two eggs, one cupful maple sugar, two spoonfuls of flour; boil till it begins to thicken, flavor with lemon; put into the crust; bake and use the beaten whites of the eggs for frosting.

TO MAKE RASPBERRY JAM.—Put six quarts of raspberries in a porcelain-lined kettle, add two quarts and a pint of granulated sugar. Mash the fruit with a long wooden spoon, stand over a quick fire, boil and stir continually 40 minutes. Put away as directed for jams.

GINGER SNAPS.—One quart of New Orleans molasses, one pound of brown sugar, three-fourths pound of lard and butter mixed, and one tablespoonful of salt, two tablespoonfuls of ground cinnamon, the same of ginger, flour sufficient to make rather a stiff dough; roll very thin.

APPLE TAPIOCA PUDDING.—Soak a large coffeecupful of tapioca in three cups warm water two hours; slice one pint of sour apples into a pudding-dish; sift sugar over them, and pour the tapioca over them; cover with a granite pie-plate and bake one hour; eat whipped cream or butter and sugar sauce with it.

RHUBARB JAM.—Wash the young rhubarb and cut it into pieces about an inch long. Do not peel it. Weigh, and to each pound allow three-quarters of a pound of sugar. Put all in a porcelain-lined kettle, bring slowly to a boil, then boil and stir continually for three-quarters of an hour. Put into jars or tumblers, and tie as directed.

BLACKBERRIES.—To every pound of blackberries allow a quarter pound of sugar. Put the berries in a porcelain-lined kettle, cover them with the sugar, and let stand one or two hours, then add a quarter-teaspoonful of powdered alum to each quart of fruit. Stand over a moderate fire, and bring to boiling point. Skim, and can immediately as directed.

COMMON FRUIT CAKE.—One cup butter, two cups sugar, one cup molasses, two eggs, two teaspoons cream tartar, one heaping teaspoon each of cinnamon, cloves and allspice, one nutmeg, one pound of raisins, stoned and chopped a little, and rolled in flour, one-half pound of currants, five or six ounces citron, one teaspoon soda dissolved in one cup of milk. Add flour to make a stiff dough. Test by baking a small portion first.

THICKENED MILK.—With a little milk, mix smooth a tablespoonful of flour and a pinch of salt. Pour upon it a quart of boiling milk, and when it is thoroughly amalgamated, put all back into the saucepan and boil up once, being careful not to burn, and stirring all the time, to keep it perfectly smooth and free from lumps. Serve with slices of dry toast. It is excellent in diarrhœa, and becomes a specific by scorching the flour before mixing with the milk.

MARBLED CHOCOLATE CAKE.—Butter, one cup; sugar, two cups; flour, four cups; four well-beaten eggs; one cup of milk; baking powder, two teaspoonfuls; vanilla, one teaspoonful. Take out one cup of this batter and mix it with four tablespoonfuls of grated chocolate dissolved in a little milk. Cover the bottom of the pan with white batter, and drop upon it, in places, spoonfuls of chocolate, forming rings, then another layer of white batter, and so on until all is used. Bake in a moderate oven.

GOOD HEALTH.

Health of the State.

The State Board of Health Report for June is at hand. The usual 84 localities have made their returns which indicate an improved condition of health throughout the State. The Secretary of the Board, Dr. C. G. Tyrrell, says in his report that "until the official result of the late census is published we have to accept the estimated population as furnished by our own correspondents. The actual death rate is therefore uncertain until we can get the correct number of the population affected. There has been very little zymotic disease reported as particularly fatal, except cerebral fever and cholera infantum, and these in limited number."

Diphtheria and croup have been collectively reported as causing 35 deaths, which indicates a very much lessened prevalence of disease. Twenty-six were from diphtheria and nine from croup. Typhoid fever is mentioned in a limited number of reports, the cases being all sporadic. From this time onward we may look for an increase in this preventable disease, as it seems impossible to educate the public upon the necessity of keeping the premises free from accumulating and decomposing filth. The air they breathe, the food they eat and the water they drink, through becoming contaminated, are dangerous to health. Reports from 84 localities indicate an improved condition of the public health. Disorders of the bowels were prevailing to some extent and some few cases of cholera morbus were noticed; this disease was no doubt induced by eating unripe or unsound fruit or vegetables. Zymotic disease, such as measles, scarlet fever and diphtheria were not prevalent anywhere, and where present were in a mild form without a tendenoy to spread. Cancer claims 27 deaths, a little short of its usual quota.

The cholera is increasing in Spain and it is not improbable that a lack of sanitary care will permit it to spread throughout Spain and then reach America through the Mediterranean or Eastern ports. It is supposed to have originated from opening the graves of some of the victims of the disease of 1885, and is of an equally virulent type. As it has been proven that cholera cannot prevail where perfect cleanliness is observed, it would be a matter of simple prudence to prepare to defeat any attempted inroad of this disease into California by a general clean-up of cities, towns and villages. Once the disease appears, this measure would be too late. We cannot be sure that cholera will not come to America; we hope it will not, but with the means of prevention so easily applied we would be criminal to neglect the warning thus timely given.

NUTRITIVE VALUE OF FOODS.—Speaking roughly, a quart of oysters contains, on the average, about the same quantity of actual nutritive substance as a quart of milk or a pound of very lean beef, or 1½ pounds of fresh codfish or two-thirds of a pound of bread. But while the weight of actual nutriment in the different quantities of food material named is very nearly the same, the quality is widely different. That of the very lean meat or codfish consists mostly of what are called, in chemical language, proteine compounds or "flesh formers," the substances which make blood, muscle, tendon, bone, brain and other nitrogenous tissues. That of the bread contains but little of these, and consists chiefly of starch, with a little fat and other compounds, which serve the body as fuel and supply it with heat and muscular power. The nutritive substance of oysters contains considerable of both the flesh-forming and more especially heat and force-giving ingredients. Oysters come nearer to milk than almost any other common food. Their values for supplying the body with material to build up its parts, repair its wastes, and furnish it with heat and energy, would be pretty nearly the same.—*Century.*

SUDDEN STARTS, JERKS, ETC., WHILE ASLEEP.—F. W. C.—Sleep restores vigor and tone to the brain and nervous system, and while one is asleep the muscles and tissues become relaxed. The spasmodic movements are due to nervous reaction for the most part. It is sympathetic sensations for the most part that cause the jumps and jerks that awaken when the person is just falling into slumber. Often external causes, a noise, a touch, the pressure of the bedclothing will produce such effects through the sympathetic nerves. Generally people whose nerves are very active during the day experience these not always pleasant sensations. They receive impressions, consciously or unconsciously, that somehow may revive in the early stage of slumber, and the sleeper catches a glimpse of a dream, in which he seems to be falling or exposed to vague danger, and an instinctive impulse to save himself is expressed in the jump or jerk that arouses to full consciousness.—*Phrenological Journal.*

BACILLI IN CELERY.—Dr. Charles M. Cresson of Philadelphia states that he has more than once found the typhoid bacilli in the juice that he has squeezed out of celery grown near Philadelphia.

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SAN FRANCISCO:
Saturday, July 26, 1890.

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Sowers, Seeders and Harrows—Baker & Hamilton.

See Advertising Columns.

The Week.

Things are at the midsummer level. The grain harvest is well over and the yield, as previously stated, is light, though there is much good grain included in it. Fruit harvesting is progressing favorably, the only regret being that the crop is not larger, for it is the farmers' ancestral luck to have small weight when prices are up; still it is hard to find a complaining fruit-grower this year.

The schools are opening, and the vacation-takers returning to the city. Such signs of the advancing year are unmistakable. Soon the first of the fairs will give another token. Arrangements for observing the great historical event of the year in California are progressing, and the fortieth anniversary of the birth of the State will be made notable. It is probable that the city will bloom with bunting and resound with music and the tramp of parades as it has not for years. The Native Sons propose that the great twin holiday of Sept. 8–9 shall see the greatest possible manifestation of the California spirit.

FRUIT FOR CHICAGO.—The fifth expedited fruit train of the season left this city last Saturday evening. The consignment consisted of deciduous fruits entirely.

The Fruit Trade.

Readers of the RURAL have been kept well informed from week to week of the unusual activity in the fruit market, the liberal prices being obtained at Eastern sales and the higher bids of local buyers as the only means of securing even a share of the fruit. Our correspondence from the different counties and our extracts from local journals have reflected the spirit of buoyancy which prevails in the fruit sections, resulting from the considerable amounts of money now being distributed and the good prospect for fruits not yet mature. This is pleasant to contemplate and will help upon their feet many who have assumed considerable obligations in the purchase and improvement of orchard lands. The experience will, of course, lead to wider planting, which will, we believe, also prove profitable if wisely done and well maintained. There is a little danger that this year's results will lead to less care for the production of fine fruit, for, as an old friend writes us, "peaches which are not worthy the name of California fruit are selling at fabulous prices; even pits with a little fur around them are passing for peaches and selling high." Of course the influence of one such year will be to beget carelessness among those disposed thereto; and having sold poor fruit for a good price once, such people will expect to have it indefinitely repeated. We have always retained confidence that reasonable freights and wide distribution in the populous States east of the Rocky mountains would open a demand for all the fruit that can be grown here, but we are sure it is not wise to expect fruit to sell ordinarily, as it is doing this year, We shall come again to careful selection and grading, and buyers will again be bearish and discriminating. The proper caution should be not to lose one's head in such flush times, but to discern that while California fruits properly handled will always be profitable, we shall come again to the necessity of producing only the best and of producing it economically as well. Therefore do not conclude from this year's experience that it does not pay to thin fruit, or grade fruit, or do any other such progressive and intelligent work, because any one who now marks out a slack policy for the future will suffer for it and probably suffer badly.

And yet it is delightful to read of the ruling prices, and more delightful still, perhaps, to pocket the coin. Nor does there seem to be the slightest doubt but that it will hold through the season and affect directly or indirectly almost everything which has seeds, pips or pits in it. Writing of the fruit prospects for 1890 in the New York *Mercantile Exchange Advocate* of July 5th, G. S. Palmer says:

As the season advances, more complete reports from various sections indicate that the general fruit crop for 1890 will be the smallest for many years. The loss most seriously felt by dealers and consumers generally will be that of the peach crop, which is almost a total failure in all sections of the country (except California), and it will be considered a luxury the present season. Its most natural substitute, the pear, is also a general failure. The same severe frost which destroyed the peach crops also blasted the pear buds, and the late reports from many of the large apple sections in the Hudson River counties and Western N. Y. state that a great deal of the young fruit is dropping from the trees, and indications are of a short product from this principal source of our winter supply. The early crops of fruits, such as strawberries, raspberries, currants, thus far have been unusually short and seem to have been fruited very lightly, which is also accounted for by the open winter, and then being followed by the severe frosts during the time of the early development of the plants. The reports from the West are yet incomplete, and the fruit-growers of those States (providing they have good crops) may again profit by the Eastern failure, as they did last season in the marketing of their apples here.

The attention now given to quicker means of transportation and improved packages for carrying perishable fruits enables distant growers to place their products on our market in good time and in prime condition, and the present and prospective favorable prices are certain to prove remunerative to all those who can send their fruits to this market, even from the more remote points on the Pacific Coast, and they have already commenced and will continue to ship largely throughout the season.

Pertinent to the same end is the following note, which we just received from a special correspondent in Illinois:

EDITORS PRESS:—My predictions to you last spring in regard to the fruit prospect for Southern Illinois have been, if anything, more than verified. There were large quantities of strawberries of some varieties; while others were from a partial crop to near a failure; but most of them went into market in poor condition. There were no plums, and so few cherries that we might say there were none of them. Raspberries were a fair crop, but blackberries have not been more than a third the usual yield; and what have grown have been so dried by the dry weather we have had that they are very poor. There will be scarcely a third of a crop of apples, and what we have are of poor quality.

There are no peaches. Fruit is so scarce in our own market now, in the midst of a fruit country, that people are buying California canned fruit for their tables. There are going to be considerably many grapes here where people have the vines, but of late years grapes have been so uncertain on account of rotting that there are very few vineyards, and what there are are small.

As I said in the article of last spring, Southern Illinois must depend largely this year on California for her canned fruit. There will be more than twice the canned fruit sold here the coming fall, winter and spring than heretofore, and nearly all of it will come from your State. A few years ago nearly all the canned fruits sold here were from Baltimore. One of our leading grocers told me yesterday that he did not handle any Baltimore goods now.—G. H. FRENCH, *Normal University, Carbondale, Ill.*

A New York telegram, dated July 22, has the following interesting allusions:

It is said here on the best of authority that the outlook is good for California to gain another bull point on apricots and peaches. A local firm last year shipped 20 boxes experimentally to Germany and the concern has just received an order for 100 cases of each fruit from Germany. Meanwhile, the boom for California products in the Eastern markets continues, and advances for standard canned fruits from 10 to 15 cents have been made the past few days here. The feeling for dried fruits continues very strong. Twenty carloads of California green fruits were sold here last week, something unprecedented at this time of year. It is reported that big shipments of green fruit make certain a good market for canned goods, the market being very short and practically bare.

The large amount of fruit being shipped green has increased the cost of the fruits needed by canners and prices of canned goods are said to be in doubt. Dried fruit has risen notably and rapidly in value, not only dried tree fruits but raisins and dried wine grapes are advancing. This fact, coupled with the advance in wines, gives the grape grower a good chance of his share in the picnic although the grape yield will be exceptionally large.

PLANT REGISTRATION.—The movement to secure registration of plants in such a way that the newness of a "novelty" can be easily determined and to secure to originators of new varieties exclusive rights of propagation and sale of the same, if they so desire, is making due progress at the hands of an energetic committee. A circular has just been issued stating explicitly what is hoped to accomplish by winning the support of all societies and individuals who approve the undertaking, and finally bring all such influence to bear upon Congress to secure the enactment of the necessary laws. We have commended the undertaking as a progressive one and one which after full discussion and criticism will yield practical points upon which wise legislation can be based. To this end we advise all to apply for copies of the explanatory circulars to A. L. Bancroft, 132 Post street, chairman of the committee. These circulars will serve to introduce the subject at horticultural meetings, where the discussion of it will no doubt be of interest and value.

SWINDLING WINE BUYERS.—Producers must be constantly on their guard against the swindler who operates under the guise of commission merchant or dealer in distant cities. It is announced that there is a gang of such thieves in New York City who send orders to California wine-producers and dealers and never remit for what they receive, changing their names and locations often enough to throw pursuit off the trail. They pretend to send references with their orders, but the references are only others of the same gang. Producers cannot be too careful about sending property to distant receivers without actually knowing something about their standing. It is risky enough dealing with honest men in these days of quick reverses. A producer puts too much value into his product to send it to swindlers, no matter how much he needs to make a sale and no matter what blandishments they may offer.

NEVADA POTATOES.—Reports favor a good yield of the fine potatoes for which some parts of Nevada are famous.

The Chicago World's Fair.

The dispatches are full of what seems to be a conflict between the city of Chicago and all the outside world concerning the selection of a site for the World's Fair. Chicago wants the fair on the lake front, which seems to bear something the same relation to the city that the front lawn does to an ordinary homestead. Chicago wants the fair there so that some grand buildings which will be erected will serve as permanent ornaments to the city after they have done the fair thing by the memory of the great Christopher. This alone would not be objectionable; it would not be a bad thing to have a permanent monument to Columbus even in Chicago. But the trouble seems to be that the lake front is not big enough for a decent fair ground, and the idea of erecting the fine buildings in her front yard to suit Chicago and to have the outdoor features of the display, for instance, the horticultural and agricultural departments, banished to Chicago's back yard, does not please the outside world. We would not be so sure of that were it not that even the State of Illinois is emphatically opposed to the Chicago plan, and if her own State cannot stand it what can be expected of St. Louis and all the rest of the world. Feeling is running so high that it is even proposed to petition Congress to take the fair away from Chicago and put in some place where suitable accommodations can be had. This will, of course, not be done, for some compromise will be effected, but it is unfortunate that a grand four-hundred-year event should be handicapped by such a squabble as now seems to be in progress.

To show more specifically the point at issue between the Illinois farmers and the Chicago people, we quote the following, telegraphed from Chicago on Tuesday of this week, as the words of Secretary Garrard of the Illinois State Board of Agriculture:

"We insist, and every State Board of Agriculture in the Union will insist with us, that the agricultural exhibits must not be embarrassed in such a manner as to impair a successful exhibition. We do not desire to dictate to the directors where they shall hold or select a site, but we have a right to insist that the site shall be one that will supply every demand for space. Four hundred acres would not be an excess for the agricultural exhibits of the World's Fair; 200 acres will be the minimum which will accommodate the States of this Union.

California alone asks for 40 acres for its agricultural, fruit and vintage exhibit, and will probably not be satisfied with less than 15 or 20. The State of Illinois will want 40 acres, if the demands of the State Board are to be observed. Other States will want 5, 10 or 15 acres each. All told, the States cannot get along with less than 200 acres, and it is absolutely impossible to give this in the lake front site. We will positively not be satisfied with a site which places the agricultural exhibit a mile away from the other principal features.

In my opinion, in case the lake front is selected as a site, the Illinois Board of Agriculture will drop the subject entirely and not make any exhibit. Of course, however, if the next regular session of the Legislature makes an appropriation and instructs us to make an exhibit, we will carry out the provisions of the law. But it is our opinion that if the lake front is selected, the agricultural boards of the country will regard the World's Fair in advance as a failure, and abstain from any attempt at a successful exhibit of the agricultural products of the country.

It is to be hoped that this matter will be satisfactorily settled before long. State aid for State displays must be had from this winter's Legislatures to be in season, and the amount of such aid will depend much upon the character of the displays proposed. Above all things in this immense country, the lack of a few acres of ground should not be allowed to endanger the success of a grand international exhibition.

SNAGGING THE SACRAMENTO.—The San Francisco Produce Exchange lately passed a resolution urging the removal of the snags which impede the navigation of the Sacramento above Butte City, and threaten to interfere seriously with the movement of grain by barge and steamer. In consequence of their representations, through Congressman Clunie, to the authorities at Washington, the U. S. snagboat has been ordered to go up the river at once and begin removing the obstructions.

WHEAT AND WEATHER.—It seems from all advices that the unfavorable weather which it was apprehended would reduce the wheat product of Great Britain has proved quite as bad as was feared, and the prospective shortage has not been exaggerated.

A Grand Redwood Reservation.

Our readers will be pleased to learn of the progress of Col. J. B. Armstrong's plan to donate a grand area of redwood forest in Sonoma county to the people of California as a perpetual reservation. Col. Armstrong has been a devoted lover of nature always and an earnest advocate of rural improvement which aims to "hold the mirror up to nature," and thus to do away as far as possible with the aspects of the cultivated country, which are almost a desecration of natural beauty. This spirit, of course, manifests itself in many ways, and one feature of its work lies in the effort to reserve certain representative areas of nature's grand work from the ax of the lumberman or settler. This is sometimes accomplished by the Government, sometimes by individual grant, and in some respects at least, the latter method is better, because the grantor being of necessity a nature lover can so place his gift that it shall be beyond the control of those with mercenary motives or those who have no love nor taste for such matters. Government grants or property granted to public use under Government control are very apt to suffer from mismanagement or sacrifice.

Col. Armstrong having prospered in this State of his adoption, now proposes to make a grand gift to the people of California and to place it in such hands that it shall always remain true to nature and true to its beneficent mission. We find in the Santa Rosa *Democrat* an outline of Col. Armstrong's plan, which may not be accurate in all particulars, but it gives outlines of the plan:

Col. J. B. Armstrong proposes a reservation of a park of 600 acres near the end of the Guerneville branch of the S. F. & N. P. railway, in Big Bottom. Four hundred acres of it are covered with the natural virgin growth of redwood, laurel and other sorts of timber, some of the trees of great size and beauty, from five to 15 feet in diameter, and exceeding 300 feet in hight. It is the last large tract of redwoods on Russian river that is a fair specimen of the great forest once covering its banks in a state of nature.

We understand that it is to be conveyed to trustees, in perpetuity, for the people, under few restrictions, together with an endowment sufficient for the annual income to improve the grounds with drives, ornamental buildings, gateways, porter's lodge, etc. Two hundred acres, being improved with orchards, buildings and the like, are to be made productive so as to yield an annual income toward developing the park, and will afford a suitable site for growing flowers and plants under glass for planting along roadsides and filling vacant places under the direction of a landscape gardener, as time rolls on. For it is not for a day, but for all time. Fifty years hence, when these forests are a memory of the past, the gift will be appreciated. Colonel Armstrong proposes to retain control so long as living, but will begin and complete many improvements, with due regard to preserving the natural features of the forest. One of the restrictions will be a positive prohibition against destroying the timber, or even trimming the trees. The drives and paths will be made throughout so as to bring into view the beauties of the place, and water will be introduced in fountains at various points. The grounds are flanked by the foothills of Mt. Jackson, protecting the big trees from the winds, and there is no reason, except fire, why, with care, the park should not stand for all time.

Such a grand act as the rescuing of such piece of forest land from spoliation and the perpetual devotion of it to public instruction and recreation, should yield the donor much satisfaction in consciousness of well-doing. It will, of course, perpetuate the memory of the donor among men, but that to a man of Col. Armstrong's retiring disposition, is probably the smallest consideration involved. To preserve the trees he loves for the improvement, elevation and enjoyment of mankind, for whose ennobling he has always worked with voice and pen and purse—this is the grand central thought in the project, the realization of which we trust the donor may live many years to direct and enjoy.

The Irrigation Surveys.

According to telegraphic advices from Washington things do not look bright for the continuation of the irrigation survey from which so much has been anticipated in developing and building up the great West. It does not prove from the striking out of the appropriation for the irrigation survey by the Senate that the movement will stop, but it places it in rather a hard position to say the least of it. The following is the current telegraphic gossip on the subject:

The fight which has been made in the Senate upon irrigation survey will be renewed when the Sundry Civil bill goes to a conference committee. From the tone of the speeches in the Senate chamber there is very little probability of any recession on the part of the Senate, and while the House is not so strongly committed to the scheme the chances are that the irrigation survey authorized a couple of years ago, and by which a great bureau of the Government has been created, giving employment to a large number of people, will be abolished.

The General Land Office officials claim that there is no part of the public domain that is free from the grip of the irrigation scheme, and very little land could be settled for months to come unless something be done to abolish the bureau, for, until the men under Major Powell complete their survey, none of it could be put upon the market.

Major Powell is a hard hitter and does not propose to yield without a strong effort to retain the newly acquired bureau which he has operated in conjunction with the Geological Survey. Those who are opposed to him in this particular feel assured that the bureau will be abolished.

A question has arisen as to whether or not, if Congress should abolish the irrigation survey, those people whose entries have been thrown out because the land was reserved from settlement should be compelled to make entry for the land *de novo*. Commissioner Groff of the General Land Office expressed the opinion that such second entry would be unnecessary.

OUR POPULATION.—A telegram from Washington says the census will show that while the rate of increase in the Northern and Atlantic States has been about the same as usual, the Western States have increased at an almost fabulous rate. Of the Southern States, Alabama, Georgia and Texas will show a marvelous increase in population. The other Southern States will remain about the same. It is probable the census will show that the rate of increase among the blacks has fallen far behind the rate of increase of the whites. The Census Bureau is now enumerating the returns at the rate of 1,000,000 per day. As a matter of fact 2,000,000 a day are being counted, because on each day, besides the 1,000,000 new names counted, the 1,000,000 counted the previous day are recounted to insure absolute accuracy. It will take 60 days, and possibly 70, to complete the entire count, which it is reasonable to believe will be concluded about September 1st.

Our Lumber Interests.

Eastern lumbermen continue to prospect this coast for places to plant their enterprises. The large land captures by syndicates of foreigners for future sale to lumber makers are not nearly so desirable to the State as more modest ventures, the conductors of which propose to bring the money and machinery and help the advancement of the coast by beginning manufacturing at once. John P. Fleitz of Michigan, a noted lumberman, is now credited with the intention of putting up mills in Tulare county. He is reported to have said:

"It is a foregone conclusion that lumber will steadily increase in price, as the supply is limited, and as I have said, you will supply the world from this coast. Already redwood shingles and finishing lumber find a ready market all over the East. In Chicago to-day scarcely a new house is built in which California redwood and pine are not utilized for finishing purposes. Your timber is becoming the fashion in the East.

"When the coast has cheaper freights and competing railroads, you will find a greater outlet for your timber. It is only because of the high freight rates that more timber from the coast is not handled in the East. Your fir and sugar pine are the best timber in the world for shipbuilding, and the supply of both is limited.

"I believe the Pacific Coast will control the future lumber business of the world. You have a great market here and can supply China, Japan, Australia, in fact, the whole universe. To-day, although the people of California are not aware of the fact, the Eastern States are receiving great supplies from this coast. Even the wooden derricks used in the oil regions of Pennsylvania come from California and Washington, and yet Pennsylvania was once a great lumber producing State."

Mr. Fleitz seems to be a lumberman with a conscience, and recognizes the fact that trees are useful for some other purpose than to keep saws going. He said: "The new laws interfere somewhat with the fluming, and then again all the water at your command is needed for the fruit-growers. The Government should take some method to protect the watersheds of the State, or evil results will follow. In America we are very careless in this respect. In Switzerland and the greater part of Germany the natural growth has been destroyed, and the people have been compelled to do much replanting, a process that will not answer in this country." Our law-makers should not overlook such hints. Each year the value of their acceptance becomes less and the evil of neglecting them greater.



A LOGGING TEAM WITH GANG OF LOGS AS EMPLOYED IN CALIFORNIA LUMBERING.

Preventing the Overflow of the Mississippi.

The late extraordinary rise in the Mississippi river, and the imminent danger threatened therefrom, seems to have induced a new and more resolute determination to adopt some preventive measure for such danger in the future. It appears to be universally acknowledged that some more adequate engineering means of defense than the present system of levees for retaining the waters within their natural barriers should be devised and adopted. There are several alternative plans—namely, the provision, in the lower course of the river, of outflow channels, that may be utilized in seasons of threatened floods, and when the volume of the river becomes dangerously swollen; and the provision, along the headwaters of the great river and its tributaries, of great impounding basins, covering great areas, and capable of retaining temporarily the flood-waters, which would be permitted to flow off gradually without endangering the country below, as at present, by its sudden accession to the river.

As the levee system is already in operation for hundreds of miles along the course of the Mississippi, having been developed year by year at enormous cost to the Government, it would be the wisest policy doubtless to maintain these artificial barriers in their present extent, and to supplement their protecting influence by both the engineering expedients above suggested. With these precautions, it is almost assured that the annual destructive floods of the lower Mississippi country would be avoided in the future. The use of embankments alone has been found, in the experience of all countries where the system has been tried, to be extremely hazardous. The gradual rise of the bed of the stream, caused by the deposition of silt, necessitates either continual dredging or the continual elevation of the walls of the embankment.

In China where this primitive system has been practiced from time immemorial, the embankments have had to be carried up so high from this cause, that the surface of the rivers are many feet above the level of the surrounding plains, and the frightful disasters that are periodically reported as being caused by the overflow of the great rivers of that country, can readily be understood. The subject of applying proper remedial measures to control the flow of our great river, it is gratifying to note, is now receiving the anxious attention of the Government engineers, and adequate measures for accomplishing this result will doubtless be adopted and carried into execution at once.

A Sequoia Reservation.

It is reported from Washington that Secretary Noble has rendered a decision which virtually secures a sequoia reservation in the public interest. Three sections of the land in the Visalia land district, Cal., were suspended from entry and sale in 1880 upon the recommendation of the Surveyor-General, for the reason that "they are covered by trees of the Sequoia gigantea variety, some of which are reported to be 40 feet in diameter and from 300 to 400 feet high, constituting a remarkable and rare curiosity, which should be preserved." After a reservation had been ordered, a man by the name of George Hening applied to enter, under the Act of June 3, 1878, a quarter-section of this land. His application was rejected, because the land containing the mammoth trees had been reserved. After he made another application to enter the land, and that also being rejected, he appealed to the Secretary of the Interior. The latter, in a decision rendered today, rejected the application. The secretary states that the trees are regarded as a remarkable and rare curiosity which should be preserved, and to this end the land containing them was withdrawn from sale and entry, so that all questions in regard to them could be properly considered. "Being thus placed in reservation," continues the decision, "by competent authority and for sufficient reason, it is not in the power of the party to acquire rights by treating such reservation as of no effect." He adds that there is no statute giving general authority to the President to reserve lands, but the right of the President to put public lands in reservation so that all questions in reference to them might be properly considered has always been maintained by the courts.

A Logging Team.

Our photo-facsimile engraving shows a characteristic scene in the lumber regions—a "bull team" hauling a gang of logs over a skid-road. Less force is used to move the gang down the inclines, but when the level is reached the full team is employed to haul it over the skid-road to the mill. The logs are fastened together with "dog-chains," the biggest log ahead as shown in the picture. The skids are oiled or watered, as the practice varies, and the logs are thus moved from stump to saw.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

BARLEY CROP—FIRE.—Livermore *Herald*, July 17: Ben Thomas thrashed last week for Johnson Righter the crop on 23 acres of barley on the latter's ranch on East avenue. It turned out 430 sacks of barley, averaging 112½ pounds each—a total of 48,160 pounds. This gives an average of 2093 pounds per acre. Mr. Thomas reports that all grain is plump, and the yield the best he has seen for years....A fire started on the Patterson ranch, south of the Arroyo valley, last Saturday, and destroyed about 2000 acres of feed before it could be stopped. R. T. Pope lost nearly 1000 acres of grass.

Butte.

A BIG FIRE —Chico *Enterprise*, July 17: A big blaze could be seen from Chico last evening, toward the river, and through a telephone dispatch to F. C. Lusk this morning, it was ascertained that the fire was on the old home place at the Glenn ranch. The fire occurred about 10 o'clock, and destroyed 43 head of fine work horses valued at $6000, and several barns with a value of an equal amount. The origin of the fire was presumed to be through carelessness in smoking. There was no way of fighting the flames, and they had full sway and destroyed everything in their course. Mr. Lusk stated that they had just removed 100 head of horses from the barns day before yesterday. The destroyed animals were the best stock at the ranch and were valued at $300 per span. An insurance of $10,000 was carried on the horses and barns. Some grain and a large amount of farming implements were burned.

The *Enterprise* of July 21st further says: From Charles V. Hobart, who had been over inspecting the result of the fire on the Glenn ranch last week, we learn that there were 42 animals burned; 37 of them were Percheron horses and 5 mules. There were also two large barns, 40 sets of harness, 2 header wagons and other traps. There was not much hay or grain stored in the barns. Mr. Hobart carried the insurance, which was $6100. The horses were the most valuable on the ranch, and had they pulled back could have broken their halters and escaped, but they seemed to hug the mangers and were suffocated where they stood.

Colusa.

DAMAGE BY THE HAIL.—Colusa *Sun*, July 19: We rode out over the Ware field with J. C. Bedell, a few evenings ago, just after the harvester had passed over, and found the ground covered with wheat heads that had been cut off by the recent hailstorm. There must have been five or six sacks to the acre thus destroyed. Mr. Bedell is putting hogs on the field to save this waste.

HIS FIRST FRUIT DRYING.—Orland *News*, July 19: A. L. Hall sold this week 5000 pounds of dried apricots to Cone & Kimball of Red Bluff, at 10 cents a pound. It was Mr. Hall's first attempt at apricot drying and he did not make a very good job out of it, or he would have received 2½ cents a pound more for his fruit. Besides the 5000 pounds dried by him, Chinamen have dried some 2000 pounds. Mr. Hall has about 13 acres in apricots and this year did not have over one-fourth of a crop, but $700 for 13 acres in an off year, besides what green fruit had been sold, is considerably better than wheat farming.

Fresno.

A LARGE WATERMELON.—Fresno *Inquirer*, July 18: Last Monday afternoon Mr. Frank Fanning left at this office a watermelon weighing 53 pounds. Mr. Fanning says that was the largest of a load he brought to sell. He says that just as good melons can be raised in Fresno county as anywhere, and he can make more money raising melons than raisins. Here is a pointer for some of our ranchers.

PRUNES DROPPING. — Fresno *Republican*, July 17: D. McLaughlin of Oleander has sent to the *Republican* office half a dozen prunes, some half ripe and some green, that have dropped from his trees. The following communication explains itself: I find the French prunes are all dropping. About three weeks ago mine began to turn dark and drop from the trees, and up to date there is one-third of them on the ground. The sample is from one tree where one is as well protected from sun or wind as the other. The trees have been well irrigated and the foliage is fine. I find all the trees in Oleander are the same. Yours, D. MCLAUGHLIN.

FLUME BUILDING.—Fresno *Republican*, July 18: H. R. Smithern, who arrived from the terminus of the Moore & Smith flume last Thursday, reports that work is progressing at a lively rate. Last Wednesday the workmen put in 140 boxes, each 16 feet long. The work of construction is progressing at the rate of about half a mile a day. The flume has now reached a hill, around which it must be built for a distance of four miles. After passing the hill it will reach the valley.

Modoc.

CROPS IN SURPRISE VALLEY.—Alturas *Independent*, July 17: From several parties who have come over the ridge during the the past two weeks, we hear encouraging reports regarding the outlook for grain crops in Surprise valley this season. There was a good soaking rain over there about the middle of June which helped grain out wonderfully. Mr. A. Hall of Lake City, who came over after a mower and rake one day last week, told us that everything was looking lovely about Lake City and taking the valley all over it was his firm belief that the coming harvest would be the most abundant which the valley has ever known. As to the hay crop, he says it is a long way the best he has ever seen. He says a few days prior to coming over here he walked across Fred Bissel's meadow and went through timothy shoulder high and as thick as it could stand, and he estimates it will yield 3½ to 4 tons per acre.

Kern.

FIGS.—Bakersfield *Echo*, July 17: John O. Miller tells us that the fig trees at San Emigdio are literally breaking down under their weight of fruit this year. They are old and very large trees, and the yield is always large, but this year it is unusually heavy. They are of the blue variety, and an extra effort will be made this year to cure them in a marketable way.

Lassen.

THE HAY CROP. — Susanville *Advocate*, July 17: We learn that the hay crop in interior valleys where irrigation is practiced is turning out heavily. Barham & Burkhart, the owners of Pete's valley ranch, have a fine show of alfalfa starting, and they have cut 60 tons of wild rye hay on ground that was never before mowed. The yield is 1½ to two tons per acre. This came from a moderate irrigation.

Napa.

DESTRUCTIVE COYOTES.—Napa *Register*, July 18: The Coombs-Coughlan ranch in Gordon valley carries some 3000 head of sheep, and were it not for the coyotes that prowl in the neighborhood the increase would be annually large. Since taking the wool olip last fall, over 600 lambs have been destroyed by these jackals. They bite into the neck of the innocent, suck its blood and leave the carcass for the vultures to eat.

THE GRAPE CROP.—Napa *Register*, July 18: Notwithstanding statements made through the press of the State to the contrary, Mr. Chas. Thompson of Rutherford informs us that the vintage will this season be light in Napa county; that not two-thirds the quantity of wine grapes gathered last year will be gathered this. To the only wave of hot weather experienced this summer this is largely attributable. It came when the bloom was on and with blighting effect. There will be a very light yield of Zinfandels and they comprise one-fourth the entire crop of wine grapes in the county. This condition of things will have a tendency to elevate prices.

Nevada.

TO RUN A STEAM WAGON.—Wheatland *Four Corners*, July 19: The Board of Supervisors of Nevada county passed an order permitting J. H. Roberts to run a steam wagon from Truckee to the Sierra county line, requiring him to give a bond in the amount of $2500 to be responsible for injury that may accrue to persons or property by the use of the wagon on the public road.

Orange.

LARGE POTATOES.—Anaheim *Gazette*, July 17: Jacob Vetter has shown us some samples of mammoth potatoes raised on his place on East street. There were five in the hill, and three of them weighed four and three-fourths pounds. One of the largest was cut for cooking before being weighed. The five potatoes would have weighed upwards of seven pounds. The land in which they grew was sandy, and seems especially adapted to potato growing. These are the largest potatoes ever seen here.

CANNERY AND OLIVE MILL. — Santa Ana *Blade*, July 17: The Capistrano Cannery commenced operations yesterday with a force of eight or ten hands, the first work being that of crystalizing apricots. The fruit grown in the neighborhood of the cannery will be utilized, and as much as may be necessary will be brought in from other portions of the county. An olive mill is soon to be added, which should encourage many of our horticulturists to cultivate the olive.

A GOOD OUTLOOK.—Santa Ana *Blade*, July 17: From the best information at hand the estimate of the yield of barley of the San Joaquin ranch for the present season will foot up a total of near 12,500 tons or 250,000 centals, which will represent at the present San Francisco quotation, $1.15 to $1.18 per cwt., for good barley, the net sum of $287,500. This amount added to the income from grain raised in other parts of the county, and those amounts combined with the large revenue that will be derived from this season's heavy fruit crop, represent an amount of no small proportion.

San Diego.

THE FLUME COMPANY.—San Jacinto *Register*, July 17: The Land, Flume & Irrigation Company are still busily at work constructing their flume. The first 100 feet was put in position this week. The injunction proceedings instituted by the Hemet Land Company are about to be dismissed by agreement, the difference between the rival companies being settled by arbitration out of court. An artesian well has been sunk upon the Company's land at the *Cienaga*, which proves that they have an abundance of artesian water in addition to the surface flow of the *Cienaga*. In a depth of 100 feet investigated, three strata of water-bearing gravel are passed, each stratum adding to the strength of flow of water. The company expects soon to place an order for a cargo of redwood lumber with which to build its line of flume to the mesa, and before another season comes, water will be flowing copiously through the flume upon the mesa lands.

THE UNION'S EVAPORATOR.—National City *Record*, July 17: Last week the Producers' Union started up a large evaporator which is now being run day and night and doing excellent work. Though its capacity is large, it is probable that another one or two will have to be put up at once.

San Bernardino.

THE SMILEY RESERVOIR — NORTH FORK DITCH.—Redlands *Citrograph*, July 19: The second Smiley reservoir has been completed and the water has been turned in. This reservoir is 130 feet long, 76 feet wide at the widest part and 12 feet deep. It holds nearly 1,000,000 gallons, and is on Albert K. Smiley's property. It is lined all around and on the bottom with hard granite bowlders, and then cemented smoothly all over. The work was done by Coulter & Hammond. It is believed that this is the largest private reservoir in the county, if not in South California, and will serve to indicate the scale upon which the Smiley work is being done in Redlands....Last Tuesday there was quite a break in the North Fork ditch a little way above Highlands. A force of men was immediately put to work, and the repairs were completed in quick time.

San Joaquin.

WATERMELONS SHIPPED.—Lodi *Review*, July 17: Two carloads of watermelons were shipped Monday, three carloads were shipped Tuesday, and five carloads left this place last night for San Francisco. Melon shipping, however, is not in the hight of its glory until it reaches a maximum of 20 carloads per day.

Santa Barbara.

IRRIGATION.—Santa Maria *Times*, July 19: Messrs. W. L. Adam and J. F. Goodwin have again tested their irrigating ditch this season by tapping the river at Fugler's Point and bringing the water as far down as W. H. Rice's place, about three miles from town. Mr. Rice is irrigating a part of his place for summer crops. The water flows nicely over the land, and it is said by one who knows that the land here is as easily and successfully irrigated as the lands down about Los Angeles. While we need no irrigation for our winter crops, our summer crops would be much more of a decided success if the land was irrigated once or twice in the spring. As there is an abundance of water, sufficient to irrigate the whole valley, that can be taken from the Santa Maria river at Fugler's Point, it is only a matter of a short time we think when it will be demanded.

Santa Cruz.

THE WELL AT THE SUGAR FACTORY.—Watsonville *Pajaronian*, July 17: The work on the big well being bored by the beet factory across the slough is nearly finished. In putting down this well several months' time has been employed, and the work has involved a considerable expenditure for labor and material. But the company has been fully repaid for the outlay, as it has a bonanza in the immense flow of water—more than sufficient to supply all the needs of this city if it could be appropriated to that use. Supt. Waters expects that the well work will be finished this week.

Shasta.

FIGHTING GRASSHOPPERS.—Anderson *Enterprise*, July 17: E. F. Buss piloted a gang of amateurs to the young orchard of Baldwin & Atherton, three-quarters of a mile below town, on Tuesday morning to fight grasshoppers by firing into their camp. For some time the hoppers have been encroaching little by little on this orchard but being fed liberally of a deceptive blood cauterizer they were kept well in check until their blood got used to it, when a few of them would hold counsel together on a nice-looking tree, and when they flew away take the tree with them. It was for the purpose of stopping this continual carrying away that Buss and his army kept the flames ascending and grasshoppers simmering the greater part of the day. Millions took wing and flew away while other millions stayed to feed another day. These miserable pests have done irreparable damage to young fruit trees of several localities in this neighborhood this year and there seems no certain way of stopping the ravages.

Solano.

INCREASE IN FRUIT SHIPMENTS.—Vacaville *Enterprise*, July 19: The extraordinary high prices which are being received this year for Vacaville fruit in the Eastern markets, led an *Enterprise* reporter to inquire into the amount of fruit being shipped and if possible obtain some approximate idea of the returns therefrom. Up to the afternoon of the 17th inst. 276 cars have been dispatched from this depot, and they are now going out at an average rate of five cars per day. They were loaded by the following parties: California Fruit Association, 16; Frank H Buck, 23; Fruit Growers' Association, 36; Earl Fruit Co.. 30; sundry shippers, 171. At the close of business Friday afternoon, Edward Fisher, cashier of the Bank of Vacaville, furnished as the result of the shipments of fruit from May 1st to July 17th the following figures: $167,920.44, which passed through this bank alone and into circulation. Probably $10,000 more came in, but did not pass through his hands.

Sutter.

HARVESTER DISABLED.—Marysville *Democrat*, July 18: Berg Bros.' combined harvester which has been in operation on their large farm in Sutter county, a few miles above Yuba City, was visited by sneak thieves, last Tuesday night. When the employes left the machine at a late hour on Tuesday afternoon, everything was intact, but on returning to resume their work on Wednesday morning, several of the essential parts of the machine were missing, including chains, two elevators, "dog-house," a large number of sacks, needles and a quantity of twine. The thief was tracked as far as Yuba City where all traces of him were lost.

HARVESTING POTATOES.—Yuba City *Farmer*, July 18: Fred Klemp began harvesting his potato crop on the Teegarden tract last Tuesday. He first mowed the tops and raked them from the field and is now plowing the ground and gathering the potatoes. The potatoes are large and of a good variety. Mr. Klemp will realize about 100 sacks per acre to the field.

Tulare.

THE CREAMERY.—Visalia *Times*, July 17: The directors of the Visalia Creamery Association met on Saturday last, and among other business transacted was the appointment of a committee, consisting of W. H. Blain, D. K. Zumwalt and S. Gilliam, to purchase the necessary machinery to put the creamery in operation. This committee met on Monday, and after having examined the bids presented for supplying the machinery, let the contract for the supplies. It will take three or four weeks to get the machinery here and place it in position, and then the manufacture of cheese is expected to begin. The directors are of the opinion that milk will be needed about the 10th or 12th of August, but every effort will be made to commence operations at the earliest date possible.

Yuba.

SUPERIOR WHEAT. — Marysville *Appeal*, July 18: The wooden warehouse of the Farmers' Co-operative Union is beginning to receive for storage a considerable quantity of wheat. An *Appeal* reporter was credibly informed Tuesday that at least 75 tons of wheat were being received there daily. All this wheat is in excellent condition, and is being stored by the owners in hope of a rise in the market. A gentleman who had sampled some of this wheat said that the most of it was exceptionally heavy and would weigh four or five pounds more to the sack this year than last.

LATE SOWN WHEAT.—Yuba City *Farmer*, July 18: T. B. Hull brought to town last Wednesday a sample of his late sown wheat. He had pulled two bunches from the field, one of "Proper" wheat and the other of "Club" wheat. Both bunches had good straw nearly three feet in length and the heads were well filled with good kernels. The wheat was sown just eighty-four days from the time it was pulled up and had made that remarkable growth and matured in that time. The field will yield over six sacks to the acre.

THE ORANGE CROP — Marysville *Appeal*, July 18: The prospect for the local orange crop is good this year. The fruit is now about as large as walnuts. There has been no loss from dropping of fruit here. The expectation is that the crop will be double that of last season. Nursery stock last winter did not lose a leaf from frost, and is coming on well this season.

FRUIT SHIPMENTS.—Marysville *Appeal* July 18: Fruit shipments by freight from Marysville are beginning to pick up. The following big shipments were made yesterday, besides numerous smaller which are not mentioned: The Sutter Orchard Co. shipped 400 boxes, or one car, of Bartlett pears to parties in Chicago. There were also 200 boxes of the same fruit consigned to Eastern purchasers by some Chinamen residing in Sutter county. The Marysville Canning Co. shipped a carload of this year's canned fruit to dealers in Chicago. The Bartlett pears mentioned above, bound for the Eastern market, are loaded into a common freight car at this point, taken to Sacramento, and there reloaded into a refrigerator or fruit cars, and forwarded on East.

ARIZONA.

THE OUTLOOK FOR STOCK.—Wilcox *Stockman*, July 19: Since our last issue, there have been splendid rains in almost every section of Southern Arizona, and the present outlook for a good year for stockmen, so far as feed is concerned, could not be better. We rejoice with our friends, the rangemen, over the flattering condition of affairs.

A GRAND CANAL SCHEME.—A telegram from Phœnix, July 18, says: D. M. Ferry, the famous seedman of Detroit, and C. C. Bowen to-day made a proposition to build canals on the south side of Salt river, to build a new dam across the river, and to consolidate the heads of all the canals on that side. The plan is to locate the dam above that of the Arizona canal, which feeds all the canals on the north side, being a short distance below the Verde river. Here two points of red sandstone project into the river, where a dam 450 feet long and 40 feet high is to be built. Hence the canal will lead the water directly at a right angle through a rock bank. The canal will be 50 feet wide at the bottom, six feet deep, and carry 50 000 miners' inches of water. The rock cut will be two miles long and 36 feet deep at places. The undertaking will be one of the largest in the valley, and will cost more than $500,000. The canal will furnish great water-power. There will be one drop of 14 feet to the Highland canal, another of about 20 feet to the Mesa canal, one of 15 feet to the Utah canal, and a magnificent fall of 30 feet over which to carry the 9000 inches of the Tempe canal.



LADIES' TOILETTE.

outline curves high over the hips and describes a sharp point at the front, and a fashionably long and narrow postilion at the back. The velvet sleeves are stylishly full and rise well above the shoulders, and they are finished at the wrists with cuffs of the suit goods. At the neck is a rolling collar of velvet, which meets the fronts in notches, the fronts being reversed to form lapels, below which they are closed with buttons and button-holes. Button-holes are made in the right lapel, with a jaunty coat effect. A shirt of striped percale, a Piccadilly collar and a four-in-hand scarf showing dark-blue spots on a cream white ground are worn with this handsome basque.

The skirt is in the approved four-gored style, and may, if desired, be worn over a small bustle. The front-drapery is arranged to fall over the gores in graceful folds and wrinkles, which are produced by a cluster of three forward-turning plaits at the belt that flare toward the center at each side; and the back-drapery falls in a well pressed double box-plait at each side of the center of the back. A band of velvet edges the front drapery and makes an effective foot-trimming; above this is applied an upturned row of Vandyke points, and similar points are placed on the basque at the shoulders.

Henrietta cloth, French maline, chevoit, tweed, cashmere or challis may be appropriately chosen for a toilette of this kind, and many effective combinations of shades and fabrics may be produced by associating velvet, Surah, faille, Bengaline or *crêpe de Chine*, which will be used for the sleeves, with wool goods, or those showing a mixture of silk and wool, such as cheviot, silk-warp Henrietta, etc. Fancy braid, galloon, passementerie, velvet, ribbon, etc., may be applied as preferred, but a plain finish will best harmonize with the simple elegance of the style.

The hat has a straight brim and is made of the suit goods, and the brim is faced with velvet and almost covered with a frill of lace.

Fashion Notes.

Ladies' Toilette.

Plain suit goods of a pale heliotrope shade and velvet of a darker tint of heliotrope are here combined, and Kursheedt's Standard Vandyke-points are used in the garniture. The superb adjustment of the basque is performed by the usual number of darts and seams, and the lower

THE RANGE INTERESTS.—Even special agents are now in the field, making an enumeration of the live stock on the ranges for the eleventh census. These great grazing-fields are year by year being curtailed as the regular farmer comes along and takes up his homestead. Still, for many years to come large tracts of land will be used for grazing purposes only at certain seasons of the year. The census of 1880 gave 3 750,000 head of cattle, 7,000,000 sheep and over 2,000,000 hogs on the ranges.

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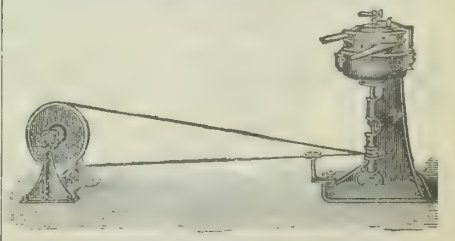
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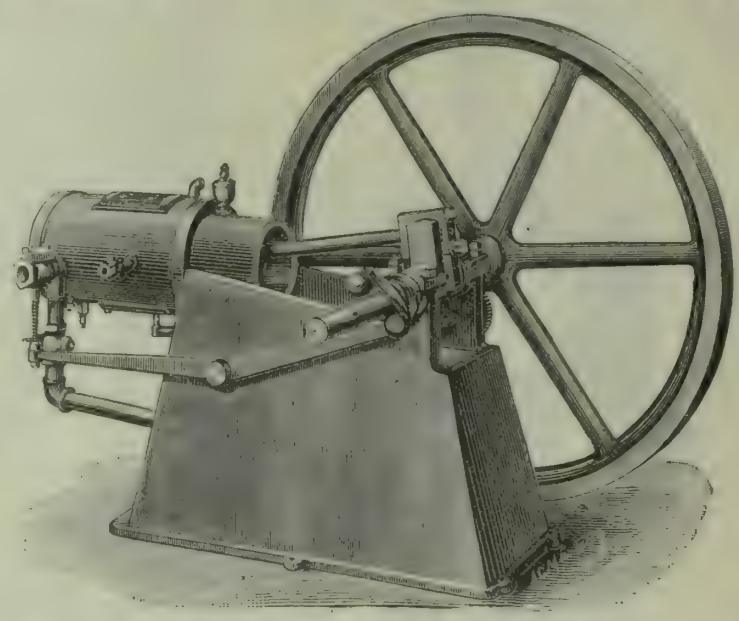
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Modoc and Lassen County Notes.

EDITORS PRESS: I left Adin this morning, and arrived at Bieber at 8 o'clock. Bieber is a lively little town, located in the central portion of Big Valley, 15 miles from Adin, and about six miles south of the town of Lookout. There are two hotels, a blacksmith shop, two livery stables, two stores, one store is owned by Mr. Packwood, formerly owned by N. Bieber; the other store is owned by Mrs. Rodey. Both stores seem to be doing a very good business. There are also two saloons. The town has a very neat and lively appearance. Mr. S. Boyd's place of business is on Bridge street. He takes the RURAL for his patrons to read. The printing office belongs to Mr. Ford, the enterprising editor of the *Mountain Tribune*, who is a thorough gentleman.

They are having races here to-day. I have seen many farmers and stockmen here. I find many warm friends here of the RURAL PRESS. N. Bieber is an enterprising business man. Mr. Bieber told me that he owned nearly 6000 acres of the best land in Big Valley. He is now in the real estate business, and will sell his lands at 50 per cent less than the actual value, in order to induce settlers to settle in the Valley. I called on Dr. J. J. Van Male. He is a good physician. He says he is located here to stay and is well pleased with the country.

As I came from home this morning I passed some very lovely rural scenes. Along Willow Creek the meadows of A. Gregg and B. N. Studley looked very fine, green grass standing nearly to the top of the fences. Hillman brothers also have a fine crop of grass which will soon be cut and made into hay.

Taking everything into consideration, times are looking better for all branches of industry. All this country wants is the right kind of cultivation and then the fertile soil will show for itself. I passed several fine fields of wheat between Adin and Bieber, which was sown last fall. The wheat on Mr. I. Bassett's ranch, three miles from Bieber east, is hard to be beaten in any country. It was sown last fall.

The beautiful green meadows stretching for miles north and south from Bieber, make the scene one of beauty and loveliness, skirted a few miles to the west with mountains covered with a heavy growth of timber of evergreen, fir, pine, and other valuable timber.

I was in Lookout on June 30th and July 1st. Lookout is located 12 miles west of Adin, on a beautiful raise of land near Pitt river. It has two stores, two blacksmith shops, one hotel, with good accommodations, kept by Mr. Winchel. Reid, Morris & Co. and Mr. Strawbridge, who keep the stores, have full lines of general merchandise, and seem to be doing a good business. H. KELLEY.

Bieber, Lassen Co., Cal., July 5, 1890.

Outing in Alameda County.

EDITORS PRESS:—The RURAL PRESS and its conductors are evidently favorites at "Agua de Vida Springs" under the grand live oaks on the mountain side above "Arroyo Mucho," beyond Livermore, where we enjoyed the delicious water and invigorating breeze, after our comfortable ride on the buckboard from Capt. Crosby's ranch, "Mulfontes" (many springs) near the Arroyo Valle, eight miles away. "We always keep the RURAL PRESS on file, the index makes it so valuable for reference," says Mrs. C.

One of your staff, visiting here, has ridden 16 miles on horseback and kept us well supplied with seasonable game, bringing in his first deer—the first he ever saw when he was out hunting — hung across his saddle bows this morning; a fine, young buck, shot through the right shoulder, killed with one rifle bullet in approved RURAL style. The Lady Isabel, aged seven months, has already crowned his white helmet with a wreath of bay, of laurel leaves, and we are to have our supper of venison steak cooked in hunter fashion by our two Maine veterans, out of doors, by the Arroyo.

It is perfect happiness to be here in this pure mountain air, nearly 2000 feet above the sea, among live oak and pine trees, and to have it so cool and yet warm enough for the gentlemen to wear white linen coats, always becoming, and for the ladies to don the comfortable summer lawns they never can use in San Francisco. We enjoy eating the ripe, sweet peaches from the trees by the flume—indeed, everything tastes delicious here. We walk and drive and ride on horseback. The roads are safe and good, though the declivities are frightfully precipitous to unaccustomed eyes. The mountains in purple morning light or rosy evening glow are an ever-changing joy. We have a cottage to ourselves as a domicile and everything is charming. K. B.

Mulfontes, July 16, '90.

A DECISION ON WINE PRESSES.—A. S. Pare, of the firm of Pare Bros. of this city, brought two years ago a suit in the United States Circuit Court against Bernard Toulouse and John Delorieux vs. the Commercial Machine Works, for infringement on a wine and cider press, better known as the "Le Merveilleuse," invented by Dominque Lille of Troucens, Department du Gers, France, for which M. Pare bought the right for this country. The case was decided Monday, the 21st instant, in favor of plaintiff by Hon. Judge Sawyer, and transferred to Commissioner Houghton for an accounting.

THE VETERINARIAN.

Acute Rheumatism.

EDITORS PRESS:—I have a mare that became stiff in one hind leg just after foaling, and in two or three days limped badly in the same leg, being barely able to step with that foot. It is now six weeks since she became lame and she still limps badly. I can find no bruise, nail or other cause for the lameness. Is it probably a result of foaling? If so, what would be a remedy for the trouble? When the foal first began to suck, the mare would hold her leg outstretched behind.—H., *Watsonville.*

EDITORS PRESS:—From H.'s description it seems to me a case of acute rheumatism. It is not at all uncommon for rheumatism to develop after foaling. The proximate cause of rheumatism has been maintained to be a poisonous substance circulating in the blood (Latic or some other acid). The *exciting causes* are: Sudden chills, exposure to wet and cold. *Predisposing causes:* A rheumatic diathesis.

Treatment.—First of all give a saline purgative and keep the bowels open by regulation of diet. Give bicarbonate of potash in large doses three times daily. If the temperature is increased, give two or three full doses daily, for two or three days, of salicylate of soda; locally, apply anodyne lotions of opium or belladonna. In the later stages, stimulating liniments are useful.

Chronic rheumatism may follow acute, or it can occur independently. When the disease is of a chronic character from the first, give bicarbonate of potash and iodide of potash; also give tonics. Use stimulating liniments, locally. Sometimes it is necessary to blister or apply the actual cautery.

A. E. BUZARD, M. R. C. V. S. L.
11 Seventh St, S. F.

Solano County Notes.

GOOD FRUIT PRICES — EDITORS PRESS:—The way things are booming in our little town at present is a sight for a stranger—in fact, it almost takes the breath away from the old settlers. The prices that fruit shipped from here is bringing in the East are paralyzing the grower, shipper and all concerned. Two to three cars a day are going East, while the Bank of Vacaville is cashing checks for San Francisco shipments to the amount of between $3C00 and $4000 per day, and the ball has only just opened. The weather so far this summer has been cool enough to have all fruit leave here in first-class condition; the thermometer has not reached 110° this season. Offers are made of 14½ cents for dried apricots, with a prospect of bringing 16 cents within a month. Sales of crops of fruit are being made at about what, one year ago, was the selling price of the land that they stand on. Yes, the fruit men have an inning this year. P.

Vacaville, July 21.

California's Stallions.

I beg to announce that, with a view of perpetuating the forms and characteristics of the leading stallions of California, I am issuing a series of lithographic likenesses. Each portrait issued will be an acknowledged likeness, the result of a close study of the horse and an artistic treatment of the subject. In order to secure for the series an immense advertising value, from a breeder's point of view, 4000 copies, at least, of each portrait will be issued.

Terms, $100 for first issue of 100 copies. In quantity, for advertising purposes, copies will be furnished at low rates.

H. BOYD, Artist.
268 Golden Gate Ave., San Francisco.

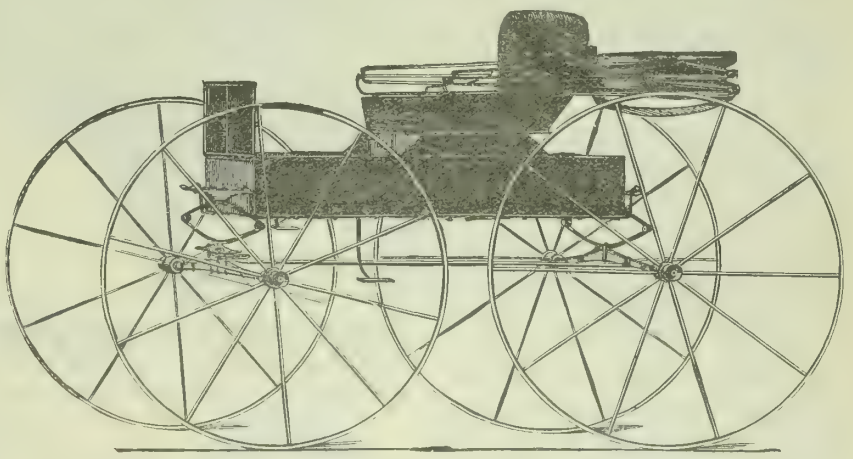
FATAL EXPLOSION.—A dispatch from San Luis Obispo states that the boiler of Frazier's thrashing outfit exploded on the 22d, near Miles station, fatally scalding Fireman John T. Pryc, who died a few hours after; crushing the skull of Walter Kyle, who will probably die, and severely injuring Engineer Ed T. Frazier. Pryo and Frazier were blown 100 yards, and part of the engine, weighing three tons, was launched like a rocket over the heads of the gang at the separator, being thrown 125 feet.

Injurious Insects of the Orchard, Vineyard Field, Garden, Conservatory, etc.,
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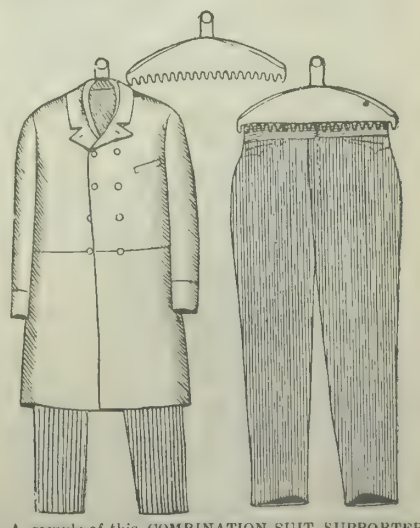
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JERSEY BULL No. 468 P. C. J. C. C. for sale cheap. A fine four-year-old animal. Address Dellwood Poultry Yards, Napa, Cal.

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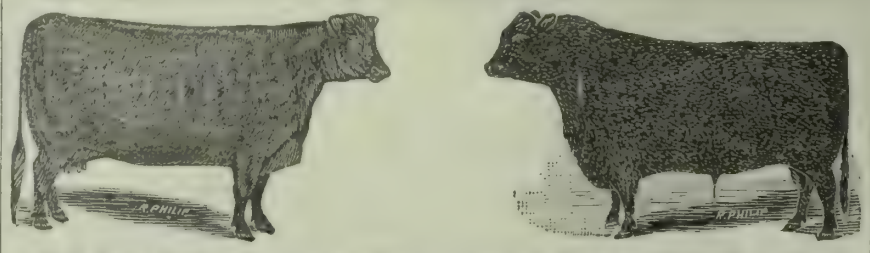
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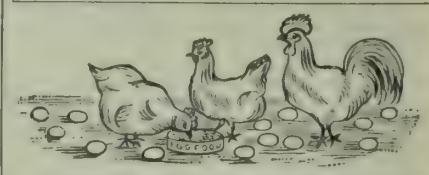
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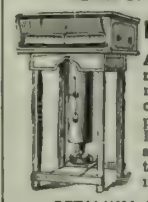
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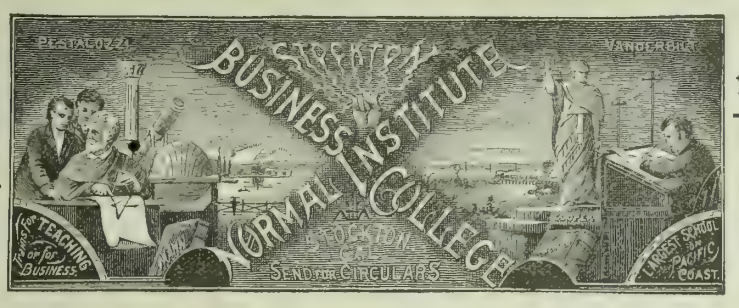
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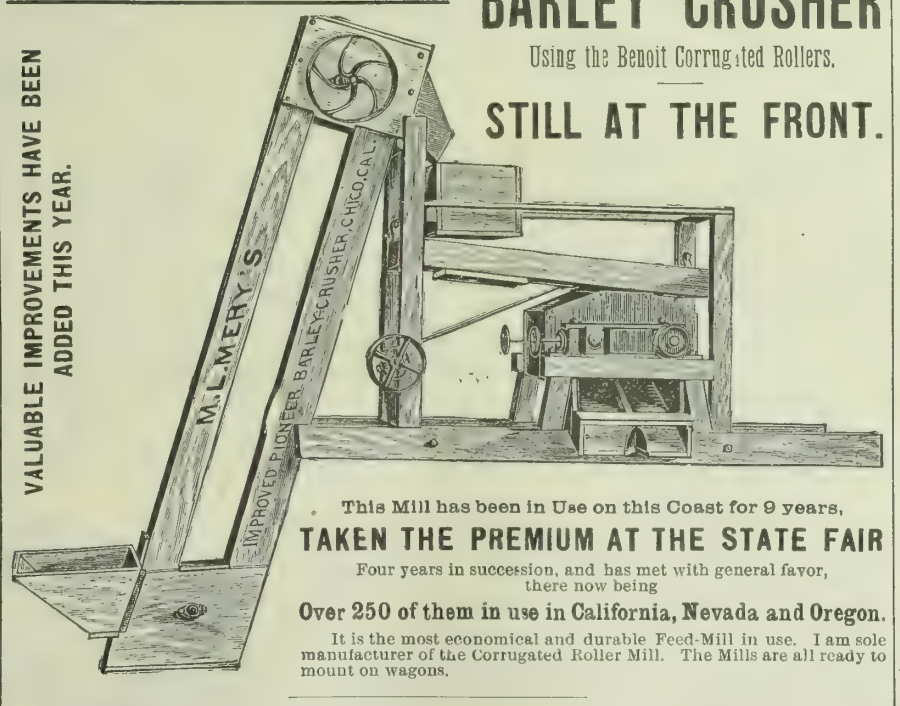
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BARLEY CRUSHER

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VALUABLE IMPROVEMENTS HAVE BEEN ADDED THIS YEAR.



STILL AT THE FRONT.

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TAKEN THE PREMIUM AT THE STATE FAIR

Four years in succession, and has met with general favor, there now being

Over 250 of them in use in California, Nevada and Oregon.

It is the most economical and durable Feed-Mill in use. I am sole manufacturer of the Corrugated Roller Mill. The Mills are all ready to mount on wagons.

GRAINLAND, BUTTE CO., CAL., June 9, 1887.

Mr. M. L. Mery—DEAR SIR: We have used one No. 2 Roller Barley Crusher now for eight years and have used it steady during that time; have crushed 45 tons a day and the Crusher is as good to-day as when it came out of your shop. I am satisfied that it is the best mill made. You may reconstruct this testimonial to the best advantage for you and sign our names, for you cannot overrate the merits of your mill. F. E. REAM, JOHN P. SUTTON.

DURHAM, May 21, 1887,

Mr. M L Mery—DEAR SIR: In reply to yours of the 19th, would say that I crushed from two to two and a half tons per hour, but could crush three and a half tons if my elevators were large enough to carry the barley from the machine. The No. 1 machine I used at Gridley was run on a sack a minute, but if we got behind we could run through five tons an hour, and do good work. The machine I use here is a No. 2. Yours, WM. M. TAYLOR.

I thank the public for their kind patronage received thus far, and hope for a continuance of the same.

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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 23, 1890.

Trade in general produce has been quite active. The higher prices obtained this season for fruits, cereals, etc, speak well for the future, so far as farmers' financial condition is concerned. The fairly easy money market is in favor of sellers. At the East and abroad wheat has advanced under slight fluctuations. The following is to-day's cablegram:

LIVERPOOL, July 23.—Wheat— Firmer. California spot lots, 7s 1d to 7s 4d; cargoes off coast, 38s 3d@38s 6d; just shipped, 37s 9d; nearly due, 38s 3d; cargoes off coast and on passage, firm; Mark Lane wheat, firm.

Foreign Grain Review.

LONDON, July 21.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: Expectations on the acreage of 1889 has lessened 1,000,000 quarters as regards wheat, although oats and barley are uncertain. English wheat in London advanced 2s 9d in one fortnight. Trade in foreign wheat is disappearing, although the tone on Friday was somewhat encouraging. Spring-corn trade is in favor of sellers. The immense quantity of Maize afloat prevents an advance. Barley is slightly dearer. At to-day's market there was an extremely reduced supply of English wheat, the prices demanded outside being 40s. Foreign wheat was irregular. Californian was 9d dearer. Flour favors sellers. Maize is steady.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	July.	Aug.	Sept.	Oct	Nov.	Dec
Thursday....	7s2½	7s2½d	7s3½d	7s3½d	7s4d	7s4½
Friday	....	....	....	....	....	....
Saturday	....	7s3½d	7s4½	7s4d	7s4½	7s4½d
Monday	7s3½d	7s3½d	7s4½	7s4½	7s4½	7s4½
Tuesday	7s3½d	7s4d	7s4½d	7s5d	7s5d	7s5d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	38s0d	37s6d	38s0d	Firmer.
Friday.....	....	....	....	.....
Saturday.....	38s0d	37s6d	38s0d	Firm.
Monday.....	38s0d	37 6d	38 0d	Stronger.
Tuesday	38s0d	37s6d	38s0d	Firm.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York for the past week:

Day.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday	94⅝	93⅝	93⅜	93½	94½	96½
Friday.....	....	....	....	....	....	....
Saturday.....	96⅛	94½	94½	....	....	96⅛
Monday	96	94½	94½	94⅝	96⅛	96
Tuesday.....	96⅞	94½	94½	....	....	96⅝

The closing prices for wheat have been as follows at Chicago for the past week:

Day.	July.	Aug.	Sept	Oct.
Thursday.....	....	86⅞	88⅜	....
Friday.....	....	87½	89⅛	....
Saturday	....	88½	90	....
Monday.....	....	87⅜	89	....
Tuesday.....	....	88⅛	89½	....

NEW YORK, July 23.—Wheat—98¼c for cash, 94⅞c for August, 94⅞c for September, 96⅜@96½c for December, and $1.00⅛ for May.

CHICAGO, July 23.—Wheat—88c for August, 89¾c for September, 91½c for December, and 95¼c for May.

Discouraging Crop Prospects Abroad.

LONDON, July 20.—A week ago it was felt that the weather in England since the beginning of June had already become too grotesquely ridiculous a thing to be discussed in ordinary language. Since then there has been the heaviest rainfall known in any one week since 1878 and the whole six weeks' record is the worst since 1813. The havoc this continuous downpour has worked in the fashionable world of regattas, lawn fetes and riverside parties, is of no lasting consequence, but the direct pecuniary loss to the farmers has become something terrible. I came in this morning from Shepperton, 20 miles up the river, and saw literally hundreds of acres of meadows in which the cocked hay was four-fifths under water. Two bright, hot days in the middle of the week revived the hope that the wheat might after all be saved in something not too far below the average crop; but subsequent tropical rains and arctic temperature have dissipated this. Everybody admits now that it is likely to be the worst yield since the unprecedented disaster of 1879. The stock of English wheat is now all but exhausted, and under the influence of this and the evil prospects of the growing crop, prices have advanced about another shilling per quarter during the week. Much the same stories continue to come from the continent. The Russian rouble went up on the Berlin Bourse in sympathy with the general advance in silver, and there was a further advance yesterday owing to the demand to pay for Russian wheat. As to the real condition of the Russian crop, much uncertainty exists. The official report of the month makes a very gloomy showing, but it is suspected in Berlin that this is done to favorably affect exchange and that Russia, in fact, has a tolerable crop. If this be true, Russia ought to make a great deal of money, because all Europe will perforce be buyers.

Cereal Crop in Central States.

WICHITA, Kan., July 21.—The thermometer throughout the Arkansas Valley stood at 104° yesterday. The hot winds which prevailed all day have finished the destruction of many thousand acres of corn. A rainfall now would save only the corn in the very low lands.

KANSAS CITY, July 21.—The *Star* says: Yesterday was the hottest day of the year in the greater portion of Kansas, and the heat did still further damage to the corn crop. The most conservative estimates cannot now place the probable yield at half what was raised last year.

Dried Fruit.

NEW YORK, July 20.—The position of canned and most dried fruit favors sellers daily. Buyers fully realize the strong bearing the Pacific prices have assumed in the widened competing bids that must attend this season. Spot apricots in blocks are selling 25c higher than a month ago. No excitement in raisins. There is a line of buyers who regard the increased number of packers as a feature in their favor, consequently the standards are not persistently inquired about. A popular brand of prunes sold here for 9¼ to 12c, six sizes. Geo. W. Meade, who is back from Europe, states that he found much encouragement for a further opening of the English trade in American raisins and prunes. The latter are favorably spoken of by some good houses.

Hops.

NEW YORK, July 20.—Choice hops higher. The market was stiffened by several round lots taken for England brewing demand, but it was checked by the new figures offering light common to best new State, 18@23c; Washington, 19@22c; California, 18@21c; all 88's, 12@15c.

Wool.

NEW YORK, July 20. — Wool had a light trading here. Some good-sized parcels are in hopeful treaty. Stronger foreign markets impart some buoyancy of tone, but the buyers are not disposed to pay more money or fully support the continued extreme views at primal points. The run at present is upon a good cheap grade. Fifty thousand pounds spring California and 25,000 pounds scoured, private terms; 30,000 pounds, defective, do, 40@41c; 55,000 pounds spring Texas, 21@23c; 15,000 pounds XX and above, 33½c; 211,000 pounds domestic, 110,000 pounds foreign and 170 bales, private terms.

Boston reports a quiet market and an independent feeling among buyers on the price question. The sales are 2,124,000 pounds foreign and domestic, including 118,000 of California spring, 17@25c.

Philadelphia reports light trading and no disposition to pay top rates and, a considerable accumulation of stock.

Local Markets.

BARLEY

	Buyer Season.		*Buyer 1890.		Buyer 1890.	
	H.	L.	H.	L.	H.	L.
Thursday...	125	124½	116	115½	120½	120½
Friday.....	128	127	....	....	122½	122
Saturday....	127½	126½	....	....	122½	121½
Monday.....	127	126½	....	....	122	121
Tuesday....	130	128½	119	118	123½	123

*After August.

WHEAT.

	S. S.	Nov.	B. '90.	*B S. '90	S '90.
Thursday....	h.	....	142½	....	....
	l.	....	142½	....	....
Friday.....	h.	....	142½	140½	....
	l.	....	142½	140½	....
Saturday....	h.	....	144	150½	....
	l.	....	143½	150½	....
Monday.....	h.	....	143½	150½	....
	l.	....	142½	150	....
Tuesday.....	h.	....	143½	150½	....
	l.	....	143½	150½	....

BAGS—The market is weak at lower quotations. Hand-sewed standard-size are quoted at 6⅜@6½c.

BARLEY—The sample market has held strong at advancing prices under light offerings and good buying—speculative and legitimate. In futures, trading has been more active at strong prices. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—200 tons, $1.23½; 100 tons, $1.23⅜; 700, $1.23. Buyer season—100 tons, $1.30½; 100, $1.29⅞. Seller 1890, new—100 tons, $1.20; 100, $1.19 ₩ ctl. Afternoon Session: Buyer 1800—100 tons, $1.23¾; 200, $1.23; 100, $1.-29⅜. Buyer season—100 tons, $1.29⅜; 200, $1.-29½; 100, $1.29⅝ ₩ ctl.

BUTTER—The market appears to be working into better shape for the selling interest. Receipts are light and demand free.

CHEESE—The market shows continued improvement under lighter receipts and a good demand. The supply to draw from is light.

EGGS—Strictly choice fresh laid are strong at full figures. The demand is good.

FLOUR—The exports continue free. The market is reported firm at full prices.

WHEAT—The sample market has ruled strong under light business in this city, but active buying in the country at slightly higher prices than quoted here. In futures, trading on Call has been fairly active of slight fluctuations. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—600 tons, $1.43¾ ₩ ctl. Afternoon Session: Buyer 1890—100 tons, $1.43⅜; 800, $1.44; 200, $1.44½; 300, $1.44¾. Buyer season—100 tons, $1.50½; 500, $1.50¾; 400, $1.51; 100, $1.51¼. November—100 tons, $1.41¾ ₩ ctl.

[COMMUNICATED.]

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending July 23d, were as follows:

Flour, qr. sks.	134,084	Middlings, sks...	2,395
Wheat, ctls..	190,683	Alfalfa, " ...	....
Barley, "	40,729	Chicory, bbls..	73
Rye, "	5,089	Broomcorn, bdls..	....
Oats, "	3 616	Hops, bls.....	173
Corn, "	1,683	Wool, "	1,338
*Butter, "	996	Hay, tons.....	3,325
do bxs	382	Straw, "	110
do bbls	....	Wine, gals.....	210,790
do kegs	....	Brandy, "	5 520
Cheese, ctls	552	Raisins, bxs	966
do bxs	59	Honey, cs	156
Eggs, doz.....	46,560	Walnuts, sks	30
do " Eastern.	63 910	Flaxseed, sks	....
Beans, ctls.....	3,931	Mustard, sks	18
Potatoes, sks....	15,577	Almonds, sks	....
Onions, "	2,310	Peanuts, sks.....	....
Bran, sks.	5,572	Popcorn sks.....	....
Buckwheat, sks...	....		

*Overland .... ctls.

Cereals.

The local wheat market has exhibited continued strength, with considerable quantities changing hands in the interior at advanced figures on quotations furnished by buyers in this city. As a rule, sellers part sparingly with their grain, only letting go enough to cover running expenses with now and then sales made to cancel matured and maturing indebtedness. Continued wet weather abroad creates a decided bull feeling, which is supplemented by the strength exhibited by silver. Free purchases of wheat in Russia have already brought the rouble into better demand at Berlin, causing an advance to obtain for that silver coin, while the Indian rupee (silver coin) and Council Bills sell for more money in England. This, of necessity, has a favorable influence on the English and Continental wheat markets. The scarcity of spot and near-by vessels is against wheat, for it keeps charters strong in the near future. The tonnage on the way to this port is about 18,000 registered tons larger than at this time in 1889, while the tonnage on the way to British Columbia, Puget Sound and Portland is more than twice as much. This shows well for an ample supply of tonnage later on.

Barley has not only held strong, but shows a decided advance. Toward the close the market, while more quiet, is no lower. The tone to the market exhibits a degree of strength that looks well for the selling interest. It also acts as if there is quite a short interest on the market, which, combined with the legitimate demand, will not only maintain values around present quotations, but as the season advances will send prices to still higher ranges. The consumption of brewing promises to be larger than it was in 1889.

Oats are firmly held under light offerings and a fair demand. The stock of old is light, while the crop of new does not promise any material change from that of last year.

Corn shows more strength with an advance obtainable. Crop prospects in this State are not so favorable, while in the Central States they are decidedly worse.

Rye shows continued strength at last week's advance.

Feedstuffs.

Ground feed is in good demand at a slight advance for bran, middlings, ground barley and feed meal.

Hay is without essential change, the demand and supplies being about equal. There is a settled conviction that the crop this year turned out much better than claimed, while in Nevada there was a larger out-turn than for years. While the crop turned out well, yet the increased consumption will, it is claimed, keep the market well up throughout the season.

Fruits.

San Francisco continues the dumping ground for poor fruits, which, except under an active demand, move slowly. Fine large fruits of all kinds meet with a quick demand. The market is better supplied toward the close; this is largely due to the fruit being too ripe for overland shipment. Plums are slow, prunes are scarce, peaches are in liberal supply, poor apricots are in free receipt, green gages are in good supply, and pears are in freer supply with quality generally poor. Choice Bartlett pears are wanted. Apples are coming in more freely, causing a shading in prices. Figs are firm.

Berries do not show any material change.

Grapes begin to show an improvement in quality as receipts increase. It is claimed that owing to the high prices for dried fruits, more attention will be given to drying grapes. Wineries are in the market for Zinfandel, Mission and Mataro grapes. For new dried grapes, 3@3½c is freely bid for future delivery.

For dried fruits the market continues strong and active. The market is quotable as follows, with fancy selling at a slight advance over quotations: New evaporated peaches, 16@17½c; new bleached apricots, sacks, 13½@15½c; boxes, 15@16c per lb. We quote futures for new crop at 12@14c per lb for White nectarines, 9@12c per lb for Red nectarines, and 7@10c for California prunes.

For 1890 raisins there is a good demand, with reported sales for September and October delivery made at $1.75@2.25 for layers.

Live-stock.

Bullocks continue weak, under liberal offerings. Large butchers look for an improvement soon. Mutton sheep are strong at full prices, with another advance looked for at an early day. Hogs move slowly, with packers doing little. For the block, prices keep up. In horses and milch cows, there is nothing new to report.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4½@4¾c ₩ lb. dressed, 7@8c ₩ lb.; heavy, 3⅞@4½c ₩ lb.; dressed, 5¾@6¼c ₩ lb. Stock hogs, 4¼@4⅝c ₩ lb.

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¾@—c ₩ lb.: second quality 5@5¼c ₩ lb.; third quality, 4¾c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6@8c ₩ lb.; large, 4@6c.

MUTTON—Wethers, 7½@8c ₩ lb.; ewes, 7@7½c ₩ lb.; lamb, spring, 7½@8½c.

Vegetables.

Garden truck is in liberal supply causing lower prices for beans, cabbages, cauliflowers, etc. Tomatoes fluctuate with the tendency downward. Green corn is slightly lower under free offerings.

Onions have made a slight advance under light receipts and a good demand. The demand is both local and export.

Potatoes show a stronger tone under a good demand and only moderate receipts. Overland shipments continue free. Nevada advices are confirmatory of a larger crop than for years, which gives that State a surplus from which California dealers can draw. Oregon has a good crop.

Miscellaneous.

Poultry shows a firmer tone, with some slight changes reported.

Beans are coming in more freely and, as buyers are offish, concessions are necessary to induce free purchasing.

Trucksters have been peddling honey, owing to the high prices for fruits. This causes honey to move more freely. Receipts are free, which causes weak prices. Choice, white comb is quotable at 9@11c, and in 1-lb frames 10½@12c, ordinary 1c less. White extracted sells at 5@5½c, and amber, 4@5c.

Hops are very strong, with 20c more freely bid for future delivery of 1890. Latest advices from abroad report that the English and German crop outlook promises a reduction of from 25 to 35 per cent, which causes the higher markets abroad.

Wool is dull, with some holders looking for better prices later on. Eastern markets are reported unchanged.

Overland shipments in last month aggregate as follows: Beans, lbs, 317,460; brandy, gals, 13,259; wine, gals, 281,525; canned goods, lbs, 1.459 670; dried fruits, lbs, 110,250; citrus fruits, lbs, 1,400,840; deciduous fruits, lbs, 2,798,310; honey, lbs, 118,340; hops, lbs, 182,890; mustard seed, lbs, 33 400; onions, lbs, 226,430; potatoes, lbs, 1,760,000; raisins, lbs, 32,330; wool, grease, lbs, 2,194,040; pulled, 123,940; scoured, 532,710.

Exports by sea the past week aggregate as follows: Wheat, ctls, Liverpool, 52,449. Flour, bbls, Nanaimo, 109; Kahului, 275; Cork, 16,250, Honolulu, 1356; China, 13,483; Japan, 3103; Vladivostock, 750. Dried fruits, lbs, Nanaimo, 500; Honolulu, 589; China, 125; Japan, 850. Barley, ctls, Kahului, 1053; Honolulu, 2768. Beans, lbs, Honolulu, 30,310; China, 18,126; Victoria, 6725. Wine, gals, Honolulu, 4361. Bran, sks, Honolulu, 2125. Raisins, bxs, Honolulu, 117. Hops, lbs, Japan, 300; Victoria, 250. Rye, ctls, Japan, 8000.

From the *Commercial News* of July 23d the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port.....	257.412	241,456
On the way to neighboring ports	19,264	26,374
In port, disengaged.....	11.246	20,327
In port, engaged for wheat....	43.340	55.020
Totals.....	331,262	343,177

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to July 18, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls.....	344 522	528,842
Flour, bbls.....	27,638	72,970
Barley.....	3,910	9,203

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 23, 1890

BEANS AND PEAS.			
Bayo, ctl.....	3 50	@	4 00
Butter.....	1 90	@	2 00
Pea.....	2 10	@	2 20
Red.....	2 25	@	2 75
Pink.....	2 75	@	3 00
Large White ...	—	@	—
Small White ..	2 00	@	2 15
Lima.....	4 00	@	4 50
Fid Peas, blkeye	—	@	—
do green	—	@	—
do NiLes.....	2 00	@	2 25
Split.....	nq	@	—
BROOM CORN.			
Choice to Extra	80 00	@	95 00
Fair to Good..	70 00	@	75 00
Poor	50 00	@	60 00
CHICORY.			
California.....	6	@	6¼
German.....	6¾	@	7
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair, lb		@	15
do good to choice	17	@	18
do Giltedged...	19	@	20
do pickled.....	—	@	—
do in kegs.....	—	@	—
do Creamery in rolls.....	20	@	21
CHEESE.			
Cal, choice mild	9½	@	10
do fair to good	7½	@	9
Young America	—	@	—
N. York Cream.	13	@	14½
Western.....	8	@	11
EGGS.			
Cal. ranch, doz.	22	@	23
do do sel'cted	24	@	25
do. store.....	19	@	20
Est'n cold st'rage	—	@	—
do fresh.....	16	@	18½
do selected..	21	@	22
do to arrive...	—	@	—
FEED			
Bran, ton.....	14 00	@	15 50
Feedmeal.....	24 00	@	25 00
Grd Barley.....	27 00	@	28 00
Middlings	22 00	@	24 00
Oil Cake Meal..	25 00	@	—
Manhattan Food Per 100 lbs....	7 50	@	—
HAY.			
Compressed	10 00	@	14 00
Wheat, per ton.	8 00	@	10 00
do choice....	12 00	@	14 00
Wheat and Oats	10 00	@	14 00
Wild Oats.....	8 00	@	11 00
Tame do.....	8 00	@	10 00
Clover.....	8 00	@	10 00
do ch'ce red top	—	@	—
Barley.....	7 00	@	10 00
Barley and Oats	—	@	—
Alfalfa	—	@	—
Stock Hay.....	—	@	—
Alfalfa C'mpr'sd	—	@	—
Straw bale.	45	@	55
New hay, Wheat	—	@	-
do do Oats..	—	@	—
FLOUR.			
Extra, City Mills	4 10	@	4 35
do Co'try Mills	4 05	@	4 30
Superfine.....	3 10	@	3 75
GRAIN, ETC.			
Barley, feed, ctl.	1 15	@	1 20
do Choice	1 20	@	1 22½
do Brewing...	1 22½	@	1 23½
do do Choice..	1 25	@	—
do do giltedg'd	1 27½	@	—
Chevalier ence	—	@	—
do com to good	—	@	—
Buckwheat.....	1 25	@	2 00
Corn, White....	1 12½	@	1 20
Yellow.....	1 22½	@	1 30
Oats, milling....	1 65	@	1 75
Surprise.....	1 70	@	1 75
Choice feed.....	1 60	@	—
do good.....	1 55	@	—
do fair.....	1 50	@	—
do Gray.....	1 45	@	—
do Black.....	1 40	@	1 50
Rye.....	1 10	@	1 05
Wheat, milling.			
Gilt edged....	1 41½	@	1 42½
do Choice....	1 40	@	—
do fair to good	1 38½	@	—
Shipping, cho'ce	1 36½	@	1 38½
do good.....	1 33½	@	1 35
do fair.....	1 31½	@	1 32½
HIDES.			
Dry light to h'vy	8	@	9
Salted	5	@	8
HOPS.			
Oregon, 1889	14	@	20
Cal 1889 Choice	18	@	20
do Fair to G'd	13	@	16
1889 hops future	18	@	20
ONIONS.			
Silver Skin....	1 50	@	1 75
NUTS—JOBBING.			
Walnuts, Cal. lb	7	@	8
do Ch'ce.....	9	@	11
Almonds, hd shl.	5	@	6½
Softshell	9	@	10
Paper shell...	12	@	14
Brazil.....	11½	@	13
Pecans.....	9	@	14
Peanuts.....	5¾	@	7½
Filberts.....	11½	@	12½
Hickory.....	6	@	9
Chestnuts.....	14	@	—
Pine nuts	7	@	8
POTATOES.			
Early Rose, sks.	90	@	1 15
Chile.....	1 10	@	1 25
Peerless.....	85	@	1 10
River Reds.....	—	@	—
Humboldt.....	—	@	—
Petaluma	—	@	—
Burbanks.....	1 00	@	1 75
Sweet.....	—	@	—
POULTRY AND GAME.			
Hens, doz.....	6 00	@	7 50
Roosters, old....	6 00	@	7 00
do young.....	6 50	@	9 50
Broilers, small	2 00	@	3 00
do large	4 00	@	—
Fryers.....	4 50	@	5 50
Ducks, tame....	3 50	@	4 00
do young.....	4 50	@	5 50
Geese, pair.....	1 00	@	1 25
Goslings.....	1 50	@	1 75
Turkeys, Gob'r.	21	@	24
Turkeys, Hens..	18	@	21
Pigeons.....	2 50	@	3 00
Rabbits, doz....	1 00	@	1 25
Hare.....	1 50	@	1 75
Venison.....	12½	@	14
Dove.....	75	@	1 00
EGG FOOD.			
Manhattan, ₩ lb	12	@	—
PROVISIONS.			
Cal. Bacon.			
Heavy, lb.....	10½	@	11
Medium.....	12	@	—
Light.....	13	@	—
Extra Light..	—	@	—
Lard.....	9	@	12
Cal. Sm'k'd Beef	11	@	12
Hams, Cal.....	12	@	13
do Eastern...	12½	@	13½
SEEDS.			
Alfalfa.....	9½	@	10
Canary.....	4	@	4½
Clover, Red....	12	@	13
White.....	20	@	22
Cotton.....	30	@	—
Flaxseed.....	2	@	2½
Hemp.....	8	@	8½
Italian Rye Grass	10	@	11
Perennial	7	@	8
Millet, German.	5	@	6½
do Common..	5	@	6
Mustard, yellow	1½	@	2
do Brown	2½	@	3
Rape.....	1½	@	2
Ky. Blue Grass.	14	@	16
2d quality....	13	@	11
Sweet V. Grass.	75	@	—
Orchard	12	@	14
Hungarian...	7½	@	8
Lawn.....	37½	@	40
Mesquit.....	6	@	
Timothy.....	6	@	6½
TALLOW.			
Crude, lb.....	3	@	5
Refined.....	6	@	
WOOL, ETC.			
SPRING—1890.			
Humboldt and Mendocino....	19	@	24
Sac'to valley....	15	@	22
Free Mountain.	18	@	24
S Joaquin valley	12½	@	17
do mountain	17	@	23
Oala'v & F'th'll.	15	@	24
Oregon Eastern.	13	@	22
do valley.....	20	@	25
So'n Coast, def..	10	@	14
So'n Coast, free.	12½	@	19

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 23, 1890

Bananas, bunch	1 25	@	3 50
Cranberries	—	@	—
Limes, Mex	3 50	@	4 50
do Cal sml cases	75	@	1 50
Lemons, Cal., bx.	1 00	@	1 50
do Sicily, bx..	5 00	@	6 00
do Malaga.....	4 00	@	6 00
do do Seedling	1 50	@	2 50
Pineapples, doz.	3 00	@	3 50
Strawberries....			
fair, chest....	5 00	@	7 00
choice, chest.	10 00	@	—
Apricots, lb.	2½	@	3½
Raspberries do.	6 00	@	9 00
Bl'kberries, do..	3 50	@	5 00
Figs, box, black.	60	@	75
do white.....	25	@	50
do Smyrna..	—	@	—
Plums, lb.....	2	@	3
Egg plums.....	1½	@	2½
Pears, bx.....	75	@	—
do Bartlett lb	2½	@	4
Peaches box ...	75	@	1 00
do choice....	1 25	@	1 50
Grapes, box....	50	@	1 50
Apples com box	50	@	—
do choice....	1 00	@	1 50
Nectarines, Red	75	@	1 25
do White	50	@	75
Green Gages lb	1½	@	2
Waterm'l'ns	100	7 50	@12 50
Cantaloupes crt	1 50	@	3 00
Crabapples, box	50	@	75
VEGETABLES.			
Okra, dry, lb....	6	@	10
do green.....	10	@	17
Parsnips, ctl....	1 25	@	1 50
Peppers, dry, lb	12	@	—
do green, bx..	50	@	75
Turnips, ctl.....	75	@	1 00
Beets, sk.....	75	@	1 00
Cabbage, 100 lbs	50	@	60
Carrots, sk.....	50	@	60
Mushrooms, Cultivated, lb.....	—	@	—
Wild, lb.....	—	@	—
Cucumbers box	40	@	65
Tomatoes, bx...	40	@	1 50
Garden peas, lb	2	@	3
Sweet do do	1½	@	2
String Beans ...	1	@	1½
Wax, do.....	2	@	3
Fountain do....	1½	@	2
Squash, summer, bx	40	@	60
Marrowfat, ton	20 00	@	30 00
Garlic, lb.....	4	@	5
Green corn doz	12½	@	20
do do corn sk ..	1 00	@	1 50
Egg Plant, bx..	1 00	@	1 25

California Fruits East.

CHICAGO, July 17.—The Earl Fruit Co. sold Bartlett pears to-day at from $2.90@3.50; Purple Duane plums, $2@2.45; Bradshaw plums, $2.40@2.55; German prunes, $2.40@2.50; Early Crawford peaches, $2.50@3 35; Peach plums, $2.95; Hale's Early peaches, $1.60@1.75; Washington plums, $2.40.

Porter Bros. sold three carloads. Bartlett pears $3 10@3.40, except one lot of small, slack-packed stock at $2.20@2.25; Crawford peaches, $3.65@3.80; Tragedy prunes, $3; Gold Drop plums, $2.60; Japan plums, very small, $1.80; German prunes, $2.40@2.60; Hale's Early peaches, $1.90; Columbus plums, $2.65; Washington plums, $2 60, except one lot in poor order, which went at $1.75@1.90.

CHICAGO, July 18.—The Earl Fruit Co. sold peach plums at the following prices: Half crates, $4.10, boxes, $2.75; Washington plums, $3; apricots, 65c@$1.65; Hale's Early peaches (small), $1.35; Early Crawford, $2.25@2.65.

CHICAGO, July 18.—Porter Bros. Co. sold three carloads of Bartlett pears to-day at $2.80@3.15; Washington plums, $1.10@1.90; Columbia, $2.25; German prunes, $2.25@2.55; Peach plums, $2.70@4.20; Crawford peaches, $1.80@3.05; grapes, half crates,in poor order, $1.50@2.55; Purple Duane plums, $2.25@2.65; Royal Hative, $1.90@2.20; Figs, small boxes, 60@65c; Hale's Early peaches, $1.50@190; Nectarines, $1.75@2; Bulgarian prunes, $2.40.

CHICAGO, July 19.—The Earl Fruit Co. sold two carloads of Japan plums at $3.20 per half crate; Peach plums, $2.80@3.20; Gros prunes, $3.15; Crawford peaches, $2.50@2.90; Bartlett pears, $3.05@3.10; Bradshaw plums, $2.30@2.70; Purple Duane, $1.90@2.65; Columbia, $2.60; Royal Hative plums, soft, $1.50@1.80; apricots, soft, 65c@$1.35.

Porter Bros. Co. sold three carloads of Bartlett pears at $2.95@3.50, except one line of very fancy, which went at $4.20. Hale's Early peaches went at $1.50@2.15; Crawford $2.40@3; Purple Duane plums, $1.90@2.40; German prunes, $2.35@2.60. Barry prunes, $2.35; Washington plums, $1.35@2.20; Magnum Bonum plums, $2.40; Bradshaw plums, $2 40.

NEW YORK, July 20.—California fruit has been selling at good figures throughout the past week, notwithstanding a supply larger than in any previous week. An auctioneer has had sales of car lots which have grossed as high as $2500, and in the face of heavy supplies this is certainly good. The fact is well illustrated that the New York fruit market will bear upward and keep firm under the most trying circumstances. Prices ran about as follows: Bartlett pears, $3.50@3.90; Early Crawford peaches, $2 95; Purple Duane plums, $1.75@2.25; Purple Bradshaw plums, $3.30, also Yellow Egg plums, $2.80; Peach plums, $3.80; German prunes, $2.60@2.65. A good many members of the trade were stuck on apricots, owing to the fruit having been heated and keeping badly. Raisins, L. M. 3-crown, $2.15@2.40.

NEW YORK, July 20.—One firm sold 17 cars of California fruits at auction—a heavy percentage in poor order. Good to best Bartletts sold at $3.10@4.55; other, $1.10@2.60; Crawford peaches, $2.95; Hale's, $1.10@2.70; some, 45@80c. Apricots had a wide range of 70c@$2.35. German prunes, $2.15@3.55; Tragedy, $2.60@3.30; Peach plums, $1.75@3.85; Duane, $1.75@3.50; Hative, $2.60@3.50; Bradshaw, $3.30@5.10; Columbia, $2 85; Egg, $2.65@2.80; Gold Drop, $1.

California Fruit Union, two cars. Many rejections and part of the apricots were actually leaking. Merchantable prices: Hale's Early peaches, $2.25@3.05; poor, $2.05; Crawford, $1.05@2.20; Bartletts, $3 85@3.80; apricots, 85c@$1.50; Peach plums, $3.55; Duane, $2.40@3.15; Quackenboss, $1.80; German prunes, $3.35.

CHICAGO, July 22.—The Earl Fruit Co. sold at auction to-day Bartlett pears at $3.10@3 20; Peach plums, 95c@$2 95; Columbia plums $1.60@2.65; German prunes, $1.70@2.55; Purple Duane plums, $1.70@2 10; Bradshaw plums, $2.10@2.45; Crawford peaches, $2.65; Royal Hative plums, $1.40@1.70; apricots, $1.20@1.40.

CHICAGO, July 22.—Porter Bros. sold seven carloads of fruit to-day: Bartlett pears brought $2 75@3.25; peaches, $1.05@3.25; German prunes, $2.65; grapes, $1.35@1.75; nectarines, 70c@$1.45; Purple Duane plums, $1.90@2.25; Kelsey Japan plums, $1.45; Walling plums, $1.75@3.05; Clapp's Favorite pears, $2.45@2.70; figs, 35@85c.

NEW YORK, July 22.—E. L. Goodsell sold at auction to-day four cars of California fruit as follows: Bartlett pears, ripe, $2.25@3 10; Purple Duane plums, $2.25@2 95; German prunes, $2.70.

CHICAGO, July 23.—California green fruits are inclined to be very easy, but no material decline. The supply is fair, several cars having lately come in. The demand is moderate but not large. Apricots, 20-lb. boxes, $1.50; Peaches—Hale's Early, $1.50@2; Crawford's, $1.75@2; German Prunes, $2.50@2.75; Plums—Purple Duane, $2.25@2.50; Royal Hative, $1.75@2; Pears—Bartlett, $3@3.50; Clapp's Favorite, $3@3.50; Sweetwater Grapes, $1.50@2: Nectarines, case of four baskets, $1@1.50. Hops are firm, for good qualities will not be ready for some time to come. Brewers are in want of stock and choice grades are very fair sale. Common and low grades at the same time are not cared for. Washington, choice, 23@24c; prime, 21@23c; fair, 18@22c ₱ lb; California, choice, 22@24c; fair to good, 19@22c; Oregon, choice, 18@23c. Beans are more active. The market is also strong at the advance in prices recently noted. During the preceding period of dullness stocks in all quarters were allowed to become very small. There has resulted a simultaneous flow of orders from all quarters, and in turn a marked improvement in the demand here, with a result favorable to sellers. Crop advices are rather conflicting; some time ago they were generally favorable. Since then there has been some change, and in several instances receivers say their correspondents in bean-producing sections do not give very glowing prospects. Present prices range as follows: California Lima beans, choice, 5¼c per lb; common, 2@4c.

CHICAGO, July 23.—The Earl Fruit Co. sold California fruit to-day as follows: Bartlett pears, $2.85@3.05; peaches, $1.50@3.15; grapes, $1.55@1.75; plums, $1.80@2.70.

BUGGIES AND BUCKBOARDS.—A complete assortment of vehicles in every grade and style. For circulars write Frank Brothers, San Francisco.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE. July 16-22.	Olympia. Rain	Temp.	Wind.	Weather.	Portland. Rain	Temp.	Wind.	Weather.	Eureka. Rain	Temp.	Wind.	Weather.	Red Bluff. Rain	Temp.	Wind	Weather.	Sacramento. Rain	Temp	Wind	Weather.	S.Francisco. Rain	Temp	Wind.	Weather.	Fresno. Rain	Temp	Wind	Weather.	Keeler. Rain	Temp.	Wind.	Weather.	Los Angeles. Rain	Temp	Wind.	Weather.	San Diego. Rain	Temp	Wind	Weather.
W.	.00	80	Nw	Cl.	00	82	S	Cl	.00	50	N	Cy.	.00	92	SE	Cl.	.00	78	S	Cl	00	60	SW	Cl.	.00	100	Nw	Cl.	.00	92	S	Cl.	.00	74	SW	Cl.	.09	72	Nw	Cl.
T.	.00	64	SW	Cy.	.00	66	N	Fr.	.00	58	N	Cl.	.00	94	SE	Cl	00	82	S	Cl	.00	62	SW	Cl.	.00	94	Nw	Cl	.00	92	S	Cl.	.60	72	W	Cl.	.00	68	SW	Cy.
F.	.00	68	W	Cl.	.00	68	N	Fr.	.00	58	N	Cl	.00	88	SE	Cl.	.00	82	S	Cl.	00	62	W	Cl	.00	98	W	Cl	.00	92	S	Fr.	.00	74	W	Cl.	.00	66	SW	Cy.
S.	.00	70	Nw	Cl.	.00	76	Nw	Cl.	.00	58	N	Cy.	.00	96	S	Cl.	00	88	N E	Cl	00	58	SW	Cl	.00	100	Nw	Cl	T.	86	S	Cy.	.00	80	SW	Cl.	.00	70	SW	Cy.
S.	.00	80	Nw	Cl.	.00	84	N	Cl.	.00	58	N	Cy.	.00	94	S	Cl.	.00	90	SW	Cl	00	58	SW	Cl	.00	102	W	Cl.	.00	86	W	Cy.	.00	80	W	Cl.	.00	76	W	Cl.
M.	.00	84	N	Cl.	.00	86	N	Cl.	.00	56	Nw	Cy.	.00	98	SE	Cl.	.00	94	Nw	Cl.	.00	60	SW	Cl.	.00	102	Nw	Cl.	.00	92	E	Fr.	.00	82	W	Cl.	.00	78	W	Cl.
T.	.00	84	W	Cl.	.00	88	Nw	Cl.	.00	54	Nw	Cy	.00	102	SE	Cl.	.00	92	SW	Cl.	00	58	SW	Cl	.00	98	W	Cl	.00	96	SW	Cl.	.00	78	W	Cl.	.00	78	W	Cl
	.00				.00				.00				.00				00				.00				.00				.00				.00				.00			

EXPLANATION. Cl. for clear; Cy., cloudy; Fr., fair; Cm., calm; — indicates too small to measure. Temperature, wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Rope.

Baling, Duplex, lb	12
" Manilla, lb	15
Twine, for hops, balls, tarred, lb, Manilla	16
" " grape vine, balls, lb "	16
" " coils, lb "	16
" spring, lb "	18
" binder (600 ft. to lb), lb	16

Duplex twine 3c per lb less.

List of U. S. Patents for Pacific Coast Inventors.

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FOR WEEK ENDING JULY 15, 1890.

432,116.—EXCAVATING APPARATUS—H. Casebolt, S. F.

432,373.—DOUBLE-ACTING PUMP—J. M. Clark, Colfax, Wash.

432,119.—WINDOW-SASH HINGE—G. D. Crocker, Oakland, Cal.

432,021.—CULTIVATOR—Wm. Davis, Los Angeles, Cal.

432,121.—SUPPLYING GASES AND LIQUIDS TO MOVING VEHICLES—L. J. De Puy, Phœnix, A. T.

432,133.—WASHING MACHINE—W. H. Gilstrap, Pixley, Cal.

432,307.—LAWN-MOWER ATTACHMENT—R. R. Grimes, Santa Monica, Cal.

432,162.—COVERING FOR PIPES—H. M. Hanmore, Santa Cruz, Cal.

432 140 —SAFETY RELIEF VALVE—A. D. Kilborn, Oakland, Cal.

432,420.—COTTON HARVESTER—J. H. Masters, Stockton, Cal.

432,191.—WIRE-ROPE TRANSMISSION—B. Mc Intire, S. F.

432,065.—LAWN-MOWER ATTACHMENT—W. C. McQuillen, Los Angeles, Cal.

432,320.—FRUIT-BOILER—Alice W. Miller, Ashland, Or.

432,427.—FUSE-CAP FASTENER—N. W. Moody, Fresno, Cal.

432,146 —WINDMILL—O. W. Parker, Oakland, Cal.

432,336.—EXPLOSIVE COMPOUND—S. D. Smolianinoff, S. F.

432,150.—VEHICLE RUNNING GEAR—Geo. A. Stom, Golden Gate, Cal.

432,217.—SAND-BAND—Jas. Van Curen, Ferndale, Cal.

The following brief list by telegraph, for July 8, will appear more complete on receipt of mail advices:

California—Daniel Best, San Leandro, variable eccentric; Francis A. Bishop, San Francisco, rotary watermeter; Harrison I. Briggs, assignor of threee-fourths to A. Myers, J. B. Birdsell, South Bend, Ind. and W. T. Carskadon, Los Angeles, split pulley; Oliver C. Christian, Brodie, steam food cooker; William T. Cottier, Oakland, ventilator; Evert Dewitt, Hanford, windmill; James C. Gould, San Jose, railway cattle guard; George F. Gray, San Francisco, cable railway construction machinery; R. Hall, San Francisco, salve; Arthur C. Harper and C. S. Hamlin, Los Angeles, machine for punching and riveting; Wallace S. Holland, Pasadena, sash or blind holder; Robert L. Hottel, Cedarville, middlings purifier; Byron Jennings, San Jose, conduit electric railway; Howard Legge, San Francisco, pencil box; Thomas McConnell, San Francisco, loading elevator; Edward C. Sessions, Oakland, street railway car. Washington—Syerling W. Baker, Tolalo, stump-puller; Isaac N. Groves, Montesano, lifting jack. Oregon—Charles C. Hogue, Corvallis, water-wheel. Utah—Bernard R. Maybeck, Salt Lake City, assignor of one-half to A. White, Kansas City, Mo., toilet fan.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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PART V: SEMI-TROPICAL FRUITS.—The Date; The Fig; The Olive; The Orange; The Lemon, Lime, etc.; Minor Semi-Tropical Fruits.

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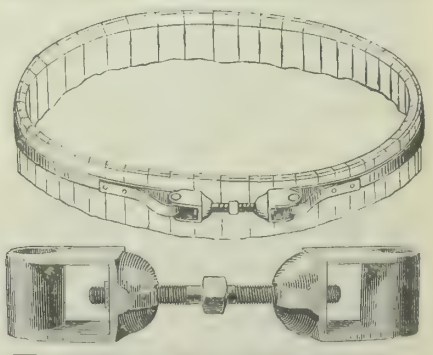
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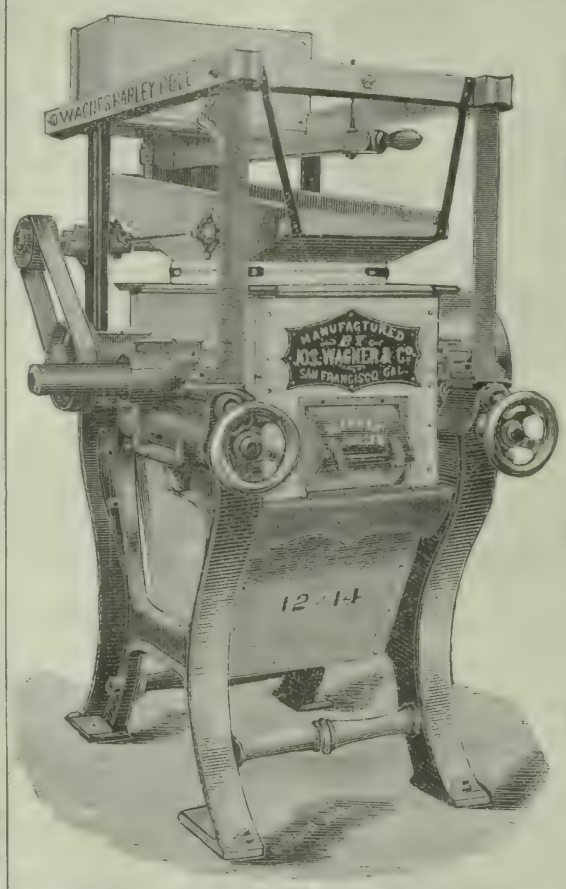
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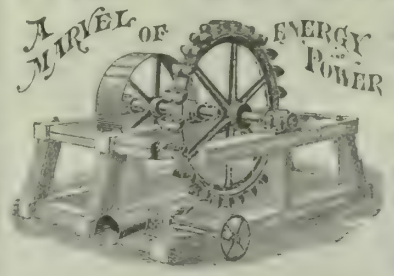
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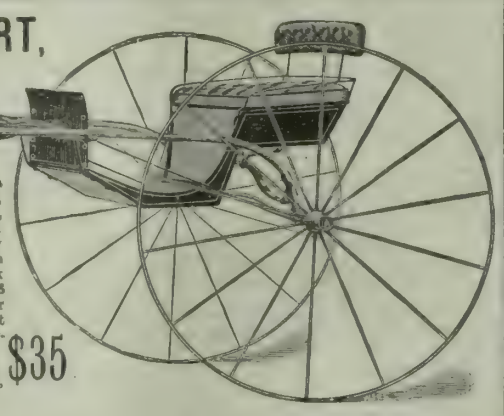
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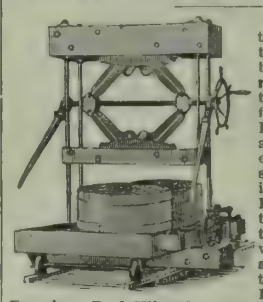
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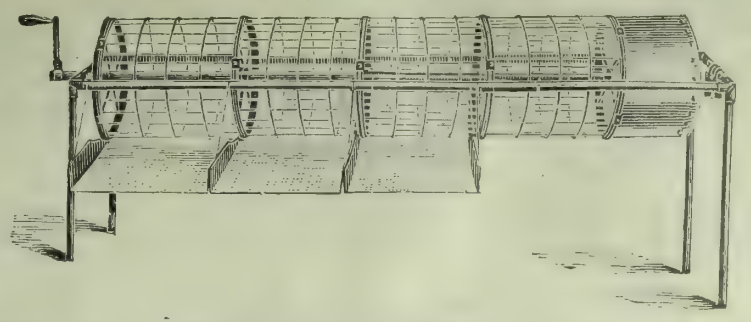
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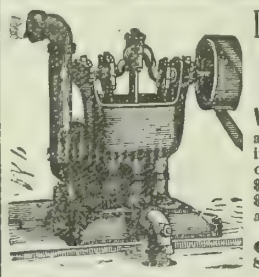
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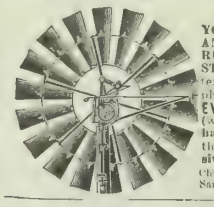
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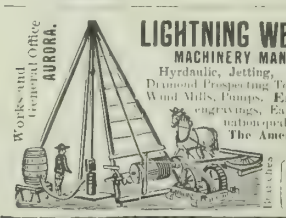
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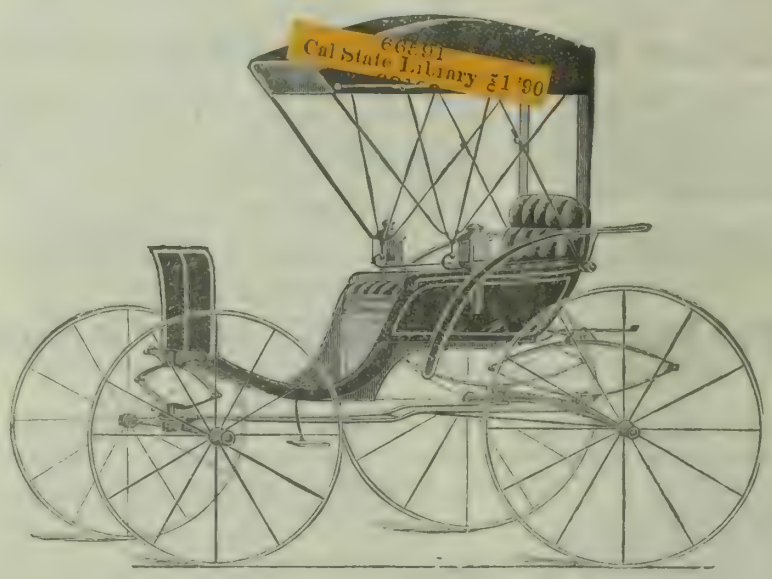
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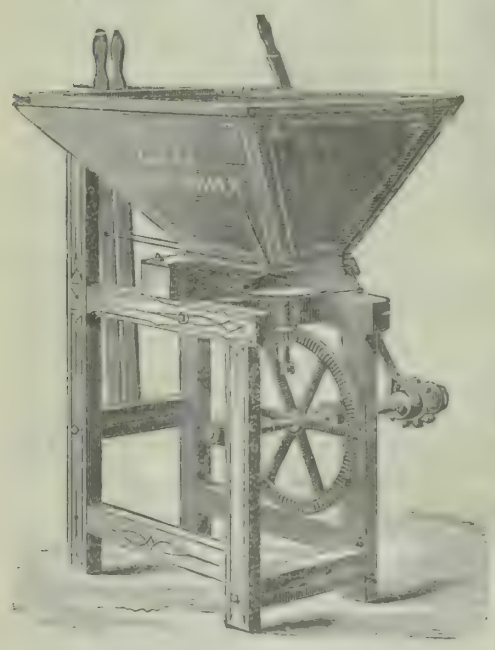
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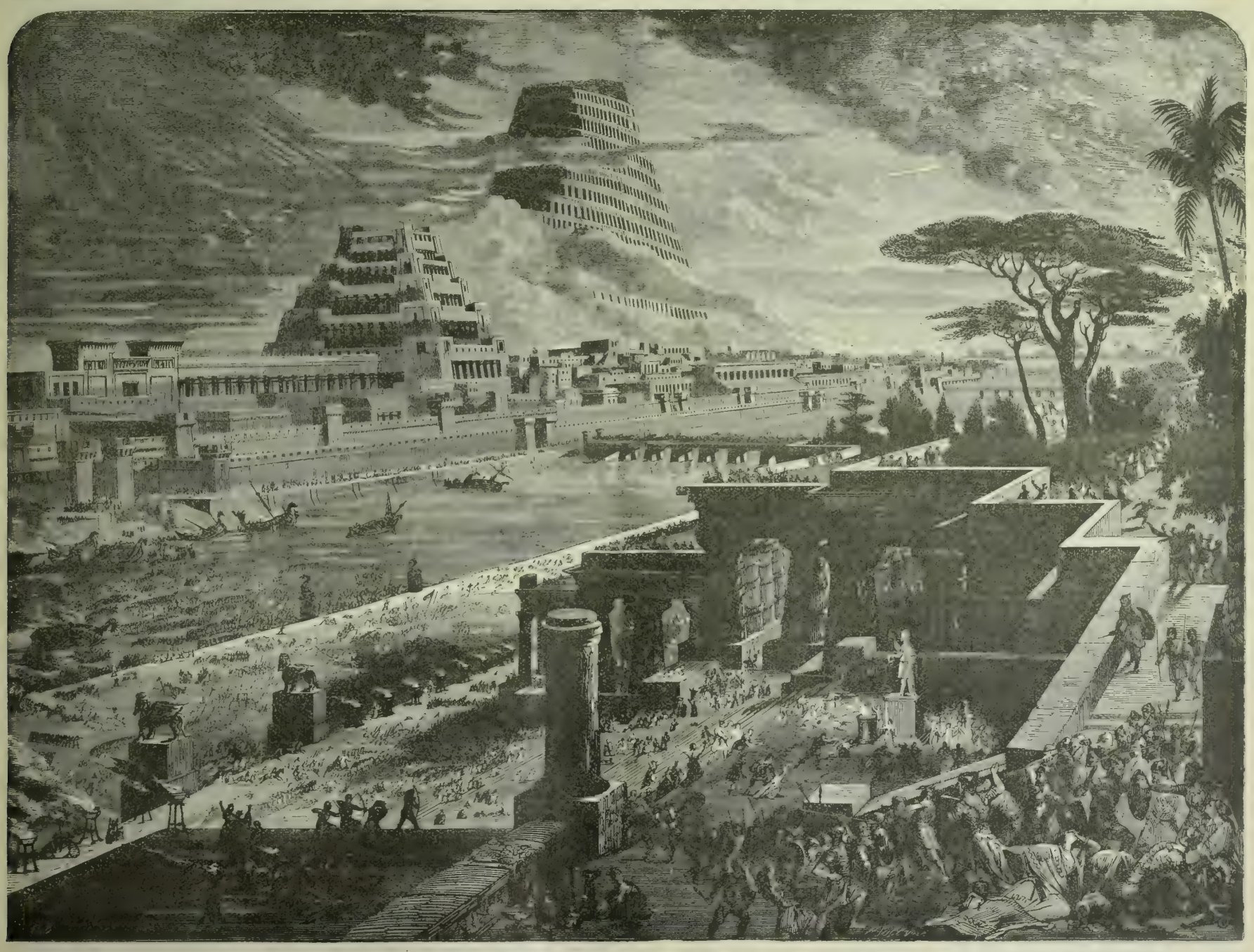
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PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XL.—No. 5. SAN FRANCISCO, SATURDAY, AUGUST 2, 1890. { DEWEY & CO., Publishers, Office, 220 Market St.



THE INVASION OF BABYLON BY CYRUS THE ELDER, B. C. 538.

The Fall of Babylon.

The origin of Babylon is wrapped in obscurity and its exact site was not a matter of controversy until recent explorations uncovered the ruins of the city and disclosed material which verifies many of the statements of the ancient historians.

According to Herodotus the city of Babylon stood on both sides of the river Euphrates, in the form of a square, of which the sides were 15 miles each. The walls inclosed rather populous districts than cities, so that the whole population might find shelter within the space inclosed. Though the area of the city was thus large, its chief buildings were adjacent, and it was at this part of the city that the artist chose to depict the wonders of the city and the entrance of the invaders. It will be remembered that Cyrus the elder diverted the river Euphrates from its channel while Belshazzar was feasting and thus prepared the way for the entrance of his men through the old river bed which passed beneath the walls of Babylon. Thus the great city fell into the hands of the invader in the year 538 B. C.

It was during this crowning disaster to the greatest city of the East that the artist times his portrayal. In the uncovered bed of the stream the troops of Cyrus are seen advancing, while the grounded ships are burned to light their pathway. On each side of the river are seen the two great palaces, while on the farther side are the temple of Belus and, beyond, the unfinished tower of Babel. Fire is attacking the proud structures on all sides. In the foreground, lighted by the conflagration, are seen the guests at the feast of Belshazzar coming forth from feasting to carnage. Upon the right is a scene in the "hanging garden;" the flight of the inmates from the burning palace.

This "hanging garden," which is always suggested when the name of Babylon is spoken, the Greeks regarded as one of the Seven Wonders of the World. This singular structure, which is ascribed to Nebuchadnezzar, was a square, each side of which measured 400 Greek feet. It was supported on several tiers of open arches, built one over the other and sustaining at each stage or story a solid platform, from which the piers of the next tier of arches rose. The top of the building, which was about 75 feet high, was covered with a large mass of earth, on which grew not only flowers and shrubs, but trees of a large size.

Boys and Girls and Fruit.—In the central part of the State there seems to be plenty of help available for the fruit-growers, though in some parts distant from towns and cities there has been scarcity of help and high wages complained of. The *Yolo Mail* says: "Every orchard of any importance affords employment for at least 20 boys and girls; and in some of the larger orchards as high as 70 are employed. One of the noticeable features is the scarcity of the Chinese in the orchards. No doubt the fruitmen have about realized that one good thrifty and industrious boy or girl is worth two Chinamen. During the last week about 1000 boys and girls were given work in the Winters and Vacaville orchards. The girls receive 20 to 25 cents per hundred pounds for picking. Some of the ladies who are fast pickers earn on an average of $2.50 per day."

To Advance Horticulture.—The Illinois Board of Horticulture has decided to invite the various National, State and other prominent horticultural and floral societies and nurserymen's and forestry associations to meet in Chicago on the 27th of August to take action on the best method of properly representing the horticultural interests at the World's Fair.

FRUIT PRESERVATION.

Prunes in France and California.

EDITORS PRESS:—In a letter addressed to me some time last winter, Mr. J. P. Koch of San Jose, a gentleman much interested in the prune business in California, remarked that he knew of some parties here who were seriously thinking of going to France and there buying up the ripe green prunes, dry and cure them in the California style and export them to New York in competition with our own prunes, of course, to be sold as ours, for cooking purposes, and not to be eaten out of hand.

I replied to Mr. Koch that such a proposition couldn't be carried out, and would have to be abandoned as impracticable, for the French didn't have large, regular prune orchards as we have in California, the largest number on one owner's place being from 100 to 500 trees, even orchards of 1000 to 2000 trees being very scarce in that country, and that the French never pick their prunes inside of a week as we do here, and for the sake of making competition to the "sauce" article of California would not for any consideration jeopardize their more valuable crop of dessert prunes or prunes to be eaten out of hand, without which the prune business would have for them very little profit. In the St. Catharine prune district, I added, such a speculation could be carried out more successfully, because there they do the picking as we do here, parties buying up the whole crop and drying it themselves, but in the d'Este district it could not be done.

In the meantime, Mr. Koch had left for an extended tour to France and Spain, to study there the olive, orange and prune, so my letter was sent to him there and he received it while at Bordeaux this spring. Now, as I think that Mr. Koch's letter contains very interesting facts in regard to the prune business, I have taken the liberty to send it to you for publication, in the expectation that it will prove of much interest to the readers of the PRESS.

Mr. Koch's Letter.

BORDEAUX. May 2, 1890.

Felix Gillet, Esq., Nevada City, Cal.—DEAR SIR: On arriving yesterday from Spain, where I spent some time in visiting the various olive and orange orchards and vineyards, which, by the way, I found in general appearance far inferior to our California plantations, I received via Holland your favor of March 25th, addressed to San Jose. Before going to Spain I made an extended visit to the valley of the Lot-et-Garonne and found, as you say, very few prune orchards of any size and none planted in the way we have them in California.

Besides that, the trees look all very bad and although I did not see that orange scale and other insects (a few caterpillars excepted) on them that we have in California, the poor looks of the trees satisfied me that the soil must be very much exhausted. Still they produce some fine fruit, although in quantity not more than one-half of our California trees, and I am perfectly sure that if our trees were thinned out as much as the trees here, we would have at least as large prunes as the largest fruit in France. I showed some of the prunes I dried in San Jose, of the largest, to several of the growers and dealers here and they all pronounced them fine fruit, although they preferred the taste of their French prunes here. I am myself of the same opinion. To eat out of hand I prefer the French prune as cured here, which, however, is an exceedingly simple way. They just place them on wooden trays in a large bread oven, where there is very little or no circulation of air and where they do not heat the air continuously, but only from time to time. As most farmers have only a few trees, and they generally sell their fruit dried in that way, they can, of course, afford to dry them in that slow way. Whether this alone causes that different taste, I do not know; I hardly think so. The way to blacken the fruit inside and outside is very simple, too. If ever the American market wants them that way, nothing will be easier.

The Americans whom I mentioned in my last, intended to buy up green ripe fruit in France and dry them in the California way; they have decided provisionally not yet to commence operations, as they find they would have to pay at least two cents per pound all around to the farmers, and unless similar prices are paid in California, they did not consider it likely to be profitable to lay out capital for a plant in France.

Although I agree with you, as I said before, that to my taste the French prune in France to eat out of hand is better than the California, it is a fact that several of the largest dealers in New York informed me for certain that our California prunes placed size per size against the imported French, our prunes would sell at one cent per pound more than the French. The imported French sold last year in New York at 6c to 6½c per pound for the four sizes in boxes, caused a loss of from 1c to 2c to the French shippers.

I made special inquiry about the way of picking, and found that they pick the fruit just exactly as we do; as soon as the first prunes commence to fall, they go around the trees, shake them a little and then pick them up to dry in their ovens. They do so every four or five days, or those who have only a few dozen trees, as most of them have, go around once a week. The women and children then grade them by hand as they come out of the oven, and when the whole crop is thus dried they sell them at the market in the nearest village where they are bought by various buyers who either ship them on their own account or sell them to Bordeaux merchants; some, like Fau, Goudillot, Violet, Dafour and others, then cure them over again and pack them in air-tight boxes and tins, and ship them all over the world.

I had read in California papers before leaving California that prune trees were planted in France in a very large way wherever the phylloxera had destroyed vines, etc. That report is entirely unfounded. Outside of the Valley of the Lot and Garonne, there are but very few prune plantations anywhere in France, and as Mr. Fau, who has been in the prune business all his life, informed me, they had several times tried to grow the Prune d'Ente in other parts of France, but always without success. He said the only place where they could grow the same *Prune d'Ente* was in California, and that only for those prunes he was afraid of competition. Mr. Fau, by the way, did not know that I came from California, and as I saw him in company of some Frenchmen, I had no occasion to inform him.

In conclusion I may say that I consider the future of our California prune industry very good indeed. The crops in France are rather diminishing than increasing, and with the increased popularity of our California prunes, and with the rather limited area where even in California they can be grown profitably, I think those who own good prune land in California will never regret planting and raising prunes, provided good care is taken of orchards and trees.

J. P. KOCH.

Mr. Gillet's Comments.

You will notice that in his letter Mr. Koch falls into the very same mistake that so many of our people do in California, when comparing the fourth and fifth grades of the French (the only grades exported to this country outside of "sauce grades") with our best California grades. The first grades of the French under the name of "Imperials" go mostly to the capitals of Europe, and sell on the London market, as Mr. Coates, who was there a year ago, informed your readers, at 35 cents per pound *wholesale*. Let it be well understood for once that the first grades of prunes of the French (which are all to be eaten out of hand as dessert prunes) never come to this country, only the inferior grades, part to be eaten out of hand, part for cooking. Of course, we can easily beat with our best grades of prunes the inferior or "sauce" grades of the French, but mind you, not the "Imperials," the very grades that make the prune business pay so well in France.

Mr. Koch thinks that if our trees were thinned out we would have as large fruit as they have in France. This is a mistake, for it is not by thinning out the fruit that the French obtain large prunes. Then thinning out so heavily loaded trees as our trees are in California would not pay, and I doubt very much that any good results could be so obtained. It is a very tedious and slow work to thin out a well loaded tree; I tried it once and gave it up. Then what is the use for us to bother trying to obtain as large prunes as the French do, which are sold to be "eaten out of hand," when there is, as you may say, no market for them in this country; as the RURAL PRESS said in the issue of January 25th of this year, "the American people don't want prunes to eat out of hand—they prefer peanuts; but they do want 'sass'—millions of tons of it." I suppose the PRESS to be right in its sweeping assertion, so then we should be contented in growing prunes of the size we do, as they are all destined to be turned into sauce, and for sauce purposes a small prune will do as well as well as a big one, so it is said. Mr. Fau of Bordeaux, when he said to Mr. Koch that only from California prunes was he afraid of competition, of course meant "dessert prunes"—the first five grades—which are never turned into sauce; as to the "sass" article, what did he care, for he doesn't handle it.

It is to be regretted that Mr. Koch while being in Lot and Garonne, didn't go to the very centers of the prune district at Clairac, Villeneuve, Montclar, and examine the various patterns of driers used there, for only the small farmer who owns but a few trees uses an oven to dry his crop of prunes. At Clairac and Villeneuve are held in the fall of the year a "concours" or competition prune fair, and there can be seen over 20 different driers competing for premiums awarded to the best working driers.

Last spring I received from a prominent prune-grower of the Valley of the Lot, a letter in answer to queries I had put to him in regard to prune-growing. Here is an extract from his letter:

> There do not exist here what could be called properly "prune orchards," prune trees being planted scattering around anywhere and everywhere; on the larger farms they are planted in rows, and the rows far apart, from 30 to 90 feet; the interval between the rows being planted into wheat, corn, potatoes, hay, etc., or grapes; this is the reason why there does not exist here a special *personnel* for the prune as it does for the grape; it is the hands employed on the farm that do the pruning of the trees, picking and curing of the fruit. Sometimes the largest farmers hire men well versed in pruning prune trees, who are paid from 50 to 60 cents per day and board to pick prunes; a woman is paid from 15 to 20 cents per day and board.
>
> I would like very much to know your special method of preparing your prunes, which I found very well prepared and so nicely preserved, that is, so soft, so well flavored and yet well cured.

The last paragraph refers to prunes of my own growing and curing which I sent with my request for information. FELIX GILLET.

Nevada City, July 23, 1890.

[We have to thank Mr. Gillet sincerely for this most interesting contribution to prune knowledge.—EDS. PRESS.]

AGRICULTURAL SCIENCE.

An Experiment With the "Curl Leaf" in the University Orchard.

EDITORS PRESS:—With the hope of finding out something of this in many places troublesome disease of the peach, and also of a preventive or some stage in the life history of the fungus in which it might be checked, a few experiments were undertaken in the University orchard at Berkeley the past spring. At that time no remedy was known; since, some practical growers have found successful means of combating it, and these experiments now deserve no further credit than that they were intentional and not a matter of chance.

From the start, two objects were constantly kept in view, viz: To get facts as to the life history of the fungus, and the use and effect of fungicides. Dr. Galloway of the Department of Agriculture considered the chances of a successful outcome to be very small, as the weight of opinion of those who had studied this fungus and its relatives was that this one would prove to be a perennial, that is, to live in the soft tissues of the twigs from year to year, pushing out with the buds in the spring. If this had proven to be true, all treatment with sprays would be useless, since to remove the disease all buds and young twigs must go too. To test this matter, Dr. Galloway suggested the use of paper bags to cover a few twigs, and this was tried with results given further on.

Not so much with the hope of accomplishing the purpose for which these experiments were begun, but with the intention of destroying any spores that might be clinging to the buds of the tree and to the rough bark, an ammoniacal copper carbonate solution was applied to an Elruge nectarine, and its mate (these trees stand in pairs) left untreated. This variety is as badly affected as any, and the many swollen twigs of last year's growth indicated the severity of the disease. The result of the spray was surprising; the untreated tree, with the first appearance of the leaves, showed signs of the disease, and later became a mass of curl, showing barely a healthy leaf. The sprayed tree came out strong and healthy, and only a few buds, mostly at the tips of the upper twigs, gave signs of the disease. The condition of some twigs, chosen to represent about an average, will best give an idea of the difference between the two trees. Six small branches from each tree were taken and the buds counted. The result was 151 buds of the untreated tree all showing curl, and of these, 118 showed it badly: of 189 buds of the sprayed tree, 13 showed curl, and only three badly. From five to seven leaves had been sent out by each bud, and a badly affected one was considered as one of which over one-half the tissue of over one-half the leaves was diseased.

A dozen twigs swollen from the presence in them of the disease, last year, were selected and covered with paper sacks. These were allowed to remain until April 28th, when several leaves had started from each bud. At the time of uncovering, a larger number and finer and darker leaves than those uncovered had pushed out from each bud, and their condition was as follows: Of five sacks on the Elruge nectarine the twig from one shows one bud badly curled, two show a few spots of curl and two are perfectly clear. Of five sacks on Rivers Orange peach, three are free from the trouble, and two show two or three spots each. Two sacks on Vineuse peach show no curl. The covered twigs received no treatment and as the sacks were put on late it is probable that some spores were included with them, and the buds became infected in this way. If the fungus lives in the twigs during the winter and appears in the new growth in the spring, the covered twigs would have been as badly affected as those uncovered, which was not at all the case. The experiment deserves repeating with the added precaution of dipping the twigs in some fungicide just before covering.

For practical considerations, at least, the above experiment would indicate that the fungus is not a perennial or has not enough of that habit to be of importance. On the sprayed Elruge tree the swollen twigs averaged as healthy in leaf as the others, and this is evidence in the same direction.

To further try fungicides, applications were made shortly after the leaves were out of the copper carbonate solution, the basic copper acetate solution and the Bordeaux mixture. None of these gave a marked beneficial effect, and upon close examination the reason why was very evident. Not only does the fungus live in the leaf of the peach, but it at once pushes its way into the young growing stem, following the growing point as fast as it lengthens and passes into the leaves as fast as they appear. No external applications can stop such a fungus growth, and spraying after the buds have burst and the fungus has become established, will have no effect.

During the winter two young trees were taken from the nursery and started in a warm house. All the leaves from the upper and larger buds of these were diseased. The house was closed and there were no currents of air that could bring in the spores, so they must have already been present on buds or twigs and only awaited the bursting of the buds to penetrate the young tissue. Later, these trees made a clean new growth from latent buds, and one of them even did not contract the disease when exposed in the orchard among other badly infected trees.

The rainfall of last winter was so exceptional that the ordinary habits of many fungi were affected, and among them probably that of the fungus which causes the curl. Young trees in nursery, growing slowly all winter, became diseased in December and January. The heavy and continued rains appear to have stimulated the winter spores to early movement, until about the first of April their germinative power was apparently expended — a comparatively small amount of infection only being noticed after that date. In a very dry winter with late spring rains, it is possible the spores may be active for some time after growth has commenced, and this would be an added difficulty in the way of a preventive treatment.

It is probable that any of the fungicide remedies will be effective if rightly applied. In some respects, however, winter treatment is peculiar and calls for a spray that is adhesive and not liable to be washed off by the rains. As long as the spores are in movement, the spray must be ready and effective to protect the trees. Of the three washes tried, the Bordeaux mixture has behaved in the best manner. Applied April 14th and passing through several heavy showers, it still covered the tree well and gave a good test for copper shortly before the time of taking the last notes on June 11th. The copper carbonate has proved of undoubted effect, but it is washed from the tree too easily, and something more adhesive will be better. The first heavy rain, about a week after its application on the last day of February, appeared to have washed all from the upper twigs and much from the lower. This left the tree ready for later small amount of infection that took place. With a persistent wash it is probable that not a trace of the disease would have been found. L. E. B.

Berkeley.

THE APIARY.

Honey in Arizona.

EDITORS PRESS:—I write you in regard to the honey industry of the Salt River valley. A few years ago, as an experiment, a few hives of bees were brought to this part of Arizona. Being a success, others followed. All the honey produced brought eight cents per pound, which soon created quite a demand for bees. As usual, the rage for bees cooled off, and to-day many hives can be bought for first cost of material, bees, honey, wax or whatsoever they might chance to contain, all thrown in for good measure. Last spring I bought out a small apiary of 75 hives for $2 per hive, when the same apiary was set up at a cost of $2.50 for the new empty hive. Last season the bee-keepers of this county organized an association but failed to effect much as to business. Our local merchants threw a wet blanket over the thing, and thought that the thing had ceased to exist.

The spring of 1890 opened up very favorable to the bee-keepers, so the call for the bee-keepers brought out a large attendance, resulting in an incorporation with five directors, who, as a prime movement "fired out" the old coal-oil package, and with the firing-out a few went off at a tangent, still adhering to the flavor of "coal-oil in theirs."

We prospected the market for cans from San Francisco on the west, to Chicago on the east, and the best we could do our cans cost us $1.05 per case (two five-gallon cans and case). When we get going we expect to do better.

Now for our export! Our honey association met, and we were stalled over the situation. We counted up, and found three cars of honey on hand, and extractors all running. Our inspector found that he had a delicate job to grade the honey. Just look round and see where your hat is, and how far it is to the door, before you tell the lady of the house that she doesn't make good butter; and it is about the same when you condemn the flavor of honey—sometimes!

But we get back to business. The Maricopa Bee-Keepers' Association has one car of No. 1 honey in new packages, and expects to ship to Chicago in a few days. This honey is mostly contributed near Phœnix. Tempe has two cars of honey mostly in old coal-oil packages, which will go to Chicago soon. All told, up to date, of this season's crop, about six carloads of honey have been produced in this valley. Our merchants had gotten prices pretty well demoralized, but our corporation has set the price of No. 1 at 5 cents per pound, and the value of package added.

We have had a sample of our alfalfa honey passed on by A. I. Root of Medina, Ohio, and is pronounced equal to the best of clover honey

of the East; so it is no very hard matter to get at value of our honey in an Eastern market.

Since writing the above, I have to add that the M. B. A. starts a car to Chicago July 22d. The honey sold at 7 cents. Another car will go in a few days. GEO. KAY MILLER.

Tempe, Ariz., July 19

THE FIELD.

The World's Wheat Production.

From the report of the Kansas State Board of Agriculture, which we have just received, we take the following article, which our wheat-producers will find of much interest. The report says:

We are indebted to the editor of the Cincinnati *Price Current* for the following statistical table, which he compiled from reports of the Department of Agriculture, Washington, D. C., and we publish for the information of our people. The editor of the *Price Current* says:

An effort has been made to present an exhibit of the approximate wheat production of the different countries in which the supplies have an influence on the leading grain markets of the world, with comparisons for a series of years. The accompanying special compilation is a close approximation for the years indicated. The crops of India, Australasia, etc., are those which were harvested at the beginning of the calendar year. Various other countries produce considerable wheat, such as Asia Minor, Persia, Syria, South Africa, etc., the aggregate of these countries being about 100,000,000 bushels annually; but such supplies do not usually enter into commercial channels to an appreciable extent.

	1889.	1888	1887.	1886.	1885.	1884.
France	316,268,000	273,620,000	319,094,000	299,108,000	312,917,000	324,130,000
Russia	188,536,000	254 619,00	273 865,000	213 907 000	209,192,00	265,712,000
Italy	103,832,000	106,079 000	120,14 ,000	129,412,000	118,245,000	116,500 000
Spain	75,622,000	101,157,000	95 000 000	131,660,000	113 500 000	99,312 000
Hungary	94 020 000	131 747,000	146,866 000	104 840,000	114,639,000	107,208 000
Austria	42,030,000	51,075,000	38,120,000	36 850,000	39,725,000	43,815,0 0
Germany	82,030,000	105,000,000	104,013 000	97,991 000	106 974 000	91,10 , 00
United Kingdom	78,257,000	76,761,000	78,512,000	63 348 000	82,146,000	84,654 000
Turkey in Europe	39,7 5,000	42,563,000	44,000 000	41,144,000	45,40 000	42 56 ,000
Roumania	44 785,000	40,000 000	30 000,000	22,500,000	22,6 9,000	36 8 7,000
Belgium	19,000,000	14,876,000	19,898,000	18 51 ,0 0	19,574,00	22,70 ,000
Portugal	8,512,000	7,094,000	7,20 ,0 0	8,2 9,000	7,661,000	7 094 000
Holland	5,675,000	4,256 000	5,050,000	4,937,0 0	4,965,000	5 892 000
Greece	5,000,000	4,824,000	4,960,000	4,937,000	4 965,000	5 000,000
Denmark	5,000,000	4,824,000	4 800 0. 0	4,731,000	5,0 0,0 0	4 970 0 0
Servia	5,000,000	4,540,000	6 80 ,000	4,526,000	4,682,000	6,342 000
Sweden and Norway	3,992,000	4,568 000	4,600,000	4 043 00	2,837,0 0	3 823 000
Switzerland	2,270,000	1,702,000	2,076,000	1,646,000	2,057,000	2,000 000
Total, Europe	1,119,494 000	1,229,305,000	1,305,000,000	1,192,324,0 0	1 217,103,000	1,269,611,000
India	248 076,000	266,822,000	233 126,000	288,938,000	287,955,0 0	251,691 000
Algeria	22 500,000	19,862 000	25 000 000	32 915,000	22,700,000	25,0 0,000
Egypt	7,945,000	14,187,000	15,000 000	16,457,000	14,187,000	15,000,0 0
Australasia	26,206,000	38,400 000	25,288,000	36,630,000	37,077,000	45,014,000
Chili, Argentine Republic, etc	24,120,00	30,000,000	33,500 000	28,800,0 0	25,000 000	25,000,000
Sundry	323,847,000	339,331,000	331,914,000	403,740,000	386,919,000	361,705,000
United States	490,560,000	415,863,000	456,329,000	457,218,000	357,112,000	512,763,00
Canada	31,217,000	30,000 000	34,000,000	37,000,000	38,000,000	40,000,000
American	521,777,000	445,863,000	490,329,000	494,218,000	395,112,000	552,763,000
Aggregate, bushels	1,935,118,000	2,044,504,000	2,127,243,000	2,090,282 000	1,999,134,000	2,184,069,000

The table given herewith shows by countries the quantity of wheat grown in the world which enters into commercial channels. The product of each country constitutes a factor in determining the price of wheat in the world's market. Practically there is but one market now, and that is the world.

Steam and electricity have in a large measure eliminated space as a factor in commercial transactions, and all parts of the civilized world are brought into more intimate commercial relations to-day than different parts of the same State were 50 or 60 years ago. An order from Liverpool, England, 4000 miles away, for a carload of flour is received by wire in Topeka, and in 12 days from receipt of order the flour is in Liverpool at a cost of 50 cents per 100 pounds.

Sixty years ago it cost as much time and more than twice as much money to transport 100 pounds of flour from Lewistown, Pa.—my native home—to Philadelphia, a distance of only 165 miles, than it now costs to transport it from Topeka to Liverpool, a distance of 4000 miles.

Farmers, while they are learning other things which are needful, must also learn that a revolution has been effected in the commercial world since the time they were boys, and that a due regard for their own interests demands that they adapt themselves to the changed order of things and broaden out their intellectual vision, taking in the world's agriculture.

By consulting the above table, we see that the world's climax in wheat production was reached in 1884 The immense aggregate quantity of 2,184,069 000 bushels is recorded, an amount not equaled before or since in the world's history.

How much this amount of wheat was above the needs of the world, we have no means of knowing with any degree of accuracy. Yet we know the surplus must have been great, for the volume of wheat which was forced into commercial channels during that year and the next caused a break in the market from which it has not yet recovered, even though the annual product grown each year since has been less. Statistics show that the export price of wheat in our country fell from $1.12 7-10 per bushel in 1883 to 86 2 10 cents in 1885. In like manner, we see there has been a decline in export prices of farm products generally.

The world's wheat product in 1885 was nearly 185,000,000 bushels less, and has never since been equal to the crop of 1884, yet the average export price has remained nearly the same, reaching 89 7 10 cents in 1889. At such times, when there is a wheat surplus and the price declines to about the cost of production, many farmers in old countries who are able to hold, store their wheat in their granaries and carry it from year to year until there is a rise in the market. When a rise comes, they place this reserve or a portion of it on the market. In this way the farmers of Russia, Germany and the Eastern United States, notwithstanding the reduction of the world's wheat product in subsequent years, have prevented any considerable rise in the Liverpool markets since 1884.

In 1889 the wheat product of Europe, as shown by the table, was 115,939,000 bushels less than the average product of Europe for the four preceding years, and the aggregate product of India, Algeria, Egypt, Australia, Chili and the Argentine Republic in 1889 was 49,489,000 bushels less than their average product for the same years. Together the total aggregate wheat product for 1889 of all the wheat-growing countries of the world whose product enters commercial channels, with the exception of the United States and Canada, was 165,428,000 bushels less than their average annual product for the four preceding years.

When this shortage was made known almost a year ago, quite a sensation was created among the grain manipulators of our country, and it was generally believed by men who were posted that before another crop was grown better prices would prevail. It was afterward ascertained, however, that this shortage in foreign countries was in a measure met by an unusually large wheat crop in the United States last year, being about 65,000,000 bushels above the average annual product for a term of years; and in consequence no impression was made on the market until last spring. At that time it became apparent that the condition of wheat then growing throughout the winter-wheat States of our country indicated a shortage in the product of that cereal, and the price advanced rapidly, not wholly because of the discouraging outlook for the crop of this year, but for the further reason that the available supply of wheat in the world was estimated to be lower than it had been since 1882. At that date wheat was worth one dollar and over per bushel in Kansas.

Of course no one can predict with certainty the future price of wheat. The only data upon which to base an intelligent opinion is the statistics which show the amount of wheat grown in all wheat-producing countries of the world whose products enter commercial channels. Each of these countries constitutes a factor in determining the problem, but the United States is the most important factor of all, because she is the heaviest export nation of the world, exporting nearly twice as much wheat and flour as any other nation.

In the United States less than ten States west of the Mississippi, which grow all the export wheat, have largely the control of this matter.

In one of two ways better prices may be brought to prevail, independent largely of foreign countries: By continuing the present area sown to wheat and waiting until consumption of our country overtakes production, or by the more radical method—applying the knife and cutting off about 20 per cent of present area.

JAPAN AND CHINA.—While Japan last year celebrated the completion of 1000 miles of railway, China has at present only 87 miles of road; but a decree of the Chinese Emperor, directing that work on a railway 700 miles long should be undertaken, has been welcomed by the ablest statesmen of the Empire, who have all declared themselves in favor of the proposed improvement.

GRASSHOPPER SOAP.—A Spanish inventor renders from grasshoppers a fatty substance which is declared to make the finest soap yet produced.

FURNITURE POLISH.—One pound olive oil, one pound oil amber, one ounce tinct. henna.

POULTRY YARD.

"Cut-a Cut-a Ca-da Cluck."

EDITORS PRESS:—Having now been long enough engaged in raising poultry for profit in this State to have learned some things about the business, I propose relating in part our experience. My father has had considerable experience in good old Connecticut, and as we have been out here but eight years, I know something about it myself in that State, but the conditions which obtain here are so different that not until lately have I felt willing to report progress.

We started in five or six years ago increasing the number of fowls for the purpose of making more of a business of it than we had done, and although we have at present not more than 175 hens, we have made such a fairly good record that we shall by no means give it up. We work principally for eggs, and are clearing year after year $1 per hen annually, which is a fair profit. Father has made in Connecticut $1 50 per hen, but it is much more difficult to make money here on hens, because of the warm climate breeding vermin worse, the long, dry summer, when bugs and worms are not to be had, and the ground, except in rare places, cannot be of direct use to the hens, necessitating feeding green food abundantly, and because it is more difficult to raise young chickens in summer. We have built three houses, two for roosting-places for hens and the third for young chickens.

The hen-houses are ordinary affairs of pine and redwood, strongly built, one about 6x18, the other 8x24, the latter including a feed-room eight feet square at one end. In each of those houses we keep from 70 to 80 hens, a number double that which I myself think can be kept together with best results. One of the yards is one-third of an acre in extent, the other about three acres.

As we raise hens for the eggs, we have not tried to keep them pure, but have bought eggs from any neighbor whose stock we know to be a little above the average, and are well satisfied with the result. By this time it is, so far as I can judge, a well-established fact that mixed breeds will lay as many eggs as any single pure breed, if care be taken, of course, to exclude fowls of a notoriously low-laying record, such as the Brahmas or Cochins. We started in with nearly five Brown Leghorns, and still have a good many, but by this time they are pretty well mixed with White Leghorns and Black Leghorns; a few Plymouth Rocks we are removing.

We buy all the grain, middlings, etc., that we use, the principal grain being barley, though we use about a ton and a half of wheat also. It is our experience that barley soaked in water for three days, or until it begins to sprout, is just as good as wheat, and certainly a great deal better, if not fed more than half the time than wheat would be if used exclusively. One of the three or four principal things in the care of hens is to give them a change of food, yet it is not always practiced. We do not cook any of the food we give the hens. In the morning I feed to 70 hens a mush of equal parts of bran and middlings, about three quarts of each, mixed in water, making an ordinary pail a little more than half full. In winter, three quarts of grain are added—perhaps cracked corn, if the weather be colder than usual. Corn, however, must be used very sparingly in this section, or the fowls will surely get too fat to lay. We never feed to 70 hens more than eight or ten quarts in a week, seeing by experience that they do not need such heating food. We have at times bought bone meal and mixed five or six tablespoonfuls with the mush, but have decided that when they have abundance of common building mortar handy, any other shell-making food is not needed. At night I feed, at present, equal parts of wheat and barley—about four quarts of each—but I watch them, and if they seem quite eager for more, I may give another quart or even two, never giving so much that it shall be left. A little attention ought to enable one to gauge pretty accurately the amount best for them, but so much depends upon circumstances that each owner must decide for himself.

Does any one still need to be told that pure drinking water is an essential in the care of fowls! O, of course, I know they will drink anything fluid that they can find, and many times prefer some dirty pool on the ground to a pure vessel of water, but it is bad for them to drink filth of any kind. This caution is not so unnecessary as it may to some people seem. There are persons who get such funny and unreasonable ideas in their heads that a sensible course must constantly be kept before them. One of our neighbors, for instance, was told by some one that a tablespoonful of food was enough for enough for a hen at a meal, and instead of seeing the absurdity of it she actually fed her hens for a time on that scanty diet! And this neighbor is an unusually bright and business-like woman, too, but she surely forgot that time to be reasonable.

For green food during the summer and fall we raise cabbages, beets and carrots, as it is very important that they should have an abundance of such food. One of our neighbors has a plot of alfalfa which he irrigates and keeps green continually—an excellent plan. Another point not less important is to provide gravel or grit of some kind, or they cannot grind up the food.

For a time we had case after case of hen-diphtheria, or roup, really a cold in the head, and found it was caused by too much ventilation. It can be cured, but 'tis too much trouble.

The third house we built is for small chickens, and has glass on one side. The house is 16x16, nine feet high, at one end, roof slanting to a point five feet from ground, where the glass commences; it is divided into four runs, and a passage-way three feet wide along the highest end admits to each run. We made the floor of Portland cement, but found very soon that when the chickens came in from their back-yards and forgot to wipe their feet, the cement would adhere by degrees to the toes until a ball would form so large that they could not get around easily, making it necessary to relieve them frequently. A cement floor is useless, wood answering all purposes. In this house we have at times kept 200 chicks, 50 under a hen, letting them out in the day into runs built of lath fences in sections eight or ten feet long.

I have lately bought a 120-egg Petaluma incubator, and shall use this instead of Nature's method. This is our first experiment with an incubator. I set it just one week ago, and so far have been quite pleased with the way it works, not seeing, indeed, how it could do any better, except occasionally when the regulator allows the heat to run up two or three degrees higher than it should. I have heard of one man who had a machine made by the Petaluma Company, same capacity, which did not work well, but some one says that a while ago they used to put two thumb-screws in a machine of this size, in connection with the regulator, and as mine has but one, it may be that one works better than two. I am running it now more as an experiment than from the belief that it is a good time to hatch chickens, but all the same I shall be disappointed if out of the four dozen eggs I put in I do not get 35 or 40 chicks, it is operating so well. For the benefit of those who, like myself till I tried, do not know how much oil a machine of that size consumes, I will say that at present it takes a trifle less than one pint in the 24 hours; in colder weather or in a more exposed place, it might use a pint and a half.

If I can be of service to anyone in further telling our experience in this line, I shall be glad to write more. There is fair profit in this business for anyone who is willing to attend to details and does not despise the day of small things; it is not "overdone," as some think, any more than the fruit business in this State is overdone. Find out what there is a demand for and then supply it.

The following very interesting comparison between the principal breeds, yield of eggs and their weight was made before the London Society of Arts:

Light Brahmas and Partridge Cochins, 80 to 100 eggs per annum and 7 to the pound; Dark Brahmas, 70 per annum and 8 to the pound; Black, White and Buff Cochins, 100—8; Plymouth Rocks, 100—8; Houdans, 150—8; Black Spanish, 150—7; Dominques, 130—9; Game fowl, 130—9; Creves, 150—7; Leghorns, from 150 to 200 per annum—9; Hamburghs, 170—9; Polish, 150—9; Bantams, 60—16; turkeys lay from 30 to 60 per annum, weighing about 6 to the pound; duck's eggs vary greatly with the different species, but range from 5 to 6 per pound; geese, 4 to the pound and 20 per annum; guinea fowls, 11 to the pound and 60 per annum. C. P. NETTLETON.

Haywards Cal.

Diseased Turkeys.

EDITORS PRESS:—Can any of your readers inform me what to do for "swell head" in turkeys, and also how they act with the cholera? Mine are dying with some terrible disease, but I do not know what it is. They will droop around the water all the time—just sit in it constantly—and the manure is of a yellow color, like sulphur; finally they get the gapes and die.

I should like to find out what it is and what to do for it. Giving the information will greatly oblige A SUBSCRIBER.

Valleton, Monterey Co., July 23, 1890.

AMERICAN-BUILT CARS FOR EUROPE.—The Jackson & Sharp Works, at Wilmington, Del., are building passenger cars for the railways in France, Spain and Austria. Mr. William Voss, writing about the cars after a visit to the works, says: They are a curious mixture of European and American practice, and are built according to complete sets of drawings sent over. Of course it is sectional work, like that sent to South America. These cars are about 50 feet long, some of them day coaches and others of the Mann boudoir style of sleeper. They have combination wood and iron sills, *bogie* trucks, the old country draw-hook and buffers, etc. All the heater and water pipes are of copper, windows run in brass guides (a very good but expensive thing). There is a vestibule at each end, but they do not touch like ours, being about four feet apart when coupled, and iron aprons and railings form the bridge. The entrance is through the vestibule and steps like ours, but *different*. The exterior is mahogany, natural wood finish. Roof much like ours, and is covered with canvas and sheet copper on ends and at eaves. Some of the cars have been shipped, six or 12 more are almost done, and a lot of six is just being erected.—*National Car and Locomotive Builder.*

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

Endowment of Colleges of Agriculture and Mechanic Arts.

Under the title "Agricultural and Industrial Training," we last week reprinted portions of a letter lately written by National Master Brigham, on the need of carefully guarding from misapplication all funds appropriated by Congress for the teaching of such branches as relate to agriculture and the mechanic arts. The *American Grange Bulletin* for July 24th has this to say upon the matter referred to:

On July 9th, W. H. Scott, president of the Ohio State University, and Alexis Cope, secretary of the Board of Trustees, together with Henry E. Alvord, president of the Maryland Agricultural College; H. H. Goodell, president of the Massachusetts Agricultural College, and George W. Atherton, president of the Pennsylvania State College, had a hearing before the sub-committee of the House Committee on Education, which has under consideration "An Act to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts, established under the provisions of an Act of Congress approved July 2, 1862." This bill has passed the Senate, but it is now receiving the opposition of the colleges interested and the National Grange.

The objections to the bill as it passed the Senate are due to the exclusion of an amendment which will limit the disbursement of the money appropriated to certain branches of education. A document signed by the college presidents above mentioned and by the Master and Secretary of the National Grange, which was presented to the sub-committee, submitted the following amendment to the bill: Insert after the clause of appropriation. "To be applied only to instruction in agriculture, the mechanic arts, the English language and the various branches of mathematical, physical, natural and economic science, with special reference to their application in the industries of life, and to provide the facilities for such instruction." The adoption of this amendment, the paper states, will be satisfactory to the representatives of the colleges interested and the National Grange, and so far as signers know, will remove all objections to the bill.

The objectors to the bill, as it now stands, claim that unless this amendment is adopted the sums appropriated will be misapplied, and will not be used for the purposes intended. The delegation which appeared before the sub-committee left the same afternoon with the impression that the amendment would be adopted and reported to the House. Representative J. D. Taylor, who is chairman of this sub-committee, stated, however, that although a number of the committee were in favor of the bill being immediately reported to the House thus amended, some others wished for another meeting, and it was decided that no action should be taken until a second meeting of the sub committee could be held.

Bro. Trimble sends us a copy of the Act (as it was committed to the Committee of the Whole House on the State of the Union and ordered to be printed July 12, 1890) adding: "They have left out *our amendment*, and we fight for postponement or death of the bill." We will all stand by you, Bro. Secretary.

An Unintentional Tribute.

While a friend was once accompanying me on a Grange canvass, we met one old member who said that the P. of H. had cost him $10 or $12 and he had never received any return.

In less than five minutes' conversation, he gave his history, showing that before the Grange started he had been running steadily behind, but since then had so improved upon his business methods as to place him among the most prosperous farmers of his section. The pith of the whole talk was that he had learned business ways in the Grange, both as to producing and disposing of his products, which had resulted in changing his business from a loss to a profit.

In visiting farmers, talking Grange, and noticing farm management, the conviction grows very strong that thousands could gain ideas that would help them to do that very thing; and that there are almost as many who would give the Grange no credit if they did.

F. S. C.

TULARE GRANGE.—According to the *Register*, the special meeting of Tulare Grange, held on the 12th ult., was not largely attended, as several of the regularly attending members were away from home. After the reading and considering of several communications of importance, Bro. Stewart gave a short but interesting address on experimental stations, which was followed by a general discussion participated in by most of the members present. The session was short, but pleasant and profitable.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

General Deputies.

The General Deputies appointed to visit each of the subordinate Granges in the State have yet much work ahead. The Executive Committee will expect them to visit all Granges in the territory assigned them, or else if they find themselves unable to do that, to report the same to the Worthy Master, so that some officer may be detailed to do the work. It is highly important that each Grange shall have an official visit before the meeting of the State Grange. Will the General Deputies go to work at once? Let us hear from you, Brothers Frisbie, Coulter, Flint, Goodenough, McConnell, Overhiser, Johnston, Steele and every officer of the State Grange. Visit the Granges and write up the result for the RURAL, so that the Order everywhere may know what the signs of promise are. Don't keep your light under a bushel. Brothers Loucks, Webster, Cressey and your humble servant are ready for the fall campaign. Brother Dewey is at work all the time for the Order. Let us join in the onward march.

Woman's Work in the Grange.

This is a subject which should be very carefully considered by the State and every subordinate Grange of California. The comfort that learning, that social progress, that home, that dignity, self-respect and manhood can give are all bound up in and dependent upon Woman's Work. Won't you join in appreciation of what our sisters, mothers and sweethearts have done, are now doing, and will continue to do for us? The Grange may safely rely on the wisdom, patriotism, devotion and calmness of the women of the Order. They are ever ready to work for the welfare of the P. of H., our country and mankind. Brothers, let us appreciate (and say so, too) "Woman's Work in the Grange."

All candidates for public office should be honest, be just and fear not. Is there any objection, Patrons, to such a test? Then look to your ballot this fall!

The farmers of America are industrious, they are frugal, honest, painstaking, zealous, constant, and yet they are not making money. It is true they are the one great producing class; they are the ones who cause, or help to cause, two blades of grass to grow where but one grew before. The farmer is the pride of the nation. When agriculture fails, degeneracy begins. The time will yet come when justice to the farmer will reign; when Faith, guided by her twin sisters, Hope and Charity, will be attendants, and when, in fidelity, he shall have

A fair reward for toil,
A free and open field,
An honest share for wife and home
Of what his labors yield.

Don't let the circus keep you away from the Grange meeting. Now that the circus is "touring" the State, we hope John Robinson won't be more popular than your own Grange associates. The one is a temporary investment and the other is a *permanent* and profitable one. Choose with soberness!

That farmer makes a mistake who thinks he can cultivate all out-of-doors. Better have a small farm and till it thoroughly and economically, than a large one and "skim" it over. Don't make the mistake of doing anything shabbily. Do well all you do and the pay will be more than you expect.

The farmer's best friend is his own brain, muscle and wife. Know that *your own* is better than anybody's else for you and yours. Better ride in your own wagon than in another's buggy, for *independence* is a fortune to any one.

Seek not public applause, for it may not be the best possible proof that you are right. But have the approval of your own conscience, and then you are sure that one honest person approves your course. Better be *right* and alone than *wrong* and with the crowd.

When will some of our Eastern Grange journals stop advertising lottery frauds?

Don't forget the real issue, *i. e.*, vote for no man for legislative honors who is *afraid* to say he will be the farmer's friend. We want a lower rate of taxation. We want honor, honesty, intelligence and bravery in positions of political trust.

Let every farmer "be up and doing with a heart for any fate," for the wary politician is doing and he is hardly ever late.

Cherish a forgiving disposition; it is better to be too good-humored than to be sour and morose.

Better go straight ahead in the pursuit of the True, the Good and the Beautiful, than to swerve to right or left, or be in doubt as to your life work.

The Grange represents intelligence, progress, virtue, honor, culture, sociability and all that is purifying and elevating. Try the Grange. See what it will do for *you*.

A Good Work at Tulare.

The fact was noted some weeks ago that an arrangement had been made by the Tulare *Register* for a P. of H. department in that daily local journal, under control of the Order in Tulare valley and edited by our old friend J.W. Mackie, with Bro. Moore and Sister Hawkins as associates. The publishers did this in the hope that Granges and Grangers will interest themselves in making it a valuable feature of the paper and an important factor in furthering the agricultural interests of that region.

In his salutatory, Bro. Mackie says: "The generous offer of the use of the columns of the *Register* to the Grange, and cordially accepted by it, comes most opportunely—comes at a time when farmers' souls are being tried and their worth put to the severest test; when even those most distantly related to the farmer perceive the imminent danger which threatens him and the farming interests of the country; when all parties seem to deem it their duty to devise ways and means of escape. Coming at such a time, it gives opportunity to farmers to be heard, for while such interest is being manifested in favor of the farmer, it will naturally be expected that he will be active in stating his own case and at least suggesting what he thinks might help him in his present difficulties."

It strikes us as no more than due the local press that the Patrons should furnish editors and also help the circulation; and it seems to us our State and National Granges are penny-wise and pound-foolish in that they seldom appropriate a dollar toward editing or circulating their official organs, but leave them, in some instances, even to pay for grange correspondence. In the Tulare case, we are pleased to observe the P. of H. staff are filling their space creditably in successive issues.

Picnic at Paso Robles.

Just after the RURAL had gone to press last week we got word from Bro. R. D. Cruickshank, Worthy Secretary of Paso Robles, that they had invited Creston and San Miguel Granges, together with all farmers and friends of the cause, to join them in a basket picnic at Experiment Station, on Saturday, July 26th, and inspect the grounds and workings of the institution. It was hoped that Bros. Webster and Fisk would lend their presence and voices on the occasion, which we expect to hear was well improved and greatly enjoyed.

AGRICULTURISTS' CONFERENCE.—The *Ohio Farmer* has called a convention of delegates from the various farmer organizations of the State, to be held in the Board of Trade rooms in the City of Columbus, on Wednesday, Aug. 13, 1890, to consult together and agree upon some general plan of action and unite on a platform of principles, "so that we may be able to make our power felt and respected." As this is not a convention to form a new political party or to nominate candidates, nor called in the interest of any existing political party, but a convention solely in the interest of depressed agriculture, S. H. Ellis, W. M. S. G. of Ohio, suggests in a letter to the *American Grange Bulletin* that each Grange in the State (both subordinate and Pomona) elect a delegate to attend this convention and furnish him with credentials of such election signed by the Master and Secretary.

THE UNION PACIFIC.—About a month since the Senate adopted a resolution calling upon the Secretary of the Interior to state whether or not in his knowledge the U. P. R Co. has guaranteed the stock or bonds of any other corporation; whether or not said U. P. R. Co. has paid out of its earnings the indebtedness of any railway company, and if so, whether such guaranty and payment are in accordance with the law and consistent with the obligations of the U. P. R. to the United States. In response, Secretary Noble says that the Union Pacific Railroad Co. has guaranteed the bonds and interest of quite a number of other corporations, but has done nothing unlawful.

JOINT PICNIC FOR FARMERS' ORGANIZATIONS.—The Olathe, Kansas, *Patron* says that the committee on arrangements are rapidly maturing their plans for the joint picnic on the 9th of August. Hon. J. H. Brigham of Ohio, Master of the National Grange, will deliver the address on the past of the Grange, and Hon. W. H. Utley of Labette Co., Kansas, has been secured to deliver the address on the part of the Farmers' Alliance and I. U. Stuck's grove, a short distance west of Olathe, has been secured by the committee, and other arrangements are being rapidly perfected looking to a grand successful picnic.

UNION LABOR PARTY.—The National Convention of the Union Labor party is called to meet in St. Louis, Sept. 3. The Greenback party, Farmers' Alliance, Grangers and other kindred labor organizations are invited to send representatives.

HOME AGAIN.—Bro. and Sister McConnell have returned from their long Northern tour and visitings, and she has sent us a very readable sketch of their trip which will soon appear.

THE National Farmers' Congress will hold its Tenth Annual Session at Council Bluffs, Iowa, Aug. 26th to 29th, inclusive.

The Fruit Interest in the Census of 1890.

At the June meeting of the State Horticultural Society the Secretary was instructed to correspond with the Census office concerning the proper representation of the California fruit industry in the census of 1890. The following reply has been received:

DEPARTMENT OF THE INTERIOR,
CENSUS OFFICE,
WASHINGTON, D. C., July 9, 1890.

Dear Sir:—I have the honor to acknowledge receipt of yours of the 21 instant regarding the importance of the horticultural interests of California, and the apprehension on the part of some of your fruit-growers that said interests may be overlooked in the census returns; and in reply I take pleasure in saying that I feel confident that in the final reports the facts and figures of the "Golden State" will have the full share of credit which I know is so justly her due in this direction.

In no part of the agricultural division have the inquiries and investigations been more extended than in the horticultural line. As a lifelong horticulturist myself, I have, with others, noted the slight attention given this great industry in former United States censuses; while tobacco, cotton and meat products have had special investigations and elaborate reports, as they very properly should, the interests of the fruit-growers have received but little consideration. In view of this fact, in preparing the agricultural schedule I gave special thought and care in this line, as you will see by the sample copy of the general schedule of agriculture, which I inclose herewith, with questions marked referring to horticulture that have never before been asked.

In addition to this, we have arranged for special investigations and reports on viticulture, nurseries, florists, seed and truck farms, tropic and semi-tropic fruits, etc.

I inclose samples of some of the special schedules in this line to show the extent of these special investigations, and our attempt to obtain full details, that now needs only the active co-operation, which I am glad to say we have so far received, of all horticulturists to make it a complete and gratifying success.

I had the pleasure of visiting your State for several weeks last November and December, while attending the session of the National Grange, and participated in the 16 days' excursion trip to all parts of the State, and was impressed with the importance of your fruit-growing industries; and, as you will note on the general agricultural schedule, which was in the hands of every census enumerator in California during the month of June, and taken to every farm and ranch in the State, the various horticultural specialties of your favored land receive full recognition, such as apricots, prunes, cherries, raisins, etc.

Mr. J. H. Hale of South Glastonbury, Connecticut, was also one of our Grange party last fall in your State. He has a national reputation as a progressive horticulturist, being one of the most successful fruit-growers and nurserymen in the Eastern States. I have given him special charge, as you will note on the schedules, of some of these special investigations, and he has been actively engaged in getting as full and complete a directory as possible of all the persons engaged in these horticultural lines in your State, to whom the proper schedules will be sent for details. I also have planned to have him visit your State in the fall or early winter, that he may personally obtain full and complete data for the final reports.

I feel confident that, after this explanation, yourself and horticultural friends need not have any fears that California will not, at least in this direction, have full credit in the census returns.

Will you kindly inform our friends of these facts in such manner as you may deem best. Perhaps a few lines from you in the agricultural and horticultural press on the subject would please all concerned.

Personally I beg to express to you the great satisfaction I have had in reading your valuable book "California Fruits," a copy of which I received at the hand of my friend Mr. A. T. Dewey of the PACIFIC RURAL PRESS. It is indeed up with the times, and I have had occasion to refer to it many times in my official work. Very respectfully,

MORTIMER WHITEHEAD,
Chief Special Agent.

E. J. WICKSON.
Sec'y California State Hortic'l Society.

[We are pleased to know that Bro. Hale will visit California in discharge of his important duties, and can assure him all the aid and interest on the part of our people which he may find desirable.—EDS. PRESS.]

STORAGE OF GRAIN.—In the U. S. Senate, July 25th, Call introduced a resolution instructing the Committee on Interstate Commerce to prepare a bill to compel elevator proprietors to accept grain for storage at reasonable rates. It is aimed at the combination of elevator proprietors on the Northern Pacific, who threaten to refuse grain and compel the farmers to sell at once.

YUBA CITY GRANGE meets on Saturday, Aug. 2d, to confer degrees. A literary program will be rendered and refreshments of ice cream, etc., served. All members are requested to be present and sojourning Patrons are cordially invited.

The Despotism of Gold.

Following is an extract of a letter, addressed to the *Oregonian* from Grant's Pass, July 4th, by James G. Clark:

Currency is the breath of life to the lungs of commerce, and all breathing things must have breath or die of suffocation. If free silver coinage means anything, it means expansion, not stifling contraction, of currency. Unless it means money, and plenty of it, for the masses to handle without risk of being robbed by public and private usury, thieves and "bonus" bandits, it is only a delusion. And if it really means fresh air for the lungs of exchange, it means precisely what Wall-street costermongers don't mean, and what they will not permit so long as Congress allows them to apply to the bust of the Goddess of Liberty the "single gold standard" corsets, and to pull the strings till there is not sufficient breath left in the body politic to move the diaphragm. Gold, as a basis for a system of speculation through which a certain few sharp, unscrupulous men get rich and purchase unmerited prominence and position socially and politically at the expense and through the impoverishment of men who are infinitely more use as factors in the moral and intellectual development of the race, is certainly a shining success. But as a basis of commercial exchange or type of values, it is a most deplorable failure. More and more it is being manipulated to the disadvantage of the many who lack the sordid quality and foresight possessed by the few that reap the advantage obtained in a medium of exchange which is and always must be too limited in quantity to answer the demands of trade—in other words, to "go around" where and when it is most needed.

Hence, gold, when measured as we measure persons, things and institutions—that is, by that which is justly required of them and claimed for them—is a notorious failure, pretense and fraud.

This being the case—and where is there an intelligent business man who dare deny it?—it is certain that sooner or later gold itself must be demonetized, and something substituted for it that will respond to the needs of an expanding civilization, and become the servant of the people instead of being the slave of a few and the master of the many, as gold now is. It is the shame of civilization for men like Rothschilds and Jay Gould to be able through the control of gold to hold in subjection the markets of the world and to play with the destinies of nations. There is no infamy that a money king may not legally accomplish.

There is no reasonable excuse for this bondage to gold, which enslaves republics no less than monarchies. And if there is no escape from it save through the red sea of revolution, then let us march for the sea, and the sooner the better. Some of us can remember how Jay Gould and his associate pirate Col. Jim Fisk, just as we were emerging from the storm and darkness of the most terrible civil war recorded in history, coolly cornered the gold market in Wall street, and actually compelled the United States to enter the lists and act as competitor over the yellow metal in order to avert general bankruptcy and disaster. And yet there was no law to reach those worst of criminals against society. "Black Friday" was simply the Wall-street tumor "gone to a head"—the legitimate end of our blood-poisoned system. The Government only lanced the tumor then. The next time the people must remove it.

We talk of anarchy among the laborers—of insanity in our lunatic asylums, but there is nothing on earth more utterly abandoned to disorder and lunacy than the "bulls" and "bears" of Wall street, when let loose in the midst of rising and falling of stocks. Compared to the Wall street opsrators on such occasions, the wildest maniac seems harmless and mild, and the patient speculator of our inland towns, who quietly plants his scores of thousands, and then calmly bides his time and awaits the harvest, is an angel of mercy and contentment. The genuine Wall streeter is always in a crazy fever and hurry, that waits for nothing. He has no time to plan for the future, but simply dives into the whirlpool of chance to get his share and the other fellows' too. He shoots the goose while on the nest, and then sucks the golden egg before it gets cold. * * *

The question for us to solve is: Are we, as a nation, to be governed by the enlightened instinct of freedom, or by the councils and dictations of Wall street?

It is strange that statesmen like John Sherman and others who are intelligent men and ought to take pride in being at least outwardly honest, will go to Wall street for advice concerning a policy which if at all successful means the weakening of Wall street's clutch on the public throat, if not the ultimate destruction of a weakening system in which that band of land pirates was born and in which it lives, moves and has its being.

Wall street operators are, by the law of self-preservation, naturally opposed to any policy that fails to direct all the fountains of wealth into their own immense reservoir, without regard to the hunger and thirst of mankind in general. Yet the keynote of our financial policy is always first sounded in Wall street. And whenever a new idea in behalf of the people is presented in our government councils our statesmen of the finance committee at once apply their ears to the Wall street telephone for the keynote. And when the twang of the Jay Gould, Sage, Windom, Rockefeller & Co. tuning fork comes floating back to the capital from the "central office" in New York, the party organs take up the theme in the same key and play the variations over and over again till the one tune fills the whole land with the ravishing music. And then the faithful voters in city and country, on the farms, in forest, and in the shop, join in the grand party dance, following the stentorian call of the "floor managers," and in the end pay the fiddler out of their scant day wages and their crops. And all this comes under the head of "wise statesmanship" and "practical politics." And our wage-workers and farmers—whose impoverishment and degradation mean revolution, if they are worthy to be called men, and monarchy under the shadow of a dictator, and a standing army, if they are content to be serfs and slaves to money kings—have been engaged in this delightful and fascinating exercise for a quarter of a century, until wages in our mines and our shops have been reduced almost to the last extremity, and the nation's grand army of foot-travelers can tramp across the agricultural States from ocean to ocean and gulf to gulf and walk on mortgages all the way.

These mortgages are only taken up in order to drive one farmer out and put another farmer and mortgage down to follow the first, while the sad evicted and exiled pilgrim finds himself obliged to "pitch his moving tent a day's march nearer" the pauper and starvation line, tramping away in quest of "cheaper lands" and new mortgages, and higher interest rates, leaving the hard earnings of a lifetime, in the way of improvements and paid installments, in the hands of legalized thieves and robbers, who never take a risk of any kind, and whose social, political, business and even church standing is enhanced and made more "solid" through the very means of their crimes against their fellowmen and before high heaven.

If our honorable Senators and law-makers in Washington regard this as a desirable state of things, to be continued and encouraged in a republic, it is perfectly proper for them to go to our national gambling hell in New York for counsel and advice.

Otherwise let them go to the people, and then keep their pledges, for the time is at hand when public traitors and bribe-takers may realize that treason to the voter involves more than the loss of office, character and property.

Nebraska Farmers and Labor Men.

Nearly 900 delegates from all over Nebraska attended the "People's Independent" Convention at Lincoln, July 29th. Farmers' Alliance and Grangers predominated, the remainder being Knights of Labor and Union labor men.

The platform demands that the financial system should be reformed by the restoration of silver to its old-time place in the currency—its free and unlimited coinage on an equality with gold—and by the increase of money circulation to the sum of $50 per capita, all paper issues necessary to secure that amount to be made by the Government alone and be full legal-tender. Land monopoly should be abolished, either by limitation of ownership or graduated taxation of excessive holdings. Alien ownership should be prohibited. The railroad system as at present managed is a system of spoliation and robbery, and its enormous and fictitious valuation is absorbing the substance of the people in the interest of millionaires. The General Government should own and operate railroads and telegraphs and furnish transportation at cost. The Legislature should enact a freight law which shall fix rates no higher than those in Iowa. Reform of State and National systems of taxation is called for. The adoption of the Australian-ballot system is demanded; also that eight hours shall constitute a day's work, except for agricultural labor, and that soldiers shall receive a liberal service pension.

The platform further declares that "the political machinery of the State has been controlled by corporate power for the plunder of the people and the enrichment of itself, and we have entirely lost confidence in the efficacy of that machinery of unjust laws. We therefore give voice for a call of a people's independent State Convention to nominate pure and honorable men for the different State offices on the principles above named, and we hereby pledge ourselves to vote and work for their election."

Hop-Growers in Council.

The State Hop-Growers' Association held a meeting in Sacramento, July 29th, at which the following resolution was adopted:

WHEREAS, We feel the injustice of a seven-pound tare; and, whereas, the State Hop-Growers' Association at its last meeting adopted a resolution that a tare of 3½ pounds be declared a proper tare; therefore be it

Resolved, That we concur in and reaffirm the resolution introduced at the last regular meeting; and be it further

Resolved, That the secretary be instructed to notify all dealers or buyers of hops that the growers will allow only a tare of 3½ pounds per bale.

The hop-growers appear to be so well organized as to be able to compel dealers and consumers to recognize their demands.

A committee of three was appointed to draw up a form of contract between growers and Chinese contractors for picking, by the terms of which extra pay to the foreman and cooks of hop-picking gangs would no longer be allowed.

THE STOCK YARD.

Operation in Cattle and Railroads.

The rumors of a great cattle concern to be established in California by leading men of the West have already been mentioned in the RURAL. The affair is now coming over the wires in a very energetic fashion, and as the project, if realized, must exert a great influence on this coast, either for the good of producers or otherwise, we give the following statements from recent Chicago dispatches:

CHICAGO, July 28.—Several weeks ago dispatches from San Francisco announced the arrival in that city of Peter E. Iler of Omaha and Obed How of Chicago, two of the largest stockholders in the Armour syndicate, operating mammoth stockyards and packing-houses at Chicago, Kansas City and other points. The same dispatches announced that the object of Messrs. Iler and How's visit to the Pacific Slope was to found somewhere on the coast an establishment rivaling in size either of their Eastern concerns.

Mr. Iler was quoted as saying in an interview in San Francisco that he had come to the coast to stay, and that the necessary steps toward securing the land, erecting the buildings and arranging for shipping facilities would be taken at once. He announced that the location for the yards and packing-houses had been selected and the refusal of the land had been secured. The syndicate expected to have everything in readiness, he said, within six months from the date of the purchase of the land, and he fixed the cost of the land and buildings at about $1,000,000.

Following the above dispatch, a second telegram from San Francisco, received about the 15th of July, announced the completion of negotiations and the purchase by the Armour syndicate of 1920 acres of land in San Mateo county, being a portion of the celebrated Charles Lux estate. Great as the enterprise was announced in these dispatches, it now transpires that the stockyards and packing-house project of the syndicate is but one of several gigantic enterprises it intends establishing on the Pacific Coast, while the 1920 acres of land purchased is but a small portion of the total acreage for which the syndicate now holds deeds. In addition to the large body of land purchased from the Charles Lux estate, it was learned here today that the syndicate has purchased 200 acres from Miller & Lux, 250 acres from Ansel Easton, a nephew of D. O. Mills; 400 acres from D. O. Mills himself, 40 acres from E. W. Burr, and a number of smaller lots from other parties owning land adjoining the original purchase, making in all over 3000 acres of land, for which the enormous sum of $776,000 was paid.

The principal parties engaged in the transaction are Nelson Morres, a large holder of Atlantic & Pacific railroad stock; Philip D. Armour, who, in addition to his stockyards and packing establishments, is also a large holder of Atlantic & Pacific securities; Hammond & Co., Swift & Co., and P. D. Iler, the millionaire pork-packer of Omaha, who has been the financial agent of the syndicate in San Francisco.

The 3000 acres purchased will be divided as follows: Twelve hundred acres will be used by the different stockyard corporations already organized in this city, and the other 1800 acres will undoubtedly be used for the shops and roundhouses of the Atlantic & Pacific railroad, which will be extended from Mojave on to San Francisco with all possible speed.

The following companies have been organized here and in Kansas City to operate the immense establishment in San Francisco: The Stock Yard Land Co., capital $2,000,000; the Avatory Co., for butchering, with large chilling and freezing houses, capital $300,000; the Stock Yards Banking Co., capital $250,000; and, lastly, the Stock Yard Co., capital $1,000,000. The last company includes the stockyard proper. Miller & Lux will remove their butchering business to the new yards.

Field Controlled by the New Company.

CHICAGO, July 28.—The importance of the great stockyards and packing-houses to San Francisco, exclusive of the competing railroad company, can hardly be estimated. The butchering business will undoubtedly be transferred entirely to the new company's establishment, thus ridding San Francisco of a great and dangerous nuisance. In fact, it is stated here that the company has arrangements made with all the large butchering firms in San Francisco. A thriving town will of a necessity be located at Baden, near the yards, as it is estimated that fully 4000 men will be employed in the stockyards and packing establishments, exclusive of the railroad employes, who will number at least 1000 more.

The packing company will compete not only for the coast trade in canned, pickled and packed meats, but it will secure the trade of the South seas, the Hawaiian islands, Alaska, Central and South America and China and Japan. No company ever started out with a greater field. With its advantages it can easily obtain the trade of all the countries mentioned, besides supplying the hundreds of steamers and sailing vessels which annually leave San Francisco. It is estimated that within a year the business of the packing company will rival that of the Union Stock Yards of this city, and will outstrip those of Kansas City and Omaha.

THE VETERINARIAN.

Anthrax in Cattle.

EDITORS PRESS:—There is a very mysterious and fatal disease among the calves in Big Meadows, Plumas county. In some instances it has killed more than half out of a drove of 50. No age or condition is exempt, but it seems to choose the healthiest and finest looking. It gives little warning and leaves no mark but death. The animal apparently well in the morning may be dead before night. He lies down and dies without a struggle. A slight bloody froth exudes from the nose. No one has observed anything wrong with any of the organs unless, perhaps, the throat is a little swollen. The disease seems to be epidemic, but not contagious.

Can you give us any light in the matter as to what it is or what to do? We are utterly helpless and would be very thankful for any suggestion.

A. F. MARTIN.

Prattville, Plumas Co., Cal., July 18, 1890.

There is no doubt at all that the cattle are suffering from some form of anthrax.

Anthrax is due to bacteria in the blood—*bacillus anthracis*. Anthrax is not infectious—that is to say, animals in contact with others which are diseased do not suffer unless some of the blood or tissues of the diseased animals enters the blood. Even eating food containing the germs of the *bacillus anthracis* appears to be insufficient to induce disease, unless there are abrasions in the mucous membranes of the digestive organs, through which the spores can enter the blood.

All animals are liable to anthrax. Undoubtedly wild ones diffuse the bacteria and bring them into parts of the country where they have been hitherto unknown.

Flies, too, are vehicles of contagion. In this case the supervisors of Plumas county ought at once to employ a thoroughly competent veterinary surgeon to investigate the matter, as it is of a very serious nature.

A. E BUZARD, M. R. C. V. S. L.

Bloody Milk.

EDITORS PRESS:—My cow gives bloody milk. Please state what I must do for her, and oblige a subscriber.

Cows are sometimes constitutionally inclined to give bloody milk, and this trouble exists chiefly among high-bred or very large milking cows. The tension of the glands, under the strain of a large secretion, causes the capillary vessels to give way and the blood exudes with the glandular secretion.

To remedy the trouble, first reduce the feed; give no grain food. It may be well to give a pound of Epsom salts to relieve any fever which may exist. The milk should be drawn frequently and the udder bathed with warm water, and then well rubbed with camphorated-soap liniment. A newly-calved cow should be milked promptly, if the udder is hard and appears full; or previous to calving, if the udder is swollen and hard. A cow about to calve should have no grain food for three or four weeks previous.

DR. A. E FUZARD, M. R. C. V. S. L.
11 Seventh St., S. F.

Calves, "Blackleg" and Garlic.

In our "Agricultural Notes" for July 5th, mention was made of farmers about Bloomfield and Tomales losing a number of calves by an unknown disease. We at once addressed a letter of inquiry on the subject to Mr. H. P. McCleave, the chief loser, but there was some delay in our note reaching him; so we have but just received the following answer, which is especially interesting in connection with the above letters from Mr. Martin and Dr. Buzard:

EDITORS PRESS:—The first calf I lost was a fat heifer. It drank its milk at night all right and seemed well, and in the morning it was dead. It had not been out to grass; it was milk-fed. I had others up in corral with it.

I had five others about four months old turned out to grass that were fat; they had grass only. In a few days I missed two of the best of them; looked for them and found them lying in a dry creek, one of them dead and the other dying. The night before they were well, or apparently so, at sundown.

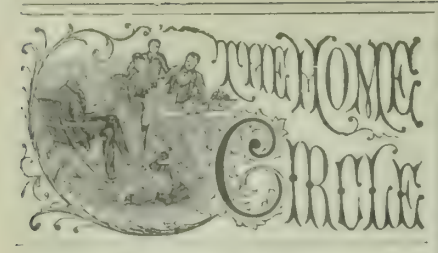
The next, a few days later, was another up in the corral we were feeding milk. It was well at night, and in the morning was dying.

I then had three of the five older ones left out in the pasture. A few days later two of them came to get some water. I went to see where the third one was, and found her dead. She was apparently well the night before.

I cut one of them open and found that the lungs and liver were much larger than they ought to be and much discolored. I was then pretty certain that my young stock had some fatal disease, and I found others had lost some, so I mentioned the fact to several, and a gentleman from the old country told me that he had seen the blackleg in cattle which was about as fatal as I had stated, and that the only thing that could be done was to try to prevent it, and the way they did in his country was to make an incision about 1½ inches long in the animal's tail, about three inches from the lower end; insert a piece of garlic into it and bind it up. So I went home and did as he told me with three that I had left. I kept the bandage on 48 hours and then took it off, and since then have not lost any, so I think that the garlic has acted as a preventive in my case.

HENRY P. MCCLEAVE.

Petaluma, July 25, 1890.



A Lump of Carbon.

Tell me, lump of Carbon burning
Lurid in the glowing grate,
While thy flames rise twisting, turning,
Quench in me this curious yearning,
Ages past elucidate.

Tell me of the time when, waving
High above the primal world,
Thou a giant palm tree, lifting
Thy proud head above the shifting
Of the storm-cloud's lightning hurled,
While the tropic sea, hot laving,
Round thy roots its billows curled.

Tell me, did the Mammoth, straying
Near that mighty trunk of yours,
On the verdure stop and graze,
Which thy ample base displays,
Or his weary limbs down-laying
Sleep away the tardy hours?

Perchance some monstrous Saurian, sliding,
Waddled up the neighboring strand,
Or leapt into its neighboring sea
With something of agility,
Though all ungainly on the land;
While near your roots, in blood-stained fray,
Maybe two Ichthye beasts colliding,
Bit and fought their lives away.

Tell me, Ancient Palm-Corpse, was there
In that world of yours primeval,
Aught of man in perfect shape?
Was there good? and was there evil?
Was it man, or was it ape?

Tell me, lump of Carbon, burning
Lurid in the glowing grate,
Lies there in each human face
Something of the monkey's trace?
Tell me, have we lost a link?
Stir thy coaly brain and think,
While thy red flames rise and sink,
Ages past elucidate.

Travelers' Journal.

Helen's Heroism.

"There ain't so much difference in folks as some seems to think," said the stout, good-looking man in front of me.

We were on a Western-bound train which had just been raided by a gang of ruffians, and only the greatest good luck, aided by the coolness of the man opposite, had kept us from falling an easy prey. While waiting to get under way—for they had gagged and bound the engineer and brakeman before entering our car—some one had said it was strange such fiends were allowed to live, and then he had spoken.

I asked sarcastically whether he meant that people were all thieves, or that thieves were good people.

"No, I don't mean that," said he; "I know better. But I tell you folks hadn't orter judge, 'specially them that's had a good fetchin' up. Now, my wife could tell you a story that would make my meanin' clear—a sight clearer than I can. She thinks everybody has good in 'em that's put there to save 'em—it's the leaven spoke of in the Bible, she says. If 'twant so, God wouldn't be just; an' it's the part of other folks to set the leaven to workin' till it leavens the whole lump—and she's right, too. She always is right!" he declared with emphasis. "See that little house over there on the hillside, with a whole yardful of posies in front? It's all by itself; you can't help but see it."

"Yes, I see it," said I.

"Wal, that's where we live—Helen and I. 'Helen of Troy,' I call her, because Troy is the name of the town. This railroad curves in the shape of an 8, an' in a dozen miles it fetches us in sight of the house ag'in—but the back side of it instid of the posy-beds. I've a good mind to tell you the story in my way, though I'd like to have you hear Helen tell it—there's plenty time before we git to Troy."

I looked my interest, and he proceeded.

"I'm a Yankee, an' I see you be. Wal, to begin 'way back, I was a wild feller when Helen took a notion to me. She was as fur above me as the stars is above this train. She was a schoolteacher, an' had money laid up; but I hadn't not one dollar to my name, an' nothin' else to speak of 'cept what I'd been a sight better off without.

"I hain't told ye how my wife looks. Wal, she's one of them pale little women with gray eyes that looks right through ye an' makes ye want to be better, an' pretty, brown hair that grows kinder cunning about the ears—you've seen it; her mouth is firm—dreadful firm. I might as well tell you I'm right under that little thumb of hers—an' its jest where I wanter be, 'cause I know if I trust to her leadin' I shan't go fur wrong.

"Wal, as I told you, Helen had laid up some money, an' had jest begun to set up housekeepin'. She'd got tired of not havin' no home of her own, an' she cackerlated on givin' of her Aunt Mary one with her, an' so havin' a home to come to when she warn't teachin'. She'd lotted a pile on that home, an' she'd hired a house an' got her money outer the bank, an' was intendin' to go to town the very next day to buy furniture. She'd borrowed some things of a friend jest for the time bein' so's to stay there, for, she's told me sense, them four walls seemed so sweet to her she couldn't bear to leave 'em even for one night. Women all seem to sorter hanker after a home of their own, you know.

"Her money was in the house. She'd hid it away; but first she'd marked every bill an' took the number, an' give the list to the friend she'd borrowed the bed an' table of. She thought it wouldn't do no harm, she said. Her money had come hard, an' she meant it shouldn't go easy.

"That night, after she'd cleared away, she set down to her knittin' or sewin', I forget which, an' in a little while she thought she heard a step on the suller stairs. She'd bought some pertaters that very day an' seen to their bein' put in the suller, an' she knew she'd locked the door, an' the key was in her pocket that minute. So if any one was in the suller 'twas a burglar, an' if 'twas a burglar he was after her money. She thought of all this in a twinklin', so to speak, betwixt the first step he took an' the second. There wa'n't no way to fasten the suller door. It opened right into the room where she set. She thought of a pail of hot water that set on the stove, how she might throw it into his face, an' she thought of the bread knife. Women are awful defenseless when you think of it. Helen has got a revolver now, an' she knows how to use it, too; but she's so tender-hearted, I don't s'pose, come case in hand, she'd do more'n threaten to use it. But she didn't go for the knife nor the hot water; she jest stood up slim an' straight behind her chair an' waited.

"The door opened kinder softly an' a man came in. He was young an' didn't look so dreadful bad, she said. He was dressed decent, but he looked as if he'd been kicked an' cuffed 'bout the world ever sense he's born.

"'Good evenin',' says my wife, settin' him a chair, jest as if her comp'ny always come up the suller stairs; 'what kind of a night is it?'

"'Blowin' an' stormy,' says he.

"'Then you must be cold,' says she.

"She bustled round an' made the fire burn better, an' set on the teapot.

"She knew, for all her calmness, that she was in mortal peril, but she said a little prayer an' drawd out the table.

"'I've had my supper,' said she, 'but it was so long ago I don't mind eatin' ag'in. "Nothing like a warm supper," my mother uster say, "to cheer a man in cold weather."'

"An' all the time she was a thinkin' how she could get rid of him, an' a-hopin' some one would come in; but they didn't.

"'Come,' says she, 'the tea is drawd, an' you can eat jest as well now as any time.'

"She set down opposite of 'im an' poured out the tea an' passed the vittles, all the time a-talkin' 'bout one thing another, as perlite as you please. After supper he got up an' then set down ag'in. My wife knew he was tryin' to git his courage up, an' she began some kind of talk, but he jumped up and says, says he, awful gruff:

"'There ain't no use foolin' any longer. You know my business as well as I do; you know I've come for that money you've hid away in the straw tick of your bed.'

"She knew then he'd been a-watchin' of her, an' she felt as if she should sink through the floor, but she didn't let him see she was skairt.

"'It can't be,' says my wife. 'You ain't the man to take my money—the money I've earnt, dollar by dollar. You don't know what I've gone through to earn that money. I was an orphan—'

"'So was I,' says the man.

—"'But I wanted to grow up good and respectable, because you see I could remember my mother an' father, an' how they used to pray for me when they knew they must leave me alone in the world. Father was a fireman, an' got injuries that killed him in a big fire, an' mother died with consumption. When I run away,' says she, 'I went to live where I could work for my board, an' go to school—'

"'I didn't,' says he. 'I run away to sea, an' went straight to the devil.'

—"'I didn't care as much as some for finery, an' when I began to teach school I laid up a little every year. I might be sick, you know, an' I hadn't no home. But I've got one now. I hired this house for me an' Aunt Mary, an' moved in yesterday. The money you speak of is to buy furniture. You can see I need it. The bed an' table are borrowed, but the bench an' dishes an' stove are mine.

"'You can take the money, of course, for you are strong an' I am weak. See, your hands are twice as big as mine. But I don't believe you will take it; you are not the kind of a man to do such a thing.'

"'I need money, you don't know how much,' said the man. 'I hain't had work for six months, an' I hain't eat a mouthful for two days till to-night.'

"'I'm sorry for you. I know what it is to be cold an' hungry,' says she, 'an' out of work. You don't say so, but I know you don't want to be a thief; you have formed bad habits, perhaps, an' got into bad comp'ny, but if you could get money honestly, you would rather do it.'

"'That's so,' said the man, 'I'd rather earn a dollar than steal one any day, an' I ain't lazy.'

"'Let me lend you fifty dollars,' said my wife, 'you can pay me some time. I am not able to give it to you, an' you wouldn't want me to; but if you can't pay me, don't let it trouble you.'

"'What kind of a woman be you?' spoke up the man. 'I didn't s'pose there was sich folks in the world as you. I never see any. If you hand me fifty dollars, do you ever expect to see it ag'in?'

"'Yes,' says Helen, 'I do; but then mebbe you can't pay me; somethin' may happen to prevent.'

"'But of course you know I can take the two hundred as well as the fifty if I want to, don't ye?' he said.

"Yes, but you won't; so don't let us talk about it at all. Besides, I haven't told you that I marked every bill with a private mark an' took the number of each, and gave the list to a friend as a safeguard. The money would bring you into trouble the first thing, but if I let you have the fifty dollars, it will be different. It shall be yours until you can pay it. Will that be enough? I will divide with you if you say so.'

"'Twenty-five is all I shall take,' said the man, 'an' I wouldn't touch a cent of it if there was any chance in the world for me to get money decently. I've walked miles and begged for work as I never begged for bread, an' I'd begun to think that honesty didn't pay.'

"'Is this the first time?' asked Helen.

"'No, but it's the last,' says he.

"She went into her little bedroom, shet the door, and counted out the money. She trembled so she could hardly stand, an' cold chills run over her from head to foot. What if he should change his mind an' take the whole; how could she prevent it? She looked like death when she came out, an' the man said:

"'Don't look like that. I wouldn't harm a hair of your head no more than I would my mother if she stood there, an' I trust you as I would her. You say these bills are marked. They would put me in prison as quick for these as for the two hundred if you folier 'em up.'

"'But I won't, you know; I won't,' said my wife.

"'No, I know you won't,' said he solemnly.

"She warn't afraid after that, but tears—mebbe 'twas nervousness—came into her eyes as she said to him:

"'Your mother is watching you; don't forget that.'

"'Do you believe it?" said he.

"'I know it,' says she.

"My wife goes to church reg'lar an' believes in her religion with her whole soul, an' her faith sorter moved him.

"'I sha'n't forget that you say so,' he said.

"'If you need any more money, let me know it; but come through the front door,' she said, smiling jest a little.

"'I shan't need any more, an' I'll pay this back.' His head was up now an' his voice had a clear, honest ring to it, so Helen said."

The speaker stopped here, and I thought his narrative was finished.

"Your wife is a real heroine," said I.

"She was sharp to get off with the loss of twenty-five dollars."

"Sharp! She knew she should git it back, an' she did. Lucky for her that it wa'n't some burglars, though. But she'd managed some way; she's up to anything. Wal, in jest three weeks, one Sunday morning a young feller come up the garden-walk. She knew him in a minute. It was her burglar.

"He had come to pay her, he said; an' sure enough, he pulled out his pocket-book an' handed her the money. They fell to talkin' upon that, an' he told her how she'd ben his salvation when she might 'a' ben his ruin, as 'most anybody else would; an' she asked him if he'd found work, an' he told her he had—good, stiddy work that brought him in ten dollars a week. So they talked together awhile an' then he went away."

"And that was the end of it, I suppose," said I.

"No 'twa'n't. He married her in two years' time. That was twenty years ago, sir, come next New Year's Day."

"You don't mean—" said I.

"I do," said he, straightening up and looking every inch a man. "It was me, and now you understand why I spoke as I did. If there was more like Helen in the world, ready to take people by the hand instid of sendin' 'em to the gallers, 'twood be better than 'tis; but she is one of a thousand. She's ben the makin' of me, and I—wal. I hope I know it. If it hadn't 'a' ben for her I might 'a' ben as bad as them fellers that boarded the train. Wal, good-by."

We shook hands, and he got off at the next station.

"Know that man?" I asked the conductor, "anything about his character and standing?"

"Tip-top! One of the first men in Troy!" said the conductor. "Made a big strike in flour a few years ago."

One Way to Cleanse a Carpet.—Having dusted and removed such articles as can be carried from the room, wring a flannel mop out of hot water and wipe the carpet thoroughly, wringing the mop from clean water as often as it may become soiled. Now, sweep with a broom, as you ordinarily would, and when you have finished you will have a bright, clean carpet, with little or no dust, and all at the expense of a very little hard labor. Those who have not tried this method are skeptical about its merits; but one trial will convince.

The man who reeks nothing is likely to wreck himself.—*Birmingham Republican.*

How Language Grows.

The late Cornelia Gracchus gave
Unto her elder sonny
Sempronius, the wise and grave,
Some nice Hymettus honey.

Tiberius Sempronius
Said to his little brother,
"This honey—*without wax* to fuss—
Is clearer than all other."

Then Caius answered laughingly,
As wishing to be funny,
"Some people—so it seems to me—
Are like Hymettus honey."

"Is not veracious Scipio,
(Not grandpa, but the other),
Sincere, if I may say it so?"
"What slang!" reproved the brother.

Yet, over-wise Sempronius,
With glossaries to back us,
We deem your blame erroneous,
And side with Caius Gracchus.

—*Portland Transcript.*

Home Courtesy.

Editors Press:—The fire of courtesy and etiquette should glow the brightest on the domestic hearth. If there is any place where politeness and kindness should be freely exchanged, it is at home. The pure influence of courtesy is felt over the whole household and is wonderful in its subduing power. Every home has a heap of embers, which should be kept in a glowing fire; if they are scattered they soon flicker and die. Courtesy is mighty and will glorify the humblest home; it is contagious and extends over the whole household. If the father be courteous to his wife, so will the boys be likewise to their sisters, the girls will imitate their mother in gentleness and patience and if big brothers are noisy and heedless (and they very often are) with their gentle demeanor and full show of love and kindness, the girls soon throw that sweet courteous influence over all, and the boys show their appreciation by submitting to the rule, which always *should* be the rule, and not the exception; it prevents jarring, and wards off many an unhappy hour, caused by harsh words, spoken in a moment of anger and thoughtlessness. It seems so strange that a man will speak more rudely to his wife than to any other lady. A man is very often a perfect gentleman in society, but a bear at home. A brother will be harsh to his sister, while to her female friend he is everything that is respectful. It is sad, indeed, but nevertheless true, that many mothers, wives and sisters are indebted to strangers for all the politeness shown them. Why is this? Only because there is a lack of courtesy among the members of the household. So long as they appear well in the eyes of the outside world, the comfort of the dear ones at home is neglected. Ah! this should not be. "*Home*" should be *first* in every heart. When the angel of death awaits to call the spirit of some heedless mortal to its eternal home, who is it that comforts the last dreadful moments and hovers over the bed with unfailing love and kindness, waiting with gentle touch and breaking heart to soothe the last moments of the weary sufferer? Is it the society friends who have received all the sweet smiles and the courteous manners, or a faithful household member who has taken all the harsh words and unpleasant glances? Oh! why should not all actions of love, kindness and courtesy originate around the glowing hearthstone of that sweet word "home"? It heals all wounds and ennobles human nature; it fills one's soul with loftier feelings and brings one nearer to God, whose loving eye watches over all with the tenderest care, and His blessings will surely rest on those who try to do right. Ada E. Taylor.

Stockton.

Chaff.

"How does this suit you?" asked the mother bird, as she dropped a nice fat worm into the yawning mouth of her young son. "One might say it fills the bill," answered the little wretch, and his mother began to seriously consider the advisability of letting him starve.—*Terre Haute Express.*

"He fairly dotes on her, but her father won't let him in the house." "The old man must be something of an antidote."—*Harper's Bazar.*

"Where did you get that imitation sealskin sacque?" "At the bargain-counter." "It looks like a counter-fit."—*Munsey's Weekly.*

As the electric light kills insects, it is understood that Uncle Jerry will advise the farmers to put an electric light at each cabbage-head and potato-hill.—*St. Paul Globe.*

"See, yonder comes old Mr. X——, who has helped to dry so many tears." "The dear, kind-hearted man! And pray tell me how?" "He is a manufacturer of pocket-handkerchiefs."

Mrs. Smith: So your daughter has graduated with honors? Mrs. Jones: Yes, she understands painting and astronomy and piano-playing, and Lord knows what all. "You ought to be very proud." "I suppose so. I expect she will be very happy in her married life, if she finds a husband who knows how to cook, sew on buttons and dress children."—*Siftings.*

Young Folks' Column.

The Wonderful Boot-Jack.

Wallace Earl was sitting in his aunt's kitchen eating pop corn. He had come to the bottom of the pan, where were left only the round, brown grains which had refused to pop.

"Why do you eat that, Wallace?" asked Hubert Black, his cousin, "If you really want some more pop-corn, I'd just as soon pop it as not."

"Thank you," answered Wallace, pushing away the remnant of their late feast. "I believe Aunt Maria has put away or cleared up our muss, and I wouldn't like to make her do it over again. Besides, I have had all I want, and all that is good for me. Thank you just the same," he reiterated, glancing around the room absently, then scanning his ten-year-old cousin's face.

"Pop-corn don't hurt anybody, and it's no trouble to clear up the muss," persisted Hubert.

"How do you know?" Wallace asked, almost sharply.

"Why because," began Hubert, wondering at his guest's manner.

"I guess that's about all the reason you could give," laughed the older boy.

"What shall we do, then?" queried Hubert, putting aside a subject which he did not understand, or which was not interesting to him.

"I believe I'll go to bed," answered Wallace, with a yawn. "I see you've already pulled off your boots; and it's 'high time,' as Uncle Jerry says." He took up the boot jack which Hubert had just thrown upon the floor, and regarded it with a thoughtful air for a moment before he spoke again: "I like this boot-jack better than any other I ever used. Now, ours at home don't come up with it."

Hubert drew nearer and became unusually interested in the useful though homely object which had served him unnoticed for a long time. "It's only made out of a piece of board. Our hired man made it year before last; I saw him saw the notch and nail on the cleat," he said, wonderingly.

"That so?" began Wallace. "I wonder if I couldn't make one like it, but I am afraid not. Where is this hired man you spoke of? Was he a sort of magician?"

"Pooh! I don't know what you are talking about. What kind of a boot jack have you at home?"

"An iron one, something like a beetle in shape. Where did you say this hired man lives? You see, I have taken a great fancy to this boot jack."

There was a slight mocking accent as Wallace continued, and Hubert began to detect the sarcasm: "You needn't make fun of our old boot-jack, if yours at home is a nicer one," he pouted.

"Make fun! I say, 'Handsome is that handsome does.' Ours at home can't hang itself up: I always have to do it myself." Wallace was speaking earnestly now.

"Hang itself up!" exclaimed Hubert. "I guess you're crazy."

"No, I'm not crazy," persisted Wallace. "I have noticed that you never go to the trouble of picking it up after you are through using it, and in the morning I never see it lying on the floor where you left it. Now I call that a labor-saving machine."

Hubert looked uneasy, though he forced the answer, "Somebody has to pick it up; it never does so itself."

"You don't say!" exclaimed Wallace. "Probably some one who can do it more easily than you can."

"It's easy enough to hang up a boot-jack. Come, I thought you wanted to go to bed so fast."

"How do you know it is easy enough? You never have made the experiment. Who do you suppose does hang it up?"

"Oh, come on to bed! Throw the old boot-jack down!"

"Hubert, who will hang it up if I don't?" There was no mistaking the severe earnestness of Wallace's tone. "I know who will hang it up: it will be Aunt Maria, and I can't think how it will be any easier for her than for you. Now, I am only taking this boot-jack as a text. I have noticed that you never put anything back in its place. You find where a thing belongs readily enough when you want to use it; but when you are through with it, you forget where it belongs, and your mother has to stoop down and pick up things forty times a day."

"Oh, now, Wall!"

"Well, but don't you see how mean it is for you to force other people to do your duty? But I don't suppose you can begin to see, else you would be too ashamed to ever trespass on other people's rights again."

Wallace began to look as if discouraged, and his tones manifested the hopelessness of his cause.

"Why, boys, you are letting the fire go out; you will take cold. I thought you were in bed half an hour ago." Mrs. Black came into the kitchen, intent upon the last household matters for that day. She stooped to put the boot-jack in its place. Hubert sprang forward and said:

"I'll do that, mother!" And with a shame-faced glance at his cousin, he hung up the wonderful boot-jack.

"Now that's nice!" began Mrs. Black, with a pleased look. "I believe it is easier for you to stoop down than for me to do so. I wonder you never thought of it before."

Then the boys said "good-night" and started off upstairs, Wallace wondering why mother and son had never thought of it before.—*Phœbe Parmelee.*

A Boy from Texas.

A slender, yellow-haired, frank-faced boy is a more than ordinarily distinguished guest at the police headquarters nursery to-day.

John Tracy is 16, and has a face and manner to inspire confidence in his ability to do anything. There is nothing of the wild Western braggadocio about him. He simply knows what he wants, and his brain is quick in devising means of getting it.

A month ago John was a bellboy in the McLeod hotel in Dallas, Texas. He was born in Bryan in the same State, but, his father and mother being dead, he lived with a grand-uncle in Dallas. When John announced his intention to go to New York to seek out his nearest living relation, a cousin of the name of Claudia, the uncle said: "All right." Probably he knew it was of no use saying anything else, and John started.

He had no money, but that was to him no obstacle. He had laid out a route by rail up the Mississippi, and he went by it just as though he owned the road. He simply told the conductors where he was going, and the conductors, sizing up the lad in a single look, passed him along and gave him food.

Once in awhile the boy would stop off to have a look at the town, and would take the next train, always with the same experience.

Coming thus, by way of Memphis, St. Louis, Louisville, Cincinnati and Buffalo, he reached New York and his journey's end yesterday on a New York Central train.

Johnny went out of the Grand Central depot to take a look at things as soon as he got in, and concluded, after a brief inspection, that New York was considerable of a town, and that he might consequently have trouble in finding his cousin, of whom he only knew that she was married to a man by the name of Knox, "with sideboards;" Claudia Knox, that was all.

The lad decided that under the circumstances the way to do was to go to work and prosecute his inquiries until he found her. The office of the Union News Company was handy, and he applied for a job without delay.

Whoever was at the desk there missed the opportunity of a lifetime in the way of securing an employe. John would have been superintendent of the company before he had time to grow a beard. He was told, however, that he must go away and get "security."

The lad smiled at the notion and went out to think it over. It was evening, and it was cool and pleasant along the North river, which he had reached in the stroll. A policeman found him there getting ready to "turn in for the night" on a plank, as contentedly as if it was a bed in the Fifth Avenue hotel. The officer kindly took the boy to police headquarters.

Sergt. Rheinisch scratched his head as he counted the Knoxes in the directory this morning and tried vainly to fix upon one as the probable husband of John Tracy's cousin. The lad looked over his shoulder with a humorous twinkle in his eye.

"Let me copy them out," he said. "They're a goodly lot, but I can go to them all and ask."

"You have got a job on hand to do that, my boy," said the sergeant. "This is a bigger town than you think."

"Well," said Johnny, "what is the matter with writing them a letter to say that Claudia's cousin is here looking for her?"

That is what will probably be done in order to discover the right Mrs. Knox. Meanwhile, John Tracy of Texas rests at headquarters, none the worse for his long journey.—*N. Y. World.*

Persevere.

One morning not long since, a teacher of music was giving his usual lesson in a certain primary school in New England. He had requested several of the little people to sing alone the exercises on the chart.

At length he turned to a bright-eyed little boy, five or six years old. The little fellow arose, his face aglow with interest; but he failed to sing even the first measure correctly. He repeated the attempt with the same result.

Had they been allowed to do so, several of the children were inclined to laugh at the discordant notes. The little boy turned questioningly his flushed face toward the teacher, who said: "I think you can't sing to-day, Johnnie."

"Yes, sir, I can. Please let me try again."

But it was a failure this time, and the music teacher himself said: "No, little boy; we will let some one else sing it. You have done your best, but it isn't quite right."

"Please, sir," said Johnnie, timidly, yet standing as firm as a soldier, "I know I can sing that piece."

The gentleman smiled, thought of the few moments left, and replied: "You may try it again, my little man."

It was better this time, and, after repeating it once or twice more, Johnnie stood triumphant; he had at last sung it without mistake.

That boy will make a true man. He will not turn aside for trifles, but will try again and again, until he succeeds in what he has undertaken. Such boys are wanted everywhere—boys who *can* and *will*.—*Exchange.*

Good Health.

The Prevention of Sunstroke.

The following hints for the prevention of sunstroke are given by Dr. Edwin C. Mann of New York city, in an article upon this subject in one of the medical journals: "To avoid sunstroke, exercise in excessively hot weather should be very moderate; the clothing should be thin and loose, and an abundance of cold water should be drunk. Workmen and soldiers should understand that as soon as they cease to perspire, while working or marching in the hot sun, they are in danger of sunstroke, and they should immediately drink water freely and copiously to afford matter for cutaneous transpiration; keep the skin and clothing wet with water. Impending sunstroke may often be warded off by these simple measures. Besides the cessation of perspiration, the pupils are apt to be contracted and there is a frequency of micturition. If there is marked exhaustion with a weak pulse, resulting from the cold water application, we should administer stimulants. The free use of water, however, both externally and internally by those exposed to the direct rays of the sun is the best prophylactic against sunstroke, and laborers and soldiers and others who adopt this measure, washing their hands and faces as well as drinking copiously of water every time they come within reach of it will generally enjoy perfect immunity from sunstroke. Straw hats should be worn, ventilated at the top, and the crown of the hat filled with green leaves or wet sponge. It is better to wear thin flannel shirts in order not to check perspiration. We may expose ourselves for a long time in the hot sun and work or sleep in a heated room and enjoy perfect immunity from sunstroke, if we keep our skin and clothing wet with water."

Seven Hours' Sleep at Least.—There is not one man or woman in 10,000 who can afford to do without seven or eight hours' sleep. All those stories written about great men and women who slept only about three or four hours a night make very interesting reading, but I tell you, my readers, no man or woman ever yet kept healthy in body and mind for a number of years with less than seven hours' sleep. Americans need more sleep than they are getting. This lack makes them so nervous and the insane asylum so populous. If you can get to bed early then rise early. If you cannot get to bed till late, then rise late. It may be as Christian for one man to rise at 8 as it is for another to get up at 5. I counsel my readers to get up when they are rested. But let the rousing bell be rung at least 30 minutes before your public appearance. Physicians say that a sudden jump out of bed gives irregular motion to the pulse. It takes hours to get over a too sudden rising. Give us time after you call us, to roll over, gaze at the world full in the face, and look before we leap.—*T. De Witt Talmage.*

Poisoning by Lead Dust.—Cases of lead poisoning among the jacquard weavers in a Swiss factory were traced to the dust from the leaden weights which are used by the weavers to carry the thread of their warp. After the varnish has been rubbed off from the weights, the lead begins to wear away and falls in fine particles among the dust on the floor. In some cases the dust was as much as 56.86 per cent lead, and even when the utmost care had been taken, nine or ten per cent of lead was found in it.

Nose Bleeding.—An eminent physician says: "The best remedy for bleeding at the nose is a vigorous motion of the jaws, as if in the act of mastication. In the case of a child, a wad of paper should be placed in its mouth, and the poor child instructed to chew it hard. It is the motion of the jaws that stops the flow of blood." This remedy, he says, is so extremely simple that many will feel inclined to laugh at it; but it has never been known to fail, even in severe cases."

The Growth of Nails.—It is said that the growth of nails on the left hand requires eight to ten days more than those on the right. The growth is more rapid in children than in adults, and goes on faster in summer than in winter. It requires an average of 132 days for the renewal of the nails in cold weather, and but 116 in warm weather.

The Taste.—Different classes of substances have been found to affect the organs of taste in the following order: Bitters, acids, saline substances, sweets and alkalies. The taste nerves are nearly 2000 times as sensitive to quinine as to sugar.

Boiling Milk.—Experiments in St. Petersburg have shown that boiling milk greatly reduces its nutritiousness.

Gould, with all his millions, has to walk the streets at night to induce sleep.

A Company to utilize underground water for irrigation and other purposes has been organized at Pueblo, Col. The projectors claim to have discovered a point where by placing a dam on the bedrock of a valley 500 yards wide, a flow of a million gallons of underground water per 24 hours will be stored.

Domestic Economy

Salad Dressing, with Olive Oil.

Editors Press:—In reply to the request of "S." in your last issue, I will give my recipe for salad dressing, which is pronounced a success by all who have tried it.

Take one-half teacup of olive oil and the same quantity of vinegar, add one egg—or the yolks of two—well beaten, one tablespoonful sugar, small teaspoonful salt, a pinch of black pepper, also of ground mustard; blend half a teaspoonful cornstarch with vinegar, or water if your vinegar be strong; stir all well together and place over the fire and stir until it is heated through and the consistency of cream; do not let it boil.

The same dressing without the cornstarch is good without the heating, served with plain lettuce salad. L. E. S. W.

Potato Balls.—To two cupfuls cold mashed potato add an egg, a teaspoonful of butter, and salt and pepper to taste. Form with floured hands into small round balls, and fry in deep fat.

Coffee Cake.—Two cups sugar, one cup butter, one cup molasses, one cup strong coffee, one egg, two teaspoons each soda, cloves, one cinnamon, one teaspoon nutmeg, one cup raisins, flour.

Potatoes Hashed with Cream.—Chop cold boiled potatoes fine, and stir them into a cup of hot milk in which has been melted two tablespoonfuls of butter. Pepper and salt to taste. If you have cream, use this and half as much butter.

Butter Cakes.—Prepare dough as for quick biscuit, roll it out ¼-inch thick, and cut into small rounds. Roll each of these out until as thin as cookies, prick with a fork, and bake in a quick oven. When done, butter well. Leave in the oven half a minute longer and send hot to table.

Dropped Fish Cakes.—One cup of salt cod picked very fine, half-cup milk, one tablespoonful butter, two teaspoonfuls flour, one egg, pepper to taste. Make a white sauce of the flour, butter and milk, stir the fish into this, add the egg beaten light, season and drop by the spoonful into boiling lard, as is done with fritters.

Chicken Mince.—From the bones of a cold roast, boiled or fricaseed chicken cut all the meat, and mince it fine with a sharp knife, chopping with it two hard-boiled eggs. Stir this into a cup of gravy, or if you have none, use instead a cup of white sauce. Season to taste, fill a pudding-dish or scallop shell with the mixture, and serve very hot.

Lyonnaise Potatoes.—Slice cold boiled potatoes into neat rounds; cut a medium-sized onion into thin slices, and put it with a good tablespoonful of butter or bacon dripping into the frying-pan; when the onion is colored, add the potatoes, about two cupfuls, and stir them about until they are a light brown. Strew with chopped parsley and serve.

Hasty Muffins.—Two cups flour, two eggs, one tablespoonful mixed butter and lard, two teaspoonfuls white sugar, one teaspoonful baking powder, saltspoonful salt, one cup milk. Into the eggs, beaten very light, stir the melted shortening, the sugar, the milk and the flour, well mixed with the salt and baking powder. Stir well and bake in thoroughly greased tins.

Parisian Potatoes.—From peeled and washed white potatoes scoop out little balls with the cutter that comes for this purpose; boil them for five minutes, then put them in the frying-pan with two tablespoonfuls of melted butter; stir them about until every ball is well coated with the butter, pour into a colander and set them in the oven until brown; sprinkle with salt and a little minced parsley before serving.

A Delicious White Cake.—One cup of granulated sugar, one-half cup of butter, one-half cup of milk, 1½ cups of flour, one-half cup of cornstarch, two teaspoons of baking powder, whites of six eggs; cream butter and sugar and add the milk; mix flour, cornstarch and baking powder, and stir into butter and sugar; have the whites beaten very stiff beforehand and add. Any flavoring can be used; almond is especially delicate. This cake can be used also as a layer cake.

Broiled Steak with Mushrooms.—Broil your steak over a clear fire. Before you put it on, open a can of mushrooms, take out half of them, and cut each mushroom in two. Saute them in a frying-pan with a little butter, unless you have a cup of bouillon or clear beef soup or gravy at hand. Let them simmer in this for ten minutes, and when you dish your steak, pour gravy and mushrooms over it. Leave it covered in the oven five minutes before sending to table.

Salads.—One rule, often disregarded by second-rate salad-makers, is that a plain French salad should consist of one kind of vegetable only—lettuce, endive or Batavian, as you will, but never two of these mixed together, else their delicate and subtile flavors are impaired, if not destroyed. The English olla podrida of lettuce, watercress, mustard and cress, beetroot and radishes is a different thing altogether, although very appetizing when craftily compounded.

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SAN FRANCISCO:
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Traction Engine for Sale—Joshua Hendy Machine Works.
Percheron Stallions—Sackrider & Chisholm, Oakland.
Sheep—C. H. Dwinell, Fulton.
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See Advertising Columns.

The Week.

Active preparations are in progress for the various district and local fairs. So far as we can judge there seems to be rather more than the usual interest being taken by directors and contending exhibitors, and this bodes well for the exhibitions. Next week the season will open with displays in Los Angeles and Amador districts, and we trust they will prove auspicious and successful. The State Fair, we are glad to see, is commanding wider attention than usual and preparations for county exhibits are more general. The experience gained during the last few years should result in something notably fine in these undertakings. People are also learning to look for them and to canvass discriminatingly the materials brought forward, and this should be another inducement to enterprising citizens to take part in the work.

The carnival of the fire fiend has kept progress during the week past with the dance of the mercury. Hot weather is bad enough without the danger to life and destruction of property by the careless fire carrier. Careless campers, careless smokers and other public devastators should be caught and prosecuted.

The Lottery Evil.

It certainly seems now that something may be done to check the evil work of the great lottery swindles which are robbing the poor, misleading the weak and idle, corrupting public journals, and, in short, spreading abroad poverty and demoralization greater, perhaps, than can be traced to any other form of vice. As States seem powerless to cope with the prevailing evil, the thoughts of those who desire to free the people from it have turned to the National Government, and, fortunately, a hope of an effective remedy is now outheld. The President of the United States, in a message to Congress on July 29th, uses the following words:

If the baneful effects of lotteries were confined to the States that gave the companies their corporate powers and license to conduct business, the citizens of other States being powerless to apply legal remedies, they might clear themselves of responsibility by the use of such moral agencies as were within their reach. But the case is not so.

The people of all the States are debauched and defranded. The vast sums of money offered to these States for charters are drawn from the people of the United States, and the Government, through its mail system, is made an effective and profitable medium of intercourse between the lottery company and its victims. The use of the mails is quite as essential to the companies as a State license. It would be practically impossible for these companies to exist if the public mails were once effectually closed against them, and thus stop the prostitution of an agency only intended to serve the purposes of legitimate trade and decent social intercourse.

It is not necessary, I am sure, for me to attempt to portray the robbery of the poor and the widespread corruption of public and private morals, which are necessary incidents of these lottery systems. The national capital has become the sub-headquarters of the Louisiana Lottery Company, and its numerous agents and attorneys are conducting here a business involving probably a larger use of the mails than that of any legitimate business enterprise in the District of Columbia. There seems to be good reason to believe the corrupting touch of these agents has been felt by the clerks in the postal service, and by some of the police officers of the district. Severe and effective legislation should be promptly enacted to enable the Postoffice Department to purge the mails of all letters, newspapers and circulars relating to the business.

The message of President Harrison, from which the above extract is taken, was sent to Congress in approval of a bill which the P. O. Committee of the House of Representatives has agreed upon as a substitute in lieu of the number of pending bills adverse to lotteries and which has been ordered reported to the House. The committee says that the present legislation is inadequate and that more forcible laws must be enacted to prevent the use of the mails by lottery companies. The present law can be enforced by the courts only and conveys no power to the Postmaster General.

The substitute prohibits lottery circulars and tickets, lists of drawings, money or drafts for the purchase of lottery tickets, or newspapers containing lottery advertisements or drawings, from being carried in the mails or delivered by carriers; and the penalty of a fine not exceeding $5000 and imprisonment not exceeding one year are imposed upon any person depositing such matter in the mails. The Postmaster-General is also authorized upon the evidence of the existence of the lottery or gift enterprise to cause the registered letters directed to the company to be stamped "fraudulent" and returned to the senders, and he may also forbid the payment of money orders addressed to the lottery or gift enterprise company.

It is encouraging also that the friends of decency and morality in Louisiana are not cast down by the recent triumph of the lottery managers in the Legislature of the State, but are organizing vigorous war upon that villainy.

The N. O. *New Delta* contains an account of a highly successful picnic, given July 16th, by the Farmers' Union of Cheneyville, Rapides parish, at which Mr. Steve Pearce, Rev. Mr. Cooper, Mr. Grayson and Mr. Ed Hunter delivered short but stirring addresses on the lottery question, and in bitter opposition to the lottery amendment to the State Constitution. The writer says: "Mr. Hunter is a brilliant young lawyer, and his whole soul seems to be aroused on this subject, and we are proud of him.....Mr. Steve Pearce of Avoyelles is a man of great influence, and every word he spoke on this occasion went home to the hearts of his hearers.....I tell you, sir, we have the material up here in Rapides and Avoyelles that will make the lightning strike this lottery concern when the batteries are turned on."

The president of the Anti-Lottery League of Louisiana has called a convention of the Democratic opponents to rechartering the Louisiana lottery, or chartering any other lottery, to meet at Baton Rouge, on Thursday, Aug. 7th.

All these are hopeful signs of the awakening of public sentiment on this important subject. Legislation should now be secured in all the States which would check the infamous local traffic which is carried on. All publications of lottery advertisements, lists of drawings, glorifications of prize-winners, etc., should be made illegal and punished severely. California has certainly a duty to do in this regard, and this winter's session of the Legislature should do it.

Causes and Cure of Hard Times.

In seeking to get at the causes of "hard times," we find one that lies far deeper down, far nearer the heart of the matter than any question about free silver coinage, or the tariff, or loaning money on mortgages. These are indeed matters of equity, expediency and (so to speak) convenience; but deeper down lies the fact that the producers and actual manufacturers and *honest* carriers and commission merchants—deeper down, we say, lies the fact that those who honestly do needed work and are content with a fair share of what the world's work produces, are but part (alas that they are so small a part!) of those who enjoy the *products* of such useful industries. However ingenious the plans devised for making money plenty, the honest toilers will still be robbed of their due, so long as wolves, foxes, and leeches are propagated. The deeper cause of hard times is the prevalence of that spirit which breeds parasites and robbers, which allows young men and maidens to grow up with no manly nor womanly longing and resolve to be of use in the world; to grow up concerned only to get all they can—their own share and the shares of others, too, if possible—with no sense of the truth that if "the world owes them a living," it is only as they each one owe the world life-service.

Let us try to make the best of existing circumstances; but let us nurture in ourselves, in one another, and above all in the boys and girls who are to be the people a generation hence, the spirit of industry and a truer appreciation of life's duties and responsibilities. Let it be known that to have better times we must have better men and women to create them by a force of character and a manner of private and public conduct, which are now too seldom seen and too little praised.

The Black Wattle.

It would be well if those who go abroad and return bringing information of what is being done in foreign agriculture, knew more about what has already been accomplished in this State. For example, Mr. Merry, who was Assistant Commissioner at the Melbourne fair, has been writing pointedly of the value of the wattle-bark industries in Australia, and urging the adaptation of the wattle acacia to growth in the south and southwest of the United States, and urging that seed of the tree be imported and planted. Mr. Merry evidently does not know that the *acacia decurrens* has been growing successfully in this State for the last 20 years; that young trees and seed were sent out by the State University a decade ago and frequently since that time; that trees from this source are now bearing seed abundantly, and that there is no more need of importing seed which can be had in large quantities in this State by making arrangements with those who have the trees. These facts are well enough known to readers of the Rural, and it is not creditable to see in other California papers paragraphs calling attention to the tree, and the importance of sending to Australia for it, when probably the editors brush against the trees every day as they stroll through the streets of their towns or linger in the gardens of their subscribers.

The continued drouth in New Hampshire is seriously affecting the crop of both cultivated and wild small fruits.

Copperas for Vines.

Jacob Schram of St. Helena, the well-known vine-grower, is naturally much interested in the announcement made recently in one of the daily papers that Prof. Felix Michel, a Frenchman, had "discovered" that a solution of sulphate of iron (green vitriol or copperas) was a cure for the phylloxera of the vine. The reason Mr. Schram takes so much interest in this announcement lies in the fact that Mr. Schram himself announced the same thing at a vine-growers' meeting in this State a decade ago, and not only that, but has made constant use of copperas in his vineyard practice, and has found much benefit therefrom. We had a talk with Mr. Schram on the subject at the meeting of the State Horticultural Society, and he assured us that he not only used it on vines, but used it in his compost pile, aiming thereby to kill all injurious germs of insects or fungus which might lie therein. In application to the vine itself, the following is his practice as told by himself to a reporter:

In the spring before the vines bud, but after they have been pruned, I use fifty gallons of water to ten pounds of sulphate of iron. I take a barrel and pour in a bucket of hot water to warm it. Then I throw in the sulphate of iron and add another bucket of hot water and then fill up with cold water. I stir it to prevent the chemical from crystallizing. I apply it with a sponge tied to the end of a stick, thoroughly swabbing the vine and allowing some of the liquid to sink in around the roots. The mixture will prevent mildew and make weak vines strong. It is the most wonderful stimulant I ever saw, and as it is very cheap, there is no reason why everybody should not use it. None should be used while the vines are in leaf, as it will burn the leaves all up. During the past sixteen years, while vineyards all around me have been affected with phylloxera, mine has been perfectly healthy, owing to the use of this mixture. I do not think its efficacy can be longer controverted.

A Meeting of Dairymen.

The following brief notice which we find in the Santa Maria *Graphic* of last week is significant:

All dairymen are requested to attend a meeting to be held at Santa Maria on Saturday, August 2, 1890, at 11 o'clock sharp, to devise some means whereby we can dispose of our produce and realize its full market value. Dairymen attend, one and all.

This is another outcropping of the old complaint of the difficulty of marketing dairy products satisfactorily, and we have often expressed the belief that the dairymen by organizing, first in the localities and afterward in a general association, could much advance their interests. The *Graphic*, commenting on the meeting of Saturday, says:

The shipment of butter from this section is very large. There is probably no point on the coast where larger are made, and the quality is A 1, always commanding the top figures. Very seldom is it that butter of inferior quality is shipped, and then the shipper does not expect the market price for good butter, and when the returns come, showing a low price, he is not disappointed. But when butter of the best quality is dubbed "poor" or some flaw is continually found in order to give the commission man a "hole to crawl out of," the dairymen claim it is time to kick, and that is just what they are doing now. They have blood in their eye and mean business.

Fruit Prices.—There is complaint that quotations of San Francisco fruit prices cannot be correct because interior sales are made at higher rates. The fact is, San Francisco prices do not govern fruit sales now. Much of the fruit sent in for city sale is that which is not desired by canners or Eastern shippers who are buying in the orchards and pay high for what suits them. Naturally, then, the price in San Francisco may not be a guide as to the value of good canning or shipping fruit. It is probably due to this fact that our city prices sometimes seem too low.

Premiums at Golden Gate Fair.—Mr. George Bement, the well-known breeder and director of the Golden Gate District, brings us the welcome information that his association has increased its awards for some entries of live-stock this year, and has made especial provision for fast-walking horses, etc. Exhibitors should apply for the new premium list which will soon be ready for distribution.

The grape crop of New Jersey will be a failure this year, owing to rot and the rose-bug. The loss to growers will be more than $500,000.

The Mount Lyell Glacier.

The fact that the Sierra Nevada bears the record of having formerly been the source of immense glaciers has been recognized by all geologists who have visited the region, but no systematic study of the glacial phenomena displayed throughout a large portion of the range has been carried out. An arduous task, but one of fascinating interest here awaits the geological explorer.

The labors of the geologists of the California Geological Survey has shown that glaciers of great magnitude existed on the high peaks about which Kern and Kings rivers rise. Here are the most southern glacial records that have been reported in the Sierra Nevada, but the extreme southern limit of the glaciated regions has not been definitely determined.

A summary of what is known concerning the living glaciers of the Sierra Nevada will be found in an essay on the existing glaciers of the United States in the Fifth Annual Report of the U. S. Geological Survey. The present ice bodies of the Sierra are small and are but miniature counterparts of the glaciers found in many other regions. They occur mostly in deep cirques on the north sides of the more lofty peaks, and with few exceptions flow northward. Observations made during the survey of the Mono basin show that there are nine small glaciers within the area draining into Mono lake.

At the head of Tuolumne canyon, on the north side of Mt. Lyell, is the largest glacier in the neighborhood of Lake Mono. The accompanying view, taken from the Geological Survey Report, will obviate the necessity of a lengthened description. The moraines now forming about the foot of the glaciers are shown. Each of the ice bodies observed occurs at the head of a deep canyon which was once filled by a magnificent trunk glacier. The largest of these ancient glaciers originated in the amphitheater on the side of Mt. Lyell, and flowed down Tuolumne canyon, forming a veritable river of ice, over 2000 feet deep near its source and about 40 miles long. The present glaciers are perhaps the shrunken remnants of the ancient ice rivers, but they may have had a fresh beginning within quite recent times.



THE MOUNT LYELL GLACIER IN THE SIERRA NEVADA.

SANTA MARIA FAIR.—The catalogue and premium list of the 4th annual fair of the Santa Maria Valley Agricultural and Stock Association is just received from Sec'y R. W. Nuttall. The fair is to be held at Santa Maria, Sept. 10–13.

NAPA FAIR.—We are indebted to Secretary Conkling of the Solano and Napa Agricultural Association, for a complimentary ticket to the 25th District's fair, which is to be held at Napa City, Aug. 18th to 23d inclusive.

WOMEN CARPENTERS have appeared in London.

FLORIST AND GARDENER.

Mr. Hopkins Flower Farming at Menlo Park.

A writer for the *Bulletin*, who recently visited the floral farm of Timothy Hopkins at Menlo Park, San Mateo county, gives the following interesting notes of operations carried on:

This is the first year that the garden has sent sweet peas to the San Francisco market, and how successful the venture has been one may judge by the demand for them at local florists. Speaking dramatically, they were a great hit, being valued not only for their fragrance, but their odd colors. Those who visited the last exhibition of the State Floral Society saw a sample of these garden favorites. It is doubtful if so many varieties of sweet peas were ever gathered together in this State before. For over four years Mr. Hopkins and his head gardener, Mr. Lynch, have been collecting these. From England, Scotland, France and various gardens of the Eastern States, the seeds came. Such combinations of color and such high-sounding names were never seen or heard of in plant life of the average modest garden hereabouts. Eighteen kinds of sweet peas were flowered this season. All are high growers and trained to wire trellises. Here the blue and white Princess of Wales and the pink-hued Crown Princess of Russia blossomed side by side in international harmony. An odd pea that did not take very well was a sort of yellow pink. Ladies found that it would not harmonize well with the average costume, and so the novelty was neglected. The Jaynes is a variety from Chicago that has claims to the artistic. In picking, the varieties are kept distinct and tied in brilliant bunches. Most of the picking is done by Chinese, who become very adept to the work.

After the peas, those who watch our florist's windows will see Chinese asters. They begin blossoming during July, and daily many bunches will come here from Sherwood Hall. There are thousands of plants here growing and buds are on them now. After asters will come various bulbs, hyacinths, tulips, tuberoses. The floral calendar for this section, so far as cut flowers for the city market are considered, is figured as beginning in autumn with chrysanthemums. After them are roses and violets, and these last through until May. Then come sweet peas, then asters, and the bulb flowers tide over the gap until chrysanthemums are again ready. A novelty in the way of poinsettias, big waxy leaved flowers of flamingo red, will come this year from these Menlo gardens. One long hot-house is given up to them. They have sold here at times for 25 cents apiece. They are natives of Mexico, where they are known also as the Christmas flower. For a table setting this brilliant flower is unique and attractive.

More carnations have been sent to this market from these gardens this season than ever before. They are grown in hot-houses. They do better there for marketing purposes than outdoors, for there are more blossoms, and the late rains cannot damage them. The brilliant red Portia has been the best market variety. It is very prolific, and the color is one that patrons never tire of buying. Soil in these carnation-houses has to be renewed yearly. In the spring months these hot-houses are heated only by the sun, and during all warm days air has free circulation through them.

As in most gardens, the rose here is queen of most of the time. Occasionally a choice specimen of the imperial Japanese flower is forced indoors, when size more than quality is thought the prerequisite.

One thing about violet culture Mr. Hopkins has learned which other California gardeners may profit by. He has found that violets do their best under the big live oaks that abound on his place. The shade and the leaf-mold soil afford just what the violet needs. Here in all are about five acres of the modest flower that poets never tire of singing about. The plants run in long rows, about two feet apart, close up to the trunks of the oak trees. For over six months of the year these immense beds are a mass of blue and purple and white, and the delicate odor is so heavy in the air as to be almost oppressive. The double white Swanley, the double blue Marie Louise, the light-blue Neapolitan, the Czar and the odd Palmesia are the violets grown. The last-named is an Italian variety. It is blue, but on one of the petals is a faint dot of red so small as to be unnoticed except to the practiced eye. These five acres of violets are probably as profitable as any other five acres in the State. Every morning during the season the crop of violet blossoms is shipped to the city. The average shipment is 50 bunches, but some days, as, for example, last Christmas, when 150 bunches were sent, the shipment runs heavier. Head Gardener Lynch is a violet enthusiast, and Mr. Hopkins has to kindly, but firmly, repress his inclinations, else Sherwood Hall and all its structural surroundings would be razed to make room for violets. The head gardener has many assistants, but the demands of the cut-flower trade are such, and the improvements in hot-houses, etc., so many and necessary, that all are kept very busy. For his new nursery scheme Mr. Hopkins has great plans. Excellence of stock and all flowers true to name he expects to make the cardinal principles of the venture.

Violets and Chrysanthemums.

Four marketable flowers are here made specialties—the rose, carnation, violet and chrysanthemum. Others are incidental to merely fill in gaps of the floral calendar. Over 10,000 chrysanthemums are growing here now. They comprise all the popular sorts, and along in October their chromatic display will begin. They and the violets are grown out of doors, but the other specialties are shielded by glass all. Over 150 varieties and 50 times as many shrubs are growing. In the nursery project just started, many of these young roses will be utilized if other rose fanciers desire to draw on the stock here collected. All the new sorts of Eastern growers are here, but for the cut-flower branch of the business only a few standard varieties are relied on. These are kinds that have long been tried by the unerring standard of public favor and market value. It has been found that for forcing in hot-houses for the winter trade the best are Niphetos, Bride, Jacqueminot, Perle de Jardin, La France, Catnerine de Mermet and Papa Gontier. The Marechal Niel is grown to some extent. The Mermet is a growing favorite, and threatens to supplant in some degree the long popular La France. The Bride is a creamy white rose that is much liked by Eastern rosarians. The Bon Silene is not valued for forcing. There are many new sorts, with qualities superior to these old favorites but habit and familiarity with the old blossoms work against the kind and profitable reception of the new.

NEVADA'S POTATO CROP is reported to be uncommonly large this year.

TRACK AND FARM.

The Agnew Stock Farm.

A RURAL representative visited the Agnew Stock Farm, five miles south of San Jose, one mile east of Hillsdale, last week. Mr. Henry J. Agnew, well known as an importer and breeder of thoroughbred horses and standard trotters, has purchased the "Center Farm" containing over 200 acres of level valley land, and has mapped out and laid the foundation for an extensive breeding farm for high-grade stock only. A force of men is now at work on buildings to meet the change required for this embryo breeding establishment. The well-known stallion Dawn, formerly owned by A. L Whitney, has been purchased by Mr. Agnew, and will be transferred to his stud soon. Our artist has in preparation a photo-engraving of this great son of Woodnut, which with a full description of his progeny and also of Mr. Agnew's string of standard mares will appear in the RURAL.

This noted farm, bounded by the Coyote creek on one side and a low ridge of hills making a crescent in which are scattered gigantic native oak trees, as also locust, gum and pine trees that were planted by the early American settlers, determined Mr. Agnew to make this his country home. He contemplates building a new residence in the near future, and his accomplished wife is quite willing to exchange "Greenwood," their former residence in the Sandwich islands, for an attractive and picturesque home in the Santa Clara valley, so close to San Jose that the electric lights of that city can be distinctly seen.

The Trotting Horse in Kentucky.

The following extract is from a recent article by Mr. Dudley Miller in *Wallace's Monthly:*

Breeding trotting horses has so rapidly and successfully developed in Kentucky that it has become one of the most prominent and profitable occupations of its live-stock breeders. The amount received for trotting stock in Kentucky has been gradually increasing year by year, until it has to be counted by the millions. Last year the sales in this State amounted to between three and four million dollars. This seems rather surprising when we consider that breeding trotting horses is yet comparatively in its infancy.

The first record of a trotting match in America dates back only to 1818. The breeding of trotters as a business may be said to have hardly commenced before 1837, the year Andrew Jackson's two sons, Henry Clay 8 and Long Island Black Hawk were foaled, and perhaps it is better to say 1849, the date of the birth of Hambletonian 10 and that game racehorse George M. Patchen.

With the advent of Hambletonian 10, the greatest of all trotting-horse progenitors, unless that honor is due his grandsire, Imp. Messenger, the business began in earnest. Thus it is hardly 50 years that horses have been bred for the purpose of racing at the trotting gait, and already we have 3851 trotters that to Jan. 1, 1890, had made records of a mile in 2:30 and better.

There is quite a difference of opinion as to the blood best adapted to the foundation from which to breed trotters. Certain breeders say that we must breed them from pacers, others

from thoroughbreds, and still others say this is all bosh—"breed trotters from trotters."

Well, we were obliged to start with something before we had the trotter, the same as Adam had to give up a rib in order that a wife might be provided for him. The pedigrees of our trotters indicate that, instead of having sprung from a rib like Eve, they are indebted to both pacers and thoroughbreds for that combination of blood which has achieved the greatest triumphs in the trotting world.

Kentucky owes its wonderful success in breeding trotters to its favorable temperate climate, pure air (due to its elevation of about 1000 feet above the sea), to its limestone water, nutritious bluegrass, and other products of lime soil, which has a happy influence on the growth and development of the bone and muscle of live-stock; and lastly, but perhaps not least, to the intelligence of its people, who have availed themselves of these natural advantages.

To the year 1890 seven stallions had each sired 32 or more trotters in the 2:30 list, and one of them, Almont, was foaled in Kentucky, and sired by Abdallah 15, a New York bred son of Hambletonian 10.

Of the 15 gamest trotters, that by the records have made 100 or more heats in 2:30, or better, three were bred in Kentucky; Lady Thorn with 106, Jewett 151, and Harry Wilkes 160 heats.

There are 14 trotters that have records faster than 2:14. Kentucky divides the honors with New York in having four each, and California three, but Kentucky stands first and alone in having produced the fastest two: Maud S, 2:08¾, and Jay-Eye-See, 2:10, both bred by Mr. Alexander of Woodburn.

The Oakland Driving Club is an organization of recent date, but it is already in a flourishing condition. At the last regular racing day there were nearly 3000 people present. The gentlemen comprising the club are all owners of fast road horses, and they race against each other for the pure sport of the thing. They allow no pool-selling on the ground and no gambling machines of any kind. They pay their own expenses and do not expect to derive a revenue from the gate. They have already given one day of public racing, and a large crowd was the result. The sport is a perfectly legitimate one, and all of the road riders of Oakland are members of the club. It is the first club in the State that has had the courage to keep the pool-sellers away from their meetings.

Horse Sales.—A. C. Bruce of the Bruce Stock Farm, Rosemount, Minn., reports following sales: To C. G. Goodrich, Minneapolis, Minn., Aunt Joe, bay filly, one-year-old, by Nutwood 600, dam Mary F. by Mambrino Boy, second dam Adieu by Administrator, third dam Kentucky Clay, fourth dam Mambrino Chief; also Brown Filly by William L., foal of 1890, dam Mabel, full sister to Lou, dam of Axtell, 2:12; price for the two, $4000.

Artificial Honey a Myth.—The seasons of 1887 and 1888, especially the latter, were unpropitious for the "busy little bee," and yielded but little honey. The crop was a general failure, not only in America but also in Europe. The modicum of honey produced, especially of comb-honey, was soon exhausted, and the dealers as well as consumers, North, South, East and West were crying out for honey. The producers were inundated with letters and orders which they could not fill. Now here was the grand opportunity for the manufacturers of "artificial honey." If the article could be sold "at an immense profit at half the price" of the genuine article, as Prof. Wiley assures us, these bogus manufacturers could have coined money—there were "millions in it" apparently. But they failed to appear. The glucose was available, the paraffine ditto, and the "appropriate machinery" ought, in the interval under the law of progress, to have become still more "appropriate" and perfect in its work; but, strange to say, the famine of honey continued. The tempting prices were offered in vain. Not a pound of the stuff ever "materialized," so far as anybody could find out.—*Ex.*

Bridging Behring Straits.—"They can talk about my uncle as visionary and a mild lunatic all they please, but the day will come, and it is not so far off, either, when he will be recognized as a thoroughly sensible, though bold, engineer." So said William Henry Gilpin of Pueblo, Col., at the Hoffman house, New York, recently. Gilpin has been for the last two years with his uncle, Wm. Gilpin, ex-Governor of Colorado, in a tour of reconnaissance on the Northern Pacific Coast. William Gilpin believes that there is no serious obstacle in the way of building a railroad which will join the United States and Russia by way of Siberia, Behring straits, Alaska and British America. The only apparent difficulty is in crossing Behring straits, but this difficulty is only apparent. The straits are only 40 miles wide, and in the middle lies an island big enough to hold New York, Brooklyn and Jersey City combined. The water is nowhere more than 40 feet deep, and there will be no trouble in erecting piers on a hard bottom.

Sawmill Burned.—The steam sawmill belonging to Johnson & Palmer, together with 40,000 feet of clear lumber and about 95,000 feet of rough lumber was totally destroyed by fire last week.—*Adin (Modoc Co.) Argus.*

Agricultural Notes.

CALIFORNIA.

Alameda.

A Big Crop.—Livermore *Herald*, July 24: Joseph Stanley has probably produced the champion crop of wheat for the present season in Livermore valley. From 110 acres D. M. Teeter's machine thrashed 1889 sacks of wheat, averaging 146 pounds each, giving a total crop of 275,794 pounds. These 2758 centals in round figures give an average of a trifle over 25 centals of wheat per acre. During the heavy rains last winter this crop was several times covered with water, and several of our leading farmers predicted that it would amount to nothing.

Proving Title.—Settlers in the mountain ranges are proving up their titles.

Good Times.—Haywards *Journal*, July 26: The prices of our products are beginning to show signs of improvement all along the line. Barley is high, and hay bringing a good figure; wool sells at a paying price, and mutton is dear, while fruit is selling at extraordinary prices, both green and dried.

Butte.

Good Suggestion.—Oroville *Register*, July 24: R. M. Green suggests that when the oranges this fall are ripe in the grove owned by the Oroville Citrus Association, each one be wrapped in a special wrapper upon which will be printed a condensed history of the planting of this grove and the time it has taken the trees to come into bearing, with such other information as may be of value in attracting attention to this part of the State.

Inyo.

Cattle Scarce.—Inyo *Independent*, July 25: So many cattle have been sold in Owens valley this season that farmers are not cutting the usual quantity of alfalfa. Some of them have turned stock upon the fields after the first crop was taken off. At Bishop 2000 head of stock are reported sold recently.

Kern.

Fat Steers.—Bakersfield *Echo*, July 24: About 350 head of fat steers were brought down from the country about Glennville last week. They were bought by Geo. Coffee and a portion of them were shipped to the city, while some were placed on Mr. Coffee's ranch. They were two and three years old and the prices paid were from $20 to $25. Of course they were just off the range, but still they were in prime condition.

Large Artesian Well.—Bakersfield *Californian*, July 26: Probably the largest artesian well that has yet been opened in this county is that finished for Dr. Lask, in the northern part of this county, about two weeks ago. It is 15 inches in diameter and 713 feet deep, and has a seven-inch flow of 4,500,000 gallons per day. The doctor has a section of land and was desirous of irrigating it all from one well and has succeeded, having enough water and to spare. He has proved also that there is economy in the construction of a large well in many ways, and this only cost 25 cents per foot more than one of ordinary size.

Lassen.

Hay.—Susanville *Mail*, July 24: The hay crop will be very large this year, and in this section will be more than an average yield. The farmer who is fortunate enough to have an alfalfa patch of 50 or 100 acres is all right. This sagebrush land seems to be just the soil for alfalfa. Seven tons to the acre is not a bad yield, and after alfalfa gets a good stand, it seems to be no trouble to raise from 7 to 10 tons per acre.

Los Angeles.

Grain Crop.—L. A. *Herald*, July 26: A crop authority says: "The crop this year will be just about half what it amounted to last year. There was so much rain last winter that a large extent of land could not be plowed. What would I estimate the crop in Southern California at? Well, I should say that including the San Jacinto valley, the output of barley will be from 800,000 to 900,000 sacks, and of wheat about 500,000 to 600,000 sacks. That is about half the crop we had last year. But prices, I think, will rule high, and the quality of the grain will be better than last year."

Mendocino.

Shipment of Sheep.—Ukiah *Dispatch-Democrat*, July 25: Six hundred mutton sheep from Round Valley were shipped from this place on Tuesday. They were part of the 3000 recently purchased in that vicinity by a gentleman named Phillips.

Placer.

Potatoes.—Auburn *Herald*, July 26: We have seen no finer potatoes for a long time than a sample of Garret Chilis left at the *Herald* office a few days ago with the compliments of Mr. Jacob Roll, and raised at Uplands, his sightly home in Auburn. They were smooth and clear-skinned, and averaged nearly a pound apiece. They are another proof of what we have frequently said—that we can raise fine potatoes in these foothills, and ought to raise more of them.

Napa.

Napa Valley Wine Notes.—Healdsburg *Enterprise*, July 25: Chas. Krug says: "Our vines looked very promising at the beginning of June, but there has been a change. The grapes began dropping off, making an uneven formation. Some vines are loaded well, while others will bear scarcely any grapes. The progress of the phylloxera is rapid, and many vineyards look horribly. Very little damage by mildew thus far; by coulure considerable, particularly among Rieslings. All parties here report only half crop of Zinfandels, Malvoisies and Johannisberg Rieslings. The yield here will probably reach 3,500,000 gallons, provided there is no further loss of grapes. There are about 300,000 to 400,000 gallons of wine in hands of producers who have no trade of their own as against over 1,000,000 gallons unsold at close of August, 1889."

Orange.

Shippers Busy.—Anaheim *Gazette*, July 24: During the past six months the Cook & Langley Co. have shipped from Anaheim 125 carloads of fruit, including oranges, 25 carloads of potatoes, 15 carloads of cabbages and 5 carloads of corn—a total of 170 carloads. During this time there were 73 carloads of sheep shipped from here by Avery & Everhardy, and 20 carloads of general merchandise and 3 carloads of wine. In the past three weeks shipments of apricots have gone forward at the rate of a carload and sometimes two carloads per day. Reckoning on a basis of ten tons to the car, our fruit and vegetable shipments alone have aggregated 1700 tons, equal, at a cent per pound, to $34,000. The value of fruit now being shipped from Anaheim will go to nearly $300 daily, and shipments will continue for many weeks yet. Nearly 16,000 sheep have been sent forward from here in the past two months.

San Benito.

Land Jumpers.—Hollister *Free Lance*, July 25: Last week the papers announced the passage of a bill through the House by which all the unearned railroad land on the line of the uncompleted section of road between Tres Pinos and Alcalda reverts to the U. S. Government and is therefore open to entry. As a result of this rumor, a number of cases are reported of men who have taken up land which has heretofore been held in large tracts, such as the Topo ranch of Donnelly, Dunne & Co., and others.

To Enforce the Law.—Hollister *Advance*, July 25: A number of our farmers have come to the conclusion that the squirrel nuisance must be abated. They do not propose to keep their own farms clear of pests and feed those propagated by their neighbors. A fund has been obtained to test the validity of the ordinance passed by the Board of Supervisors of this county some time ago. If the law is upheld by the courts, suits for damages will be commenced against land-owners who fail to poison or destroy the squirrels and gophers upon their lands.

San Joaquin.

Tule Land.—Stockton *Independent*, July 27: Speaking of the tule lands, Mr. Ferris feared that the high water will prevent the cultivation next year of the tracts now overflowed, and two seasons' use of the land will probably be lost. The San Joaquin river has fallen but three feet at the railroad bridge, but it must fall 13 feet to be at low-water mark. He is of the opinion that low-water mark will not be seen this year, and the tule lands will not be drained.

San Diego.

A Sand Patch Product.—*San Diegan*, July 17: During the past few days people doing business down town have noticed a driver hauling beets through the city. On account of the talk there has been here about sugar beets, and the profits of beet culture generally, the driver and his beets aroused some curiosity. That driver was met by a *San Diegan* reporter this morning, and gave his name as John Gunton, and in answer to the first question in regard to the beets said: "No, they are not sugar beets; that is, I did not buy the seed for sugar beets. I have sold a lot of them to Mr. Babcock for the hotel, and the rest of them go to dairymen and stockmen to feed to cattle. Last December I leased a little land of the Coronado Beach Company down there on the neck of the peninsula near the brick yard. The land was all sand and people did not think I could raise anything. I planted just six acres in beet seed. I had no water for irrigation, and the crop had to take care of itself. But off that six acres I have sold and got the money for 100 tons of beets, and still have in the ground half the crop. The total yield will not be less than 200 tons. I find an easy market for them at $5 a ton."

Escondido Fair.—National City *Record*, July 24: The Board of the 22d District Agricultural Association, with nearly all of the members present, held a three-days' session recently at San Diego and made complete arrangements for the fair to be held at Escondido commencing Sept. 30th and lasting three days. The premium list last year was largely a copy of the State list, and some useless premiums crept in. These have been eliminated this year, which will make the list much more convenient. The directors have done everything in their power to foster improvements in live stock, poultry raising, fruit culture, etc. The banner won by the Cuyamaca Horticultural Society for the best general exhibit will be reawarded this year for excellence in the same line, and besides this, the association will present a medal to the individual making the best exhibit. Special prizes of $25 and $20 each will be given for the best general exhibit of deciduous fruits, citrus fruits, raisins, grapes, apples, olives and figs. In the cereal and vegetable departments the quantity required to be brought has been cut down from what it was last year. In the case of grain, 10 pounds is all that is necessary to bring. In some of the departments the premium offered is a year's subscription each to the Pacific Rural Press and the *Great Southwest*.

Citrus Crop.—National City *Record*, July 24: The excellent yield and good prices obtained for the orange crop the past season have still further enhanced the value of orange orchards. Those that have come to near maturity are now worth from $2000 to $3000 per acre.

Santa Cruz.

Sugar Beets—Fruit Shipments.—Watsonville *Pajaronian*, July 24: The beet crop continues to improve, and now promises to be much larger than it was estimated two and three weeks ago. In places where no crop was looked for two weeks ago the stand of beets is now very promising. The seed was slow in sprouting. There have been lots of surprises in beet farming, and not the least is the appearance of lots of beets in fields that were given up as being unproductive. At Moro Cojo W. V. Gaffey ran a heavy roller over a piece of beets that did not promise much, and in a few days a wonderful improvement in the stand was manifested....The fruit shipments from Watsonville are about four cars daily. Probably another car daily is added at Pajaro. The shipments of peaches, apricots and apples are increasing, while berries are falling off. The quality of the peach and apricot crop is extra good this year. San Jose canneries have bought up much of the blackberry crop, and the growers are now shipping to them. The second crop of strawberries is not yet on, and it promises to be light.

Sonoma.

Hop Contracting.—Santa Rosa *Democrat*, July 26: The hop-buyers have increased their offers for this year's crop to 18 cents. Not many of the growers are contracting for this price. A number contracted enough of their crop earlier in the year at 16 and 17 cents to be safe, and will hold off for a higher price on the balance.

Siskiyou.

Harvesters at Work.—Yreka *Journal*, July 23: Rose & Co., now farming the immense Scott tract in Shasta valley, near Sowden station, north of Montague, are doing a rushing business in harvesting, with a number of new style harvesters, expecting to get through with the work in about 40 days. One of the harvesting machines, operated by 32 horses, threshed 40 sacks of barley in 67 minutes last Saturday. Crops were never so good in Shasta valley and this vicinity as this year, the past extraordinary wet winter being just what was needed, in consequence of so many dry seasons, and especially the extraordinary dry winter of 1888.

Stanislaus.

A Runaway.—Modesto *Herald*, July 24: Last week the team attached to Henry Holverson's combined harvester ran away, and so damaged the machine as to lay it up for the season. At the time the accident occurred Mr. Holverson was harvesting grain eight miles south of Newman.

Sutter.

Dairying.—*Independent*, July 25: One of the important industries of Sutter county is dairying and cheese-making. The lands bordering along our rivers are specially adapted to the successful prosecution of that business. The attention of intending settlers and home-seekers is directed to this pleasant and remunerative industry which can be very much extended in Sutter county. One of the best features about it is that the returns begin to come in as soon as the business commences, and but a small capital is required after the land is secured. An average family can do all the work at home without the aid of hired help, and it is done principally in the shade and in the cool of the day.

Large Pack.—*Farmer*, July 25: The pack on peaches began at the cannery here last Tuesday. The crop of most of the orchards in this vicinity had been contracted for during last week at from 2 to 3½ cents, according to the grade. Wagon-loads of fine Early Crawford, Foster and Tuscan Cling peaches are constantly arriving. The peach crop purchased this season is estimated at 350 tons, all of which is of a higher grade than any year previous, being better in size, firmness, quality, etc. Plums will begin to come in this week and pears next week.

Steam Harvesting.—*Farmer*, July 25: The steam harvesting outfit of Ed Fagan of Gridley is at work in the grain of David Fisher, a few miles north of Live Oak, and it is well worth any one's time to go and see this great combined invention that is becoming such a strong factor in reducing the expenses in the agricultural world. The monster 50 horse power traction engine draws the harvester, upon which is mounted an eight-horse power engine; the latter power supplied by steam from the boiler of the traction, running the entire machinery of the harvester. With such steam-power under direct control, the outfit can be backed, turned, reversed and handled with an ease that is almost incredible. With this outfit Mr. Fagan has been cutting as high as 85 acres per day, the largest number of sacks thrashed being about 600

The Briggs Orchard.—Notwithstanding the damage done to the famous Briggs orchard, the yield this season will be excellent on some varieties of fruit. The Bartlett pear trees which have been under water most of the winter are loaded with first-class fruit. C. N. Tharsing, the manager, has unbounded faith in

the pear, and when the water was high last spring he sprayed all the trees with an outfit set in a boat which was floated through the orchard. This work destroyed all the pests and invigorated the trees to such an extent that the company will realize an enormous profit from the yield. All the trees in the orchard that have been killed by the water will be dug out and new varieties planted that will stand more moisture. Mr. Tharsing will plant over 20,000 pear trees alone, and his peaches, etc., will be all planted on plum roots, which is well adapted to low ground.

Tulare.

HIGH GRAIN FREIGHTS.—Porterville *Tidings*, July 25: Five dollars is the extra price charged for freight on each car loaded with grain from Deer Creek station to Porterville. One train brought out 16 cars last Friday, amounting to $80. This is on the off-time of the regular train. It is estimated that 100,000 tons of grain will go out from Deer Creek switch in the next three months, the freight on which would be $50,000—pretty good freight for moving the cars eight miles.

ALTA IRRIGATION DISTRICT.—Traver *Advocate*, July 25: The bonds of the Alta Irrigation district, for the purchase of water rights in the 76 canal, have been deposited in the Nevada bank of S. F., by the 76 Co.; also the 30 bonds, which were to be deposited with the treasurer of the district, are in his possession, and the 76 Co. have paid all their irrigation taxes, according to the agreement which they made in the transfer of the canal, etc., to the district. Those who wish bonds for their water rights can now obtain the same, but those parties who desire the money for their rights will have to wait until those bonds, which are deposited for that purpose, are sold.

A NEW LEVEE DISTRICT.—Visalia *Delta*, July 24: The most important business done by the board now in session was the formation of the Visalia levee district. The proposition will be laid before the property-owners within the boundaries of the district on August 9th, when an election will be held to decide whether a levee around the city is wanted. The proposed levee will cost between $5000 and $6000. The area will be called Land Levee District No. 1, and is organized under an Act approved April 15, 1880. The boundaries of the proposed district are as follows: Commencing on the south bank of the St. Johns river, 7½ chains west to the northeast corner of the southwest quarter of Sec. 23, Tp. 18, R. 25; thence westerly along south bank of St. Johns river to W. line of Sec. 12, Tp. 18, R. 24; thence S. to S. W. corner of said Sec. 12; thence W. 1 mile, S. 1, W. 1, S. 1½, E. 2, S. 120 rods, E 1½ miles, S. 40 rods, E 80 rods, S. ½ mile, E. 1½, N. 1, E ½, N. ½, E. 152.50 chains, N. 40 chains to place of beginning.

A STRANGE HOG DISEASE.—Visalia *Times*, July 24: The hogs belonging to Huse Campbell are dying at the rate of six or eight a day. During the month of June he bought about 20 head in Eshom valley, which he drove to his ranch six miles north of town, and where his other hogs, several hundred in number, were being pastured. Several days after the Eshom valley hogs had reached the Campbell ranch they began to die, being affected with a strange disease that has thus far baffled all attempts of Mr. Campbell to check it. He thinks, however, that it is akin to the hog cholera. It affects pigs and shoats principally, only two or three full-grown hogs having died. Some of the animals die shortly after being affected with the disease, while others linger for a week or ten days. Up to Sunday last, Mr. Campbell had lost about 100 hogs, at which time the disease appeared to be increasing in virulence.

CALIFORNIA LIONS AFTER SHEEP.—Visalia *Times*, July 17: Mr. Zimmerman, a large sheep-owner, reports killing two very large California lions a few days ago at his camp in the Kaweah meadows. The lions made a raid on a band of his sheep and killed ten of them before he killed the lions. The female lion measured seven feet nine inches from tip of nose to end of tail; the male was much larger.

Yolo.

MOORE'S DAM.—Woodland *Democrat*, July 24: For the past six weeks a force of men has been hard at work erecting a temporary dam across Cache creek near the head-gates of Moore's ditch, for the purpose of turning the water into the ditch for irrigating purposes, and allowing room for the reconstruction of the old dam. A few days ago this work was completed. Yesterday afternoon the dam broke and a large volume of water was rushing through the break. The pressure, it seems, has been too much for the old dam. We understand that it is this part that has broken, and although it will probably not stop irrigation altogether, it will prevent the use of any very large head of water, and will entail considerable expense on the ditch company to make the necessary repairs.

WALNUT TREES.—A Yolo Co. man, who has a grove of walnut timber, cut a carload out to thin it a couple of years ago, and got $3000 for it. A carload is 9000 feet, which makes the price received equivalent to $300 a thousand for the timber. At this rate, it would pay those who have land adapted to black walnut to plant it for the timber alone, even if they have to wait 20 years for such returns.

Yuba.

FRUIT SHIPMENTS.—Marysville *Appeal*, July 25: The Sutter County Fruit Company of this city have opened their fruit-shipping season in earnest, and are making daily shipments of pears, peaches, plums and grapes to Eastern markets. On Friday they shipped a carload of Bartlett pears to New York, and will make another like shipment to-day.

ARIZONA.

A CLOUDBURST.—A telegram from Tucson, July 21st, says a cloudburst occurred yesterday in the foothills of the Santa Rita mountains and covered an area of a square mile. The water rushed down the canyon in torrents, drowning a number of cattle and horses. Sixty-one wild animals, such as deer, bears and wolves, were caught in the flood. The Schofeldt ranch was completely devastated of crops, orchard and houses. A large freight team was caught in the flood and carried a mile. No lives were lost.

A NARROW ESCAPE.—Tucson *Citizen*, July 19: Mr. W. F. Selleck is in from the San Pedro with some cattle. He had a narrow escape in the cattle pens from an alfalfa-fed steer, which was made wild with the heat. He went into the corral on foot and didn't notice that the steer looked dangerous, but very soon found it out. He would probably have been made short work of, but for timely rescue by a companion on horseback, who soon sent Mr. Steer to the right-about.

NEVADA.

THE "SHEEP TRAVEL" LAW.—Reno *Gazette*, July 24: The first civil procedure over the "Sheep Travel" law passed by the last Legislature occurred Thursday. Newt Evans brought claim against a sheep-owner who last spring had driven his sheep over Mr. Evans' uninclosed alfalfa ranch, just north of Reno. Day before yesterday Mr. Evans, accompanied by Constable Upson, went over the field, and Mr. Evans claimed damages to the amount of $50. Three citizens were chosen as arbitrators, and while agreeing to Mr. Evans' claim under the letter of the law, allowed him a lesser sum of damages.

HEAVY HAY CROP.—Winnemucca *Silver State*, July 25: The hay crop throughout the county is said to be the heaviest in many years. The dry season last year had about the same effect on the meadow lands that summer-fallowing has on grain lands.

A NEW CANADIAN SHIP CANAL.—The Canadians, who have shown a great deal of enterprise in the matter of building ship canals and in otherwise providing for the increase of transportation facilities through their territory, have now under contemplation another scheme which will shorten the route between Chicago and Toronto some 600 miles. It is no less a plan than the building of a ship railway from the Georgian Bay about 66 miles to Toronto.

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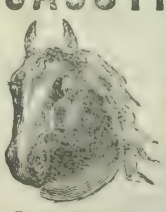
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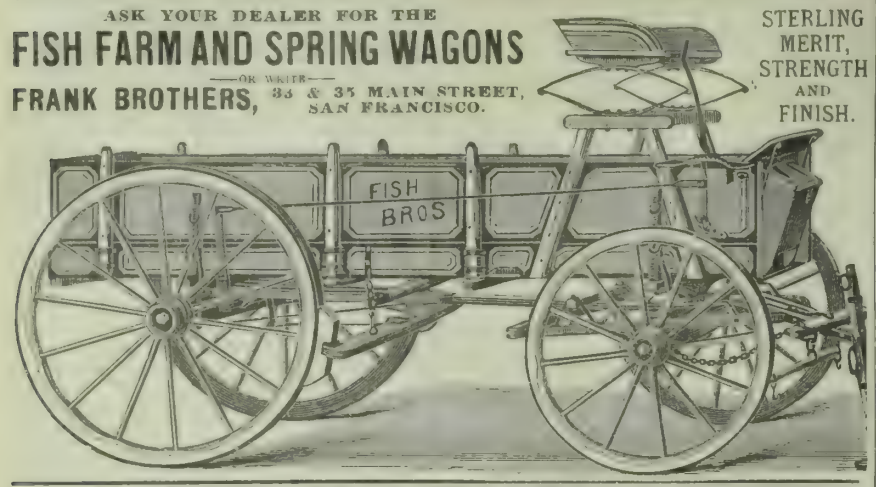
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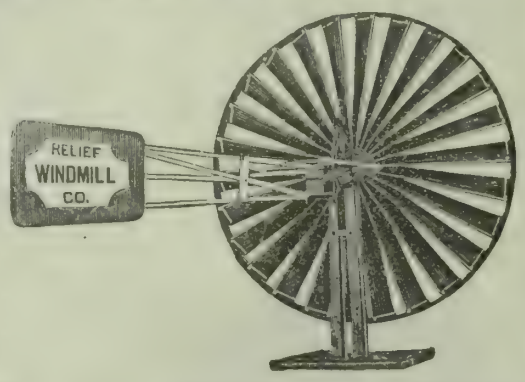
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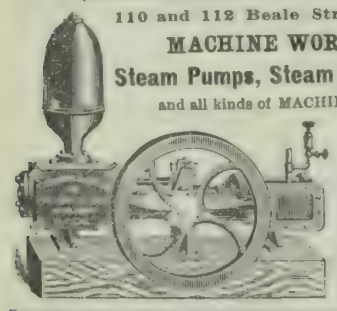
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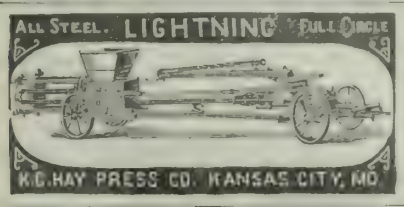
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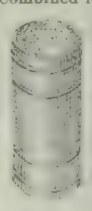
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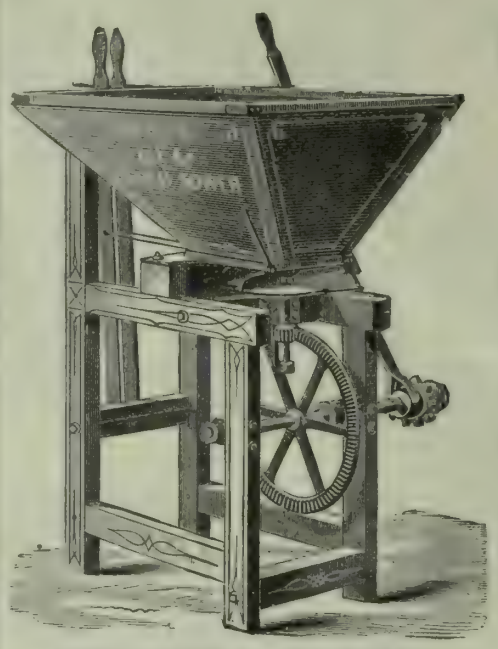
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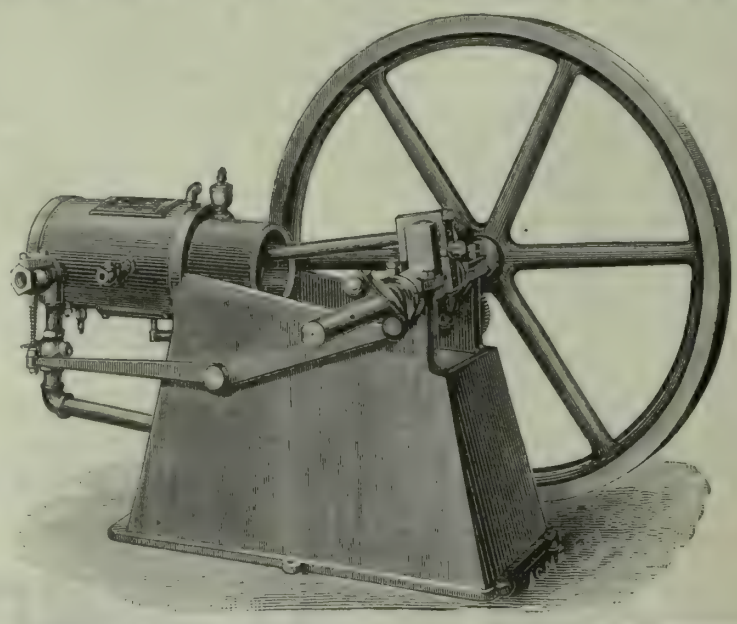
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HORTICULTURE.

State Horticultural Society.

The rush of the fruit harvest caused a light attendance at the meeting of the State Horticultural Society held at the State Board of Trade, July 25th. I. A. Wilcox presided, and on taking his seat, called the attention of the members to the death of one of the leading pomologists of the country, Patrick Barry of Rochester, N. Y., who died since the last meeting of the society. He hoped that the members would take some suitable action on this sad event during the course of the meeting. On motion, Messrs. Wilcox, Smith and Wickson were appointed to prepare a suitable expression of the society's sense of loss in the death of Mr. Barry.

The secretary read a letter from Mortimer Whitehead, Chief Special Agricultural Agent of the Census, which is published elsewhere.

There was a general conference concerning fruit crops now being gathered.

C. Sadler of Saratoga reported apples a fair crop, apricots light, prunes very large, but rather scattering on the trees. He had sold prunes at $50 per ton.

I. A. Wilcox of Santa Clara said prunes are a very light crop, apricots and peaches fair. Prunes had sold at $50, but were now going as high as $60 per ton. The prunes were best apparently on low heavy lands, on myrobolan stock, where there was surface drainage even if there was water below.

A. T. Perkins of Alameda said prunes grown on peach stock were larger than ever, but his soil was well suited to the peach.

Howard Overacker Jr. of Centerville reported apricots a small crop, prunes fine, peaches a good crop. Clings have fallen off considerably, but freestones have not.

M. C. Parkison of Antioch reported the peach crop fair. There will be only a light crop of pears. There is a worm there that eats down into the peaches. It is a little brown worm, about one-half to three-quarters of an inch in length, with a flat head. Where it attacks the peach the fruit is spoiled. There are considerable of them. They were never seen before. Almonds were ripening now. They are ten days later than two years before.

The chairman stated that he found a worm answering the above description in his prunes this season, which appeared for the first time.

F. C. Miles of Penryn said the Placer county cherry crop was the greatest ever known. Peaches were very large and handsome, but were scarcer than usual; the less weight is, however, compensated for by the better price. Pears are yielding well. All kinds of fruit are carrying well this year; even the Sharpless strawberry has shipped well. Mr. Miles said some growers concluded they had saved trees which were suffering from excess of water in the soil by digging down and uncovering the main roots, exposing the soil for awhile to the sun and air.

Emory E. Smith presented copies of a circular prepared by the Committee on the Registration of Plants, and reported that the scheme was commanding wide attention as a bright California idea.

B. N. Rowley submitted the following report of progress from the Fig Committee:

Your Standing Committee on the Fig, continued from last season, beg to report that we have again taken up the fig question and will endeavor during the coming season to make a most thorough examination of both the green and dried fig, that we may be in a position to report very fully upon this important subject at the end of this season. We herewith submit for examination two varieties of green figs grown in districts widely remote from each other, and ask that a temporary committee of three be appointed by the Chair to examine the same with the view of naming the varieties and pointing out such peculiarities in their growth as may be discovered, and that said committee report at this meeting.

B. N. ROWLEY,
ALFRED T. PERKINS.

As there was a manifest reluctance to serve on such a committee, it was explained that two of the specimens were types of the *Bulletin* imported varieties and the third was the White Adriatic. Mr. Lelong said that these *Bulletin* varieties had so far fallen off and were evidently unfertilized. This may not always be so. The trees were young, perhaps younger than the bearing age of the fig in Smyrna.

W. B. West was called upon to speak upon the raisin industry in the absence of Dr. Eisen. Mr. West was unprepared to make any general remarks upon the subject, but stated that he had recently received advices from Malaga that the inroads of the phylloxera were very serious, but they have hopes of regaining footing by the use of resistant vines in a few years. The crop in the old vineyards has declined so that the owners are selling out and emigrating. Mr. West promises to write out his information and comments therefrom for publication.

The secretary stated that complaint had come from red spider in a few places in Fresno county, and asked if this insect had made much of a record on grapevines. Mr. West thought not. He had trees ruined by red spider, while the vines beneath were unharmed. Mr. Miles said he had red spider on vines rooting in nursery.

The chairman asked for information concerning the Robe de Sargent prune, whether such a prune existed, its value and characteristics. At the next meeting this matter will be taken up, and all were requested to bring specimens.

Mr. Lelong said he had just seen an improved fruit tray which he thought very superior. Complaints had been made that fruit shipped in zinc trays tasted of the metal. J. L. Mosher of Santa Clara has produced a tray which overcomes all those complaints. The tray is dipped into japan and baked at a temperature of about 200 degrees. The tray so far as tested is a success.

B. N. Rowley questioned whether the fruit acids would not disintegrate the component parts of the japan preparation, but Mr. Lelong replied that it had not done so. The secretary was instructed to request Mr. Mosher to show a sample of his japanned trays at the next meeting.

W. H. Wiester exhibited a model of an improved apple-parer, which pares, slices and cores at one operation. It has a quick action and pares very true. It can be used as a parer, slicer and corer as desired.

The subject chosen for the next meeting was "Fruit Drying and Appliances Therefor."

On motion, the meeting adjourned to the last Friday in August.

Peaches in Southern Oregon.

The *Tidings* of July 19th says: Ashland will ship all the peaches that are sent out from Southern Oregon this year, and the bulk of them will go to the Sound country. Owing to the late frosts there will be by no means a full crop, but in the neighborhood of 15,000 boxes will be shipped from Ashland during the season. In the lower valley, the crop is almost an entire failure, and Ashland will be called upon to supply many places in the county that usually have peaches to ship.

Some two months ago Mr. Spafford, representing the Tacoma house of W. E. Simpson & Co., was in Ashland looking over the fruit prospects and made arrangements with S. B. Galey for the purchase of 10,000 boxes of peaches for his house. Mr. Galey has secured the crop on most of the larger orchards in this vicinity, and last Saturday made the first shipment of 250 boxes. Tuesday he shipped over 250 boxes, and expects to have shipped 2000 boxes by the end of the week. The price paid the orchardmen is three cents per pound in the orchard ready for packing. Three cents is a profitable price to the orchardmen, but even a higher price than that was paid for some choice lots.

Mr. Galey says the peaches are of better quality generally than those of last year, but do not surpass the crop of two years ago.

The Early Alexanders ripened pretty rapidly the first of the week, and the packers were kept hustling to get them ready for shipping.

J. W. Hockersmith thinks he will ship 3000 boxes during the season. Joe is doing a big business in the shipment of blackberries, and will have 4000 gallons on his own place. The blackberry crop about Ashland this year is a magnificent one—never better. The demand for berries is good, and the present price—25 cents per gallon—will probably continue during the season.

Fruitmen say that with the new orchards that will come into bearing next year, Ashland ought to ship 50,000 boxes of peaches next season. The industry is growing every year.

There is not much probability of the peach market being flooded this year with Southern Oregon fruit. The bulk of our crop going to Washington will make a better market in Oregon for the remainder of it.

Replanting Sour-Sap Orchard.

EDITORS PRESS:—Would you please oblige me by giving your opinion of planting trees in the same holes where dead ones are taken out that have died of sour sap? Do you think if there are a few roots left in the ground they will affect the young trees if the holes are left open from now till fall? Please answer through the PRESS and oblige a SUBSCRIBER, *San Jose.*

[We see no objection to the practice, providing water-proof stock is used or proper drainage is provided. If one replants with the same stock that has been killed, he simply takes his chances of the recurrence of the conditions which wrought the injury this year, and this may or may not happen for many years. As the trouble was not in the soil itself, and as the danger of injury from the decay of such roots as may be left is small, we would not be retarded from replanting in the same holes simply because of any danger in the hole itself. What have others to say on the subject?—EDS. PRESS]

Prunes to the Front in Tulare.

EDITORS PRESS:—On the 24th inst., Mr. I. H. Thomas, the leading horticulturist of Visalia, took a seat with me in my buggy and showed me the fine prune prospects about Visalia. We first went to Thos. Jacobs' fine fruit farm and nursery. His prune trees looked overburdened with the immense crop they were striving to bear up. His nursery stock has made an immense growth, giving evidence of the vast productiveness of the soil. We went to other places, all representing some 40 acres of prunes in full bearing, ranging in value for this year's crop from $200 to $500 per acre.

Visalia. E. B. TAFT.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING JULY 22, 1890.

432,851.—STUMP-PULLER—S. W. Baker, Olallo, Wash.

432,594.—VARIABLE ECCENTRIC — Dan'l Best, San Leandro, Cal.

432,929.—ROTARY WATER-METER—F. A. Bishop, S. F.

432,863.—STEAM-FOOD COOKER—Olive C. Christin, Brodie, Cal.

432,817.—VENTILATOR—Wm. T. Cottier, Oakland, Cal.

432,696.—WINDMILL—Evert DeWitt, Hanford, Cal.

432,934.—FIRE-KINDLER—Ford & Baird, Placerville, Cal.

432,827.—RAILWAY CATTLE GUARD—James C. Gould, San Jose, Cal.

432,730. — CABLE RAILWAY CONSTRUCTION—Geo. F. Gray, S. F.

432,732.—LIFTING JACK—I. N. Groves, Montesano, Wash.

432,411.—SALVE—W. R. Hall, S. F.

432,528.—RIVETING MACHINE—Harper & Hamlin, Los Angeles, Cal.

432,875.—WATER-WHEEL—C. C. Hogue, Corvallis, Or.

432,799.—BLIND-HOLDER—W. S. Holland, Pasadena, Cal.

432,876.—MIDDLINGS PURIFIER—R. I. Hottel, Cedarville, Cal.

432,670. — CONDUIT ELECTRIC RAILWAY — B. Jennings, San Jose, Cal.

432,944 — CONDUIT ELECTRIC RAILWAY — B. Jennings, San Jose, Cal.

432,831.— PENCIL BOX—H. Legge, S. F.

432,637.—LOADING ELEVATOR—Thos. McConnell, S. F.

432,954.—STREET-RAILWAY CAR — E. C. Sessions, Oakland, Cal.

The following brief list by telegraph for July 29, will appear more complete on receipt of mail advices:

California—Lucius E. Ashley, assignor of one half to A. Clark, Stockton, ditching and grading scraper; Daniel Best, San Leandro, wheel; Arthur H. Douchy, San Diego, valve and faucet; Geo. R. Driggs, San Francisco, water dyeing machine; Geo. Gibbs, assignor of one-half to F. A. Robbins, San Francisco, stock and die for cutting metal screws; John Jett, San Francisco, bicycle; Geo. H. Malter, San Francisco, aging wine; Edwin McDonald, willow washing machine; A. W. Reppy, assignor of one-half to T. C. Masteller, Oakland, automatic electric train signal; Thos. P. Mehwartz, Stockton, combination tool; Adrian R. Smith, San Francisco, feed-water heater and purifier; Dormer Walsh, assignor of one-half to F. H. Manker, San Francisco, game.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Fairs of 1890.

Los Angeles (6th Dist.), Aug. 4-9
Ione (26th Dist.), Aug. 5-9.
San Jose (5th Dist.), Aug. 11-16.
Willows, Aug. 12-16.
Napa (25th Dist.), Aug. 18-23.
Red Bluff, Aug. 19-23.
Nevada City (17th Dist.), Aug. 19-23.
Petaluma (4th Dist.), Aug. 25-30.
Chico (3d Dist.), Aug. 26-30.
Placerville (8th Dist.), Aug. 26-30.
Oakland (1st Dist.), Sept. 1-9
Marysville (13th Dist.), Sept. 2-6.
S. L. Obispo (16th Dist.), Sept. 2-6.
Auburn (20th Dist.) Sept. 2-6.
California State Fair, Sacramento, Sept. 8-20.
Santa Maria, Sept. 10-13.
Oregon State Fair, Salem, Sept. 15-20.
S. F. Mechanics Institute, Sept. 18-Oct. 25.
Nevada State Fair, Reno, Sept 22-27
Stockton (2d Dist.), Sept. 23-Oct. 4.
Rohnerville (9th Dist.), Sept. 22-26.
Quincy (11th Dist.), Sept. 22-27.
Lakeport (12th Dist.), Sept. 23-27.
Independence (18th Dist.), Sept. 23-26.
Concord (23d Dist.), Sept. 22-27.
Redding (27th Dist.), Sept. 23-26.
Bishop (Eastern Slope), Sept. 23-26.
No. Pac. Industrial, Portland, Sept. 25-Oct. 25.
Fresno (21st Dist.), Sept. 29-Oct. 4.
Escondido (22d Dist.), Sept. 30-Oct. 2.
Yreka (10th Dist.), Oct. 1-5.
Watsonville (24th Dist.), Oct. 1-4.
Spokane Falls (N-W Ind. Exp.), Oct. 1-Nov. 1.
Walla Walla, Oct. 6-11.
Susanville (Lassen Co.), Oct. 6.
Visalia (15th Dist.), Oct. 7-11.
Arroyo Grande, Oct. 8-10.
Santa Barbara (19th Dist.), Oct. 21-25.
Salinas (7th Dist.), Oct. 30-Nov. 4.

California's Stallions.

I beg to announce that, with a view of perpetuating the forms and characteristics of the leading stallions of California, I am issuing a series of lithographic likenesses. Each portrait issued will be an acknowledged likeness, the result of a close study of the horse and an artistic treatment of the subject. In order to secure for the series an immense advertising value, from a breeder's point of view, 4000 copies, at least, of each portrait will be issued.

Terms, $100 for first issue of 100 copies. In quantity, for advertising purposes, copies will be furnished at low rates.

H. BOYD, Artist.
268 Golden Gate Ave., San Francisco.

ATTENTION is called to the advertisement of Sackrider & Chisholm in this number. We can recommend correspondence with this firm in the matter of buying and selling stock and the livery business generally.

SEVENTY-FIVE MILLION gallons of water a day are now supplied by the new aqueduct of New York.

WORTHY OF GOOD WILL.—Rev. Dr. F. Horton's departure from Oakland will be generally and sincerely regretted. A strong personal force has gone out of the community. We have lost a man of large brain and vivid convictions. He has been a pillar of strength to many good causes and a citizen whom we dislike to lose. —*Enquirer.*

As a neighbor of Dr. Horton for years in Oakland, we delight in saying that Providence, R. I., is fortunate in securing so good a citizen and able teacher, who has the courage of his convictions and dares express them so significantly on important matters of public welfare.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Wanted, Situation

As foreman of a large fruit ranch. Have had 25 years' practical experience in growing, packing and shipping fruit. Was with John Bidwell, Chico, Butte county, Cal., two years.

[COPY OF LETTER FROM GEN. BIDWELL.]

CHICO, CAL., July 14, 1890.

To whom this may concern: The bearer, Mr. J. Luther Bowers, having been in my service for some time, several years ago, as a practical fruit-grower, it gives me pleasure to say that I found him competent and reliable in all respects, and as such I very cheerfully commend him to the kind notice of all persons. Very respectfully,

JOHN BIDWELL.

Can also give good Eastern references. Address,
J. LUTHER BOWERS,
Herndon, Fairfax county, Virginia.

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WORTH LOOKING AFTER
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Likely to Double in Price Soon.

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CHOICE FRUIT
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A well-cultivated farm of 480 acres, inclosed with 7 miles of fencing and cross fencing, with first-class improvements, 7-room, two-story, hard-finished house, nearly new, large barn, blacksmith shop, milk house, grain house and other outbuildings; 7 acres of bearing orchard; 30 acres of alfalfa; large flowing artesian well of splendid water, and first-class surface wells of water; in a healthy location in Southern California; is offered for sale at little or nothing for cost of improvements by the owner, who has engaged in other business. This property is offered for $25 to $30 per acre, on easy terms. The readers of this journal are assured that this chance is worth looking after. Parties in San Francisco who know the property can be referred to through the Publishers of this paper. LAND OWNER.

Will be Sold Very Reasonable,
TWO PERCHERON STALLIONS,
One black and the other gray. Both seven years old last spring. Can show their colts. Weigh 1750 and 1840 pounds.
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HENRY HAMILTON, Westley, Cal., breeder of Kentucky Jacks and Jennies, Draft Horses and Holstein Cattle. Jacks, Horses and Mules for sale.

EL ROBLAR RANCHO, Los Alamos, Santa Barbara Co., Cal., Francis T. Underhill, proprietor, importer and breeder of thoroughbred Hereford Cattle. Information by mail. C. F. Swan, manager.

JERSEY BULL No. 468 P. C. J. C. C. for sale cheap. A fine four-year-old animal. Address Dellwood Poultry Yards, Napa, Cal.

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San Francisco, Cal., Oct. 22, 1888. **PETER SAXE & SON, Lick House, S. F.**



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Standard and High-Bred Trotting Horses

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THOROUGHBRED HOLSTEIN CATTLE.

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On account of a contemplated change in business, we are authorized by Mr. White to dispose of all the high bred stock upon his noted breeding farm at Lakeville, Sonoma County. This comprises over forty head of high-bred Trotting Stallions, Brood Mares, Colts and Fillies, most of them standard and all exceptionally fine individuals. They consist of the get of Stallions by Electioneer, Director, Antevolo and other noted horses. Most of the brood mares are with foal by Hernani, one of Electioneer's most prominent sons. Several have been bred to Director. Taken collectively they are, in size and form, the finest looking lot of trotters yet offered in California, and their breeding is upon the most approved speed lines.

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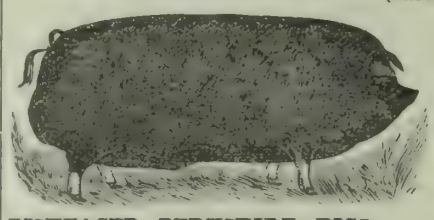
Catalogues are being prepared and will be sent on application only. Horses and cattle may be seen at ranch, six miles from Petaluma.

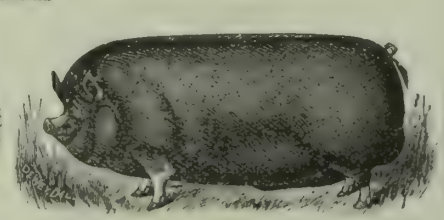
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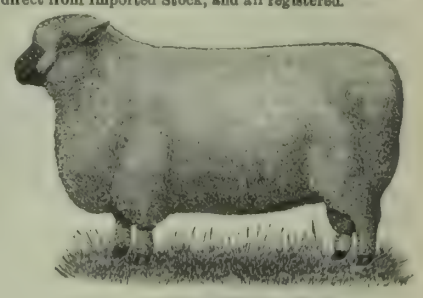
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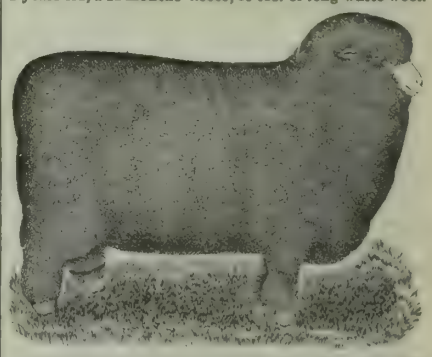


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I have bred from him and his get ever since and have never made an out-cross and never used the same ram but one year on the same flock. My rams at 2 years old will weigh from 160 to 180 lbs.; have a strong constitution, without wrinkles, and will shear on an average about 25 lbs., a 12 months' fleece, of long white wool. Rams and Ewes for sale. **P. O. Address:**

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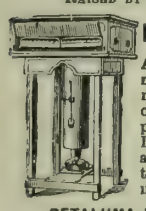
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The Only Reliable and Efficient Powder
For Stump and Bank Blasting. From 5 to 20 pounds blows any Stump, Tree or Root clear out of ground at less cost than grubbing. Railroaders and Farmers use no other.

As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing a second-grade, inferior to Judson.

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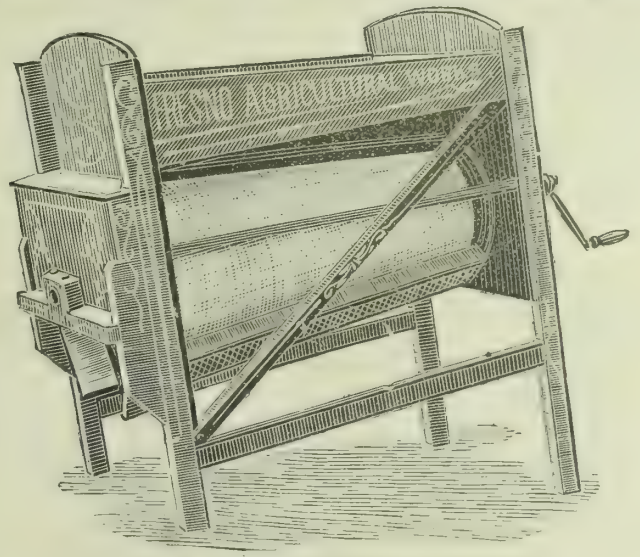
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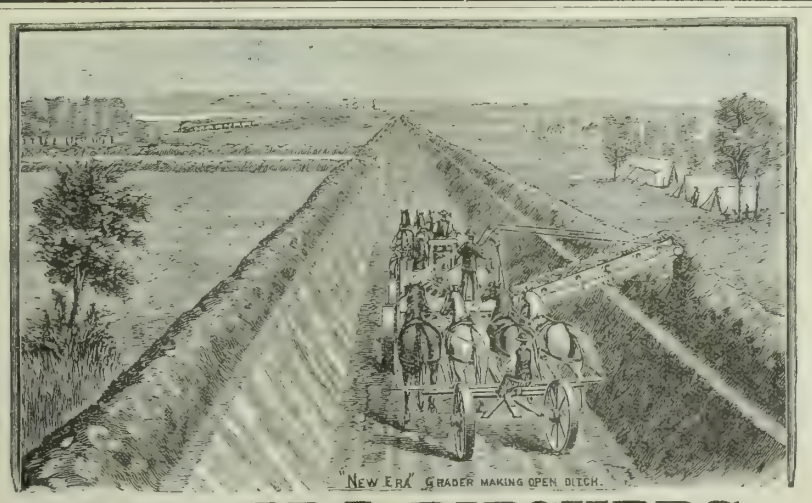
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC

SAN FRANCISCO, July 30, 1890.

Trading the past week in farm products has been quite active, with good prices ruling for both orchard and field products. All kinds of fruits are selling readily at higher figures, as are cereals, particularly wheat and barley. The advance in the latter is due to a short crop, and in wheat to a higher market abroad and a short crop in this State. The markets abroad have strengthened somewhat. The following is to-day's cablegram:

LIVERPOOL, July 30.—Wheat—Quiet but steady. California spot lots, 7s 2d to 7s 5d; cargoes off coast, 38s 3d to 38s 6d; just shipped, 37s 9d; nearly due, 38s 3d; cargoes off coast, firmly held; on passage, red wheat, very dull; white, firmly held; Mark Lane wheat, firm; French country markets, firm; wheat and flour in Paris, slow; weather in England, unsettled.

Foreign Grain Review.

LONDON, July 28. — The *Mark Lane Express* says: Improved weather has bettered the prospects of wheat, although expectations of a crop of over average are gone, the outlook being that it will be 5 per cent less than the usual crop. Barley, oats and beans suffered less than in 1889. In English wheat the patent is at fancy rates; good samples of heavy white are quoted at 38@42s and red at 32@38s. Heavy imports of foreign wheat have prevented an advance. The spring corn trade is firm. Maize is in large supply, yet good inquiry caused an advance of 1d in northern markets and 3d in southern markets. The demand for foreign wheat is fair at an advance of 6d. Foreign is firm.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	July.	Aug.	Sept.	Oct.	Nov.	Dec
Thursday....	7s4d	7s4¼d	7s4¼d	7s5d	7s5½d	7s6d
Friday	7s4¼d	7s4¼d	7s5d	7s5½d	7s6d	7s6¼d
Saturday	7s4½d	7s5d	7s5½d	7s6d	7s6¼d	7s6¼d
Monday	7s4½d	7s5d	7s6d	7s6d	7s6¼d	7s6¼d
Tuesday	7s4½d	7s4½d	7s5½d	7s6d	7s6d	7s6d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	38s 3d	37s 9d	38s 3d	Firmer.
Friday	38s 3d	37s 9d	38s 3d	Firm.
Saturday.....	38s 3d	37s 9d	38s 3d	Dearer.
Monday.....	38s 3d	37s 9d	38s 3d	Strong.
Tuesday	38s 3d	38s 0d	38s 3d	Firm.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York for the past week:

Day.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday	99	97	96¼	97	...	97
Friday.....	99	96⅞	95⅞	96⅞	...	96⅞
Saturday.....	99	96⅞	97	...	...	99¼
Monday	99	97	96⅞	98⅛	99¼	100
Tuesday.....	...	96⅞	96⅛	98⅛	98⅝	99⅛

The closing prices for wheat have been as follows at Chicago for the past week:

Day.	July.	Aug.	Sept	Dec.
Thursday.....	...	90	91½	...
Friday.....	...	91	92⅝	94⅛
Saturday	...	90	90⅝	90
Monday	...	90⅜	91⅛	91¼
Tuesday.....	92¼	92⅛	94⅛	95⅜

NEW YORK, July 30.—Wheat—$1.00¼ for cash, 97⅝c for August, 97½c for September, 99¾c for December, and 99¾c for May.

CHICAGO, July 30.—Wheat—92¾c for August, 94⅝c for September, 96½c for December, $1.00¼ for January, and $1.03 for May.

Effect of the Silver Bill.

LONDON, July 26. — Chaplin, the Minister of Agriculture, delivered an address at the Lincoln agricultural show to-day. He said the recent rise in the prices of agricultural products was due to an advance in the price of silver, in consequence of the passage of the Silver Bill in the United States Congress.

Excited Grain Market.

NEW YORK, July 28.—A bull fever was raging in both wheat and corn all day long, and in both cereals the prices for options advanced to the highest point of the year. The advance was not so great in wheat as in corn. The upward movement rests solely upon reports of damage to crops here and in Europe. Brokers report that most of the buying orders were received direct from Chicago. The total sales of wheat were 8,520,000 bushels; corn, 4,216,000 bushels.

Hops.

NEW YORK, July 26.—The first bale of hops of this year's growth has just been shipped to this city by R. J. Merkley of Sacramento, one of the largest growers of California hops. "It is very seldom in the history of the hop business," said a hop-dealer, "that the stock of old hops has been so light as at present. The result will be that the market will show an advance of more than 100 per cent over the opening in the September season. The outlook for the growing crop is not auspicious. The probabilities are that in the market for 1890 hops will not be sold for less than 25 cents a pound."

CHICAGO, July 26.—Hops are in small supply and firm. Old hops are in very much reduced stock, and new will not be ready for some time to come. Brewers are in want of stock and choice grades are very fair sale. Common and low grades at the same time are not cared for. Washington, prime, 21@23c ₩ lb; fair, 18@22c; California, choice, 22@24c; fair to good, 19@22c; Oregon, choice, 18@23c.

Eastern Wool Markets.

NEW YORK, July 26.—*Bradstreet's* says: There is little change to be reported in the wool market. The belief is general that the mills will have to buy more liberally soon, but the prospect for the near future does not favor higher prices. Some Montana wool, held by growers at 20c, is coming in on consignment. Ohio fleeces are quiet, but prices are steady. California wools are exceedingly dull and no interest is evinced in either the pulled or carpet varieties. Australian stock has received more attention this week. Hoosier people are showing more interest in lamb's wool. At Boston the receipts show a falling off of about 7000 bales in comparison with the corresponding week of last year. The London wool sales have been well attended and considerable animation in competition has appeared.

Malaga Raisins.

NEW YORK, July 26.—The new crop of Malaga raisins is not expected to exceed that of last year, 600,000 boxes. The first shipments are expected to begin early in September. Owing to the neglect of the lower grade for shipment to America, it is thought a large portion of such goods will find their way to England branded as the 2-crown black loose.

California Products.

NEW YORK, July 29.—The following is from the *Commercial Bulletin:* Monday's reports indicated that the speculative fever in the primary markets for California dried fruits—prunes, apricots and peaches—continues unabated. The growers are having things pretty much their own way. The packers, with strong speculative proclivities, are also doing their utmost to keep prices on the jump. There is just enough of the bullish spirit in this locality to help along the manipulations at the centers of supply. A prominent packer, who, it was reported, refused to confirm the sale of 70 carloads of prunes made by Eastern agents under alleged misrepresentation, claims to control at least one-third the entire crop. This packer, it has also asserted, has made no prices, and will make none until the latter part of next month, while a number of competitors seem to be holding back awaiting his figures.

There are some signs of a bull movement in the new crop of California Lima beans, in which one or two Eastern firms seem more than curiously interested.

Smyrna Figs and Raisins.

NEW YORK, July 30.—A circular issued by Alfred H. Keun of Smyrna, under date of July 12th, estimates the crop of Sultana raisins at 30 per cent less than that of last year, a falling off of 11 per cent in Eleme raisins, an increase of 10 per cent in Black raisins, and a falling off of 30 per cent in figs. The crop of the latter is estimated at 12,900 tons, against 19,250 tons last year, and an average of about 15,000 tons during the preceding three years. The 1890 crop of Sultana raisins is placed at 15,000 tons. Last year's yield was 21,200. The average for 1886 and 1887 was 27,000 tons.

Local Markets.

BARLEY.

	Buyer Season. H.	L.	Seller 1890. H	L	Buyer 1890. H	L.
Thursday...	130	129½	119¼	119¼	123½	123½
Friday.....	130½	130½	120	119¾	124½	123½
Saturday....	130½	130½	...	...	124½	124½
Monday.....	131½	131	...	...	126½	124¼
Tuesday.....	132½	131½	121¾	121½	126¾	125¼

WHEAT.

	S. S.	Nov	B. '90.	B 8 '90	S '90.
Thursday....	h.	136½	144¾	152	141¾
	l.	136¼	145	152¼	141½
Friday.....	h.	....	145¾	153½	....
	l.	....	145¾	153	....
Saturday....	h.	....	146¾	....	138¾
	l.	....	146¼	....	138¾
Monday.....	h.	143½	147¼	156½	....
	l.	143	147¼	156½	....
Tuesday.....	h.	....	147	155	138
	l.	....	146¼	154½	137

BAGS—The market is reported steadier but no higher for standard size grain bags. Spot quoted at 6⅝@6¾ cts.

BARLEY—The local market has not only held strong but has advanced slightly. The upward movement appears to be well grounded, and therefore looks well for the future. A fair shipment of brewing was made the past week to New York. In futures, trading has been quite active, with slight but attractive fluctuations. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—200 tons, $1.28; 100, $1.28¼; 100, $1.28⅜; 100, $1.28½; 100, $1.29; 100, $1.29¼; 200, $1.29⅝; 100, $1.29¾; 300, $1.29⅞; 800, $1.30. Buyer season—500 tons, $1.35. May, 100 tons, $1.28. Seller, 1890, new—100 tons, $1.23; 100 tons, $1.23¾ ₩ ctl. Afternoon Session: Buyer 1890—300 tons, $1.29; 600, $1.30. Buyer season—200 tons, $1.34⅜; 500, $1.34½; 100, $1.34¾; 500, $1.35; 200, $1.35¼. Spot—100 tons, $1.23¾. Buyer season, Brewers—100 tons, $1.36½ ₩ ctl.

BUTTER—Under light stocks and a good demand, choice to gilt-edged butter is strong and higher. Receipts the past week show an increase, yet the market closed very strong.

CHEESE—The market is strong at another advance. The demand is exceptionally good.

EGGS—The market shows more strength but with no advance in quotations. Receipts show a falling off, but the free supply in cold storage is against much of an advance in prices.

FLOUR—The market is strong at an advance. The demand is improving.

WHEAT—The sample market has been quite active at higher prices. Buyers have been compelled to bid up so as to obtain supplies. Old wheat for milling is quite scarce. Harvest returns are so far in as to enable us to form a fairly correct idea of the outturn. It now looks as if the crop will fall short of last year fully 200,000 tons and the shortage may reach 250,000. This is due to the very light outturn in the Sacramento valley. In futures, trading has been more active with slight fluctuations noted. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—200 tons, $1.46; 200, $1.45⅞; 400, $1.45¾. Buyer season—100 tons, $1.54¾; 100, $1.54⅝ ₩ ctl. Afternoon Session: Buyer 1890—200 tons, $1.45. Buyer season—700 tons, $1.54¼; 200, $1.54½. Seller 1890, new—200 tons, $1.37¾. Seller season, paid—500 tons, $1.40 ₩ ctl.

[COMMUNICATED.]

Market Information.

Cereals.

The wheat market has held very strong at advancing prices in sympathy with the foreign markets. The advance abroad is due to bad weather in England and France, light visible supplies and higher prices ruling for silver. The close money market abroad and the feverish feeling in financial circles are against a decided bull movement promoted by speculation, therefore the present upward tendency is based on legitimate business principles, supply and demand, and being so grounded gives promise of greater stability in the future. Our local market, although higher, would do still better were it not for an advance in wheat charters. The latest charters reported are as follows: 43s 9d for a handy-sized iron vessel to Cork, U. K., Havre or Antwerp, and 40s for a 1789-ton registered iron vessel to Cork f. o. The vessels on the way to this port show a registered tonuage of about 20,000 tons in excess of last year at this date, while the tonnage on the way to Portland, Puget Sound and British Columbia aggregates 102,964 tons registered (carrying capacity 164,742 tons) against 39,576 tons registered at the like time in 1889.

This year's grade of wheat in California averages better than in 1889, yet it is very mixed. Millers say that a large proportion of the large plump wheat is light in gluten, going more to bran than to flour. They also say that while the flour will be very white it will not be strong. For family use this will be unobjectionable, but for bakers it will hardly answer, for the latter like flour that requires a good deal of water, for it makes more loaves of bread to the 100 lbs.

Barley has gravitated to still higher prices with a strong market at the close. The large increased number of horses at work on railroad construction, drawing, farming and city use give confirmation of a larger consumption this season than for several years past, and as the crop is short, the supply bids fair to run short, or, at least, be quite light by the end of the season. The export movement is light, but it is likely to increase if the bad weather abroad does as much injury as it is now claimed that it will.

Corn has held strong with an advance obtainable. It is claimed that the bulk of the stock is held by two firms. The growing crop is said not to be quite so promising. Worms are reported worse than ever before. In the Central States the crop is said to promise a yield below an average.

Oats are strong under light supplies and a fair demand. The advance in the price of barley has had a favorable effect on oats.

Rye is firm at current quotations.

Feedstuff.

In ground feed the market is firm for bran and middlings, and very strong for ground barley and feedmeal. The consumption shows a steady increase.

Hay has been coming in quite freely, causing some buyers to ease off in their bids, but as yet there has been no perceptible influence on the market owing to the free consumption. The high price of wheat and barley has unquestionably caused fewer fields to be cut for hay, which, if correct, will cut off a large source of the supply of hay.

Fruits.

Apples are coming in very freely with the quality generally good. The market is naturally easy under free supplies of other kinds of fruits. The hot weather of the past week caused fruits to ripen more quickly, which is having the effect of causing a shading off in the prices of some kinds.

Apricots, peaches, plums, and pears are in free receipt, but the market holds up well, with at the close a slight advance obtainable. The quality is still poor, although more large sized are being received, but they, as a rule, will not keep long. It is probable to this is due their being shipped to this city. Canners are buying all they possibly can both in this city and in the country. The prices paid are still very high for the best canning varieties.

Orchardists who accepted the RURAL PRESS advices of a short fruit crop at the East and higher prices here have no cause to complain. Early in the season we gave the above information, which our contemporaries kept back until buyers had made heavy purchases, when they too began to give correct information.

There will be an unusually large quantity of fruit dried, but notwithstanding this the better informed expect all to go into consumption at good prices—no lower but probably higher than now ruling. As far as the writer can learn, driers are meeting the market, preferring to sell now when the fall and speculative demand is on. It is difficult to give correct quotations, for much depends on the locality, how cured or dried and also how sent to market. At this time anything will sell. There have been heavy sales of dried grapes, future delivery, ranging from 3c to 4c ₩ lb in the interior. As near as can be learned the following are the ranges in this market, with fancy selected, dried and packed fetching an advance on outside quotations: Evaporated peaches, 16@18c; bleached apricots, sacks, 13½@16c; boxed, 16@17c. White nectarines, 13@15c; red, 11@13c. Prunes, 8@11½c; grapes, 3½@4¼c.

Raisins for September and October delivery are in good request with buyers naming $1.75@2.25 for layers. Fancy, of course, fetch more money. It now looks as if the pack will not only be larger, but finer, and with care in selecting and packing, should give California raisins a still better reputation.

Vegetables.

Garden truck continues in liberal supply so far as cauliflower, lettuce, radishes, table onions, etc., are concerned, but beans and peas are getting old and consequently sell slowly. Green corn is in free supply. It still continues to be wormy. Summer squash, egg plant and okra are being received quite freely. Cabbages both in size and quality make a good showing.

Onions are selling for more money. The higher price is due to lessened receipts and a fair demand.

Free receipts of potatoes are causing the market to ease off. The quality appears to be better this year. There is still a fair outside demand, which begins to show signs of slacking off. Nevada and Oregon will have large crops.

Live-stock.

The market under free offerings is weak. The warm weather keeps retail dealers from buying freely. The condition of bullocks, sheep and hogs is of the best. It is generally claimed that the supply of hogs for fall and winter use is heavy, but then the consumption is larger.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4¼@4½c ₩ lb; dressed, 7@8c ₩ lb.; heavy, 3⅞@4⅛c ₩ lb.; dressed, 5¼@5¾c ₩ lb. Stock hogs, 4¼@4⅝c ₩ lb.

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¾@—c ₩ lb.; second quality 5@5¾c ₩ lb.; third quality, 4½c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6@8c ₩ lb.; large, 4@6c.

MUTTON—Wethers, 7@7½c ₩ lb.; ewes, 6½@7c ₩ lb.; lamb, spring, 7@8c.

Miscellaneous.

From the *Commercial News* of July 30th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port.....	265,158	245,196
On the way to neighboring ports	20,262	24,822
In port, disengaged.....	4 736	12,868
In port, engaged for wheat....	45.346	53,530
Totals.....	330 502	356,416

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to July 25, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls.....	397 585	743,974
Flour, bbls.....	63.430	92,789
Barley.....	8,662	27,518

Poultry is generally weaker under fairly free receipts.

Beans are decidedly mixed; while some kinds are stiff, others are weak. Whites and bayos are firm, while pinks and Limas are weak.

New crop hops have been contracted for fully up to 75 per cent of the total outturn. The remainder of the crop is being held back, no offer under 20c being entertained.

Wool moves slowly. Late English advices report that luster goods wools are easing off, while the finer grades show a better front. It now looks as if slightly better prices may obtain in this country for fine wools, which would cause a better demand for Californian.

In hog product, hams are strong and higher.

The stock of nuts is very light, barely enough to give a basis for quotations.

Honey is in better request, causing slightly higher prices to obtain for the more choice. Two-lb comb is hard to sell, but 1-lb is wanted. White comb 1-lb frame, choice, 10@11½c, ordinary to good 7@9c. White, extracted, 5¼@5¾c, amber, 4c.

Beeswax is strong at 24@26c.

Exports by sea the past week aggregate as follows: Wheat, ctls, Central America, 2202; Cork, 276,548. Flour, bbls, Central America, 2503; South America, 250; Guayquil, 2600; Guaymas, 750; Mahukona, 200. Brandy, gals, New York, 3464. Wine, gals, New York, 199.864; Central America, 233; Guaymas, 1061; Victoria, 680. Beans, lbs, Central America, 82,260; Victoria, 11,177; Sydney, 12,498; Auckland, 3026; Victoria, 2816. Corn, ctls, Central America, 2262. Hops, lbs, Central America, 160; Victoria, 395; Sydney, 750; Dunedin, 1031. Raisins, boxes, Central America, 80. Hay, bls, Honolulu, 575. Dried fruits, lbs, Victoria, 750; Sydney, 1250. Honey, cs, Sydney, 20. Canned fruits, cs, New York, 1250. Broomcorn lbs, Melbourne, 37,726; Auckland, 8514; Guaymas, 2000. Mustard cake, lbs. New York, 21,410.

Produce Receipts.

Receipts of produce at this port for the week ending July 30th, were as follows:

Flour, qr. sks....	93.725	Middlings, sks...	4,057
Wheat, ctls.....	355,829	Alfalfa, " ...	....
Barley, "	58,703	Chicory, bbls..	211
Rye, "	47	Broomcorn, bdls..	....
Oats, "	4.144	Hops, bls.....	133
Corn, "	1,079	Wool, "	907
*Butter, "	1.229	Hay, tons.....	4 427
do bxs	288	Straw, "	174
do bbls	....	Wine, gals.....	236,140
do kegs	19	Brandy, "	7.920
Cheese, ctls	1,108	Raisins, bxs	502
do bxs	77	Honey, cs .....,	156
Eggs, doz.....	32,920	Walnuts, sks	....
do " Eastern.	36,720	Flaxseed, sks	....
Beans, ctls.....	279	Mustard, sks	....
Potatoes, sks....	25,384	Almonds, sks	....
Onions, "	1,501	Peanuts, sks.....	....
Bran, sks.	14,031	Popcorn sks.....	....
Buckwheat, sks...	....		

*Overland .... ctls.

California Fruits East.

NEW YORK, July 24.—A large dealer in an interview to-day confirmed all that has been said concerning the field for California fruits this season. He deals in fruit largely and is in a position to speak with authority. He says all fruit crops in Delaware, New Jersey and New York are practically ruined. What promised to be a fine crop of Bartlett pears in this State has been destroyed. The prices for California fruit in this market are higher than for fruit grown near by, because the quality is superior and better graded and packed. He says it is not an exaggeration to say that a few years hence California will entirely supply this market with fruit. Illustrative of the readiness of the market, he said that he sold four car-loads of California fruit at auction this morning within 45 minutes. He predicts 3500 car-loads of California fruit will be sold in this market this season. At his auction sale to-day the following prices were realized: Gros prunes, $4.40; Washington plums, $3.35; Columbia plums, $3.15@3.90; German prunes, $3.15; P. D. plums, $3.10@3.30; early Crawford peaches, $3.15@4.05; Bartlett pears, $2.95@3.10; also one car-load of California canteloupes, very green, $1.10@2.35.

CHICAGO, July 25.—The Earl Fruit Co. sold California fruits to-day as follows: Bartlett pears, $2.85@3; peaches, $1.50@2.10; Fontainebleau grapes, $1.25@1.65; figs, 65c@$1.40.

Porter Bros. sold five carloads as follows: Bartlett pears, $2.40@2.75; Fontainebleau grapes $1.25@1.55; nectarines, $1.65; plums—Washington, $1@1.55; Bradshaw, $1.50@1.75; purple Duane, $1.25@1.95; Columbia, $1.80@1.95; Coe's Golden Drop, $1.30; Egg, $1.85; Fallenburg, $1.65; Red Egg, $2.85; Crawford peaches, in very small lots, $1@1.80; German prunes, $1.65@2.35; French prunes, $2.30.

NEW YORK, July 25.—E. L. Goodsell sold at auction to-day three cars of California fruits as follows: 500 bxs early Crawford peaches, $3.20@3.70; 100 bxs Bartlett pears, $2.70@3.10; 350 hf-bushel bxs, $1.80@1.85; Royal apricots, $1.50@1.70; 900 bxs Bartlett pears, $3.15@3.25; Coe plums, $2.45@

2.85; Bradshaw plums, $3.15; purple Duane, $2@2.65.

CHICAGO, July 26.—The Earl Fruit Co. sold four cars of California fruit to-day as follows: Bartlett pears, $2.55@2.60; yellow Egg plums, $1.60@2.50; Crawford peaches, $1.45@1.65; Fontainebleau grapes, $1.60; nectarines, $1.65.

Porter Bros. sold four carloads as follows: Peach plums, $1.90; Crawford peaches, 90c@$1.65; Fontainebleau grapes, 80c@$1.40; Tucson Clingstone peaches, $1.70; Bartlett pears, $1.70@2.50; Bradshaw plums, $1.50; Columbia, $1.40@1.60. One carload was in very bad order.

The Montgomery Auction Co. sold seven cars of California fruit for account of the Earl Fruit Co. and W. R. Strong Co., at the following prices: Bartlett pears, $2.25@2.65; early Crawford peaches, $1.45@1.55; Hale's early, $1.25; nectarines, $1.65; plums—purple Duane, $1.50@1.65; Egg plums, $1.60@2.50; Washington, $1.30; Royal Hative, $1.20@1.45; Columbia, $1.65; German prunes, $1.35; Gros, $1.75@1.85; Fontainebleau grapes, $1.50; Hemskirk apricots, $1.25@1.45; Moorpark, $1.10@1.45.

CHICAGO, July 27.—The Earl Fruit Co. sold four carloads of California fruit at auction yesterday at the following prices: Bartlett pears, $2.55@2.60; yellow Egg plums, $1.60@2.50; Crawford peaches, $1.45@1.65; Fontainebleau grapes, $1.60; nectarines, $1.65

Porter Bros. sold yesterday four carloads of fruit: Peach plums brought $1.20; Crawford peaches 90c to $1.65; Fontainebleau grapes, 80c to $1.40; Decker peaches, $1.40; Tucson cling peaches, $1.70; Bartlett pears, $1.70 to $2.50 (one car was in very bad order); Bradshaw plums, $1.50; Columbia plums, $1.40 to $1.60.

The Montgomery Auction Co. sold yesterday for account of the Earl Fruit Co. and the W. R. Strong Co., seven carloads of California fruit. The prices realized were as follows: Bartlett pears, $2.65@2.25; early Crawford peaches, $1.65@1.45; Hale's early peaches, $1.25; nectarines, $1.65; purple Duane plums, $1.65@1.50; Egg plums, $2.50@2.60; Washington plums, $1.30; Royal Hative plums, $1.45@1.20; Columbia plums, $1.65; German prunes, $1.35; Gros prunes, $1.85@1.75; Fontainebleau grapes, $1.50; Hemskirk apricots, $1.45@1.25; Moorpark apricots, $1.45@1.10.

CHICAGO, July 28.—The Earl Fruit Co. sold three carloads of Bartlett pears at $2.50@2.60; some No. 2's at $2.05@2.50; Crawford peaches, $1.45@1.75; some in poor order at 90c@$1.40; fancy nectarines, $2.05@2.10; others, 60c@$1.35; Fontainebleau grapes, $1.15@1.40; Rose of Peru grapes, $1.35.

Porter Bros. Co. sold ten carloads of fruit. Bartlett pears, $1.30@2.70, average, $2.35; Egg plums, $1.35@1.45; Columbia plums, $1@1.95; grapes, 95c@$1.40; peaches 60c@$2.15. Weather hot, and a good deal of fruit in very bad order. Purple Duane plums, $1.40@1.85; Gros prunes, $1.50@1.70; German prunes, $1.35@1.70,

CHICAGO, July 29.—The Earl Fruit Co. sold California fruits at auction to-day as follows: Bartlett pears, $2.40@2.55; ripe stock, $2.25@2.35; peaches, $1.35@1.75; ripe, 95c@$1.20; Gros prunes, $2.35; Columbia plums, $1.60.

Porter Bros. Co. sold five carloads of fruit as follows: Bartlett pears, $1.90@2.65; peaches, $1@1.50; Foster peaches, $1.35; nectarines, $1.60@1.80; grapes, 70c@$1.30; Japan plums, $1.80; German prunes, $1.50; Gros prunes, $2.80@2.90.

NEW YORK, July 29.—Sgobel & Day, the agents of the California Fruit Union, to-day sold at auction two ventilated carloads of fruit, obtaining for Bartlett pears, $3.30@2 50 ₩ box; Washington plums, $1.75; Crawford peaches, $1.70@1.35; purple Duane plums, $2.15@1.55; Decker peaches, $1.55.

All the peaches had more or less decay, and the plums were mostly undersized. The Bartlett pears ranged from good to ripe condition. The refrigerator cars are landing sounder fruit than the ventilated cars.

CHICAGO, July 30.—The Porter Bros. Co. sold to-day nine carloads of California fruit: Bartlett pears brought $1.85@2.60, except one line in very bad order at 70c; Crawford peaches, 50c@$1.65; Egg plums, $1.25@1.40; Purple Duane plums, $1.30@1.50; Tragedy prunes, $2; Fontainebleau grapes, all in bad order, 30@90c. All the fruit arrived here to-day shows the effect of the hot weather en route.

CHICAGO, July 30.—California dried fruits are firm; apricots are ready sale and are now up to 17½@18½c ₩ lb; peaches are held at 20c; none of any amount have been received yet but some are on the way. A carload of good apricots sold at 17½c. For beans there was a firm market; the inquiry continues good; offerings at current prices are small, hence transactions are few. A few lots of beans remain in first hands, but not many. Those having stock of good quality left are disposed to ask a little above present prices and it is difficult for those wanting to purchase to secure the stock desired. California Lima beans, choice, 5¼c ₩ lb; common, 2@4c.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 30, 1890.

Bananas, bunch	1 00	@	3 00
Cranberries	—	@	—
Limes, Mex	3 50	@	4 50
do Calsmi cases	75	@	1 50
Lemons, Cal., bx.	1 00	@	1 50
do Sicily, bx.	5 00	@	6 00
do Malaga	4 00	@	6 00
do do Seedling	1 50	@	2 50
Pineapples, doz.	3 00	@	5 00
Strawberries			
fair, chest	6 00	@	8 00
choice, cheat.	10 00	@	—
Apricots, lb		2	@ 3½
Raspberries do.	5 50	@	10 00
Blkberries, do.	4 50	@	5 50
Figs, box, black		60	@ 75
do white		25	@ 50
do Smyrna		—	@ —
Plums, lb		1½	@ 2
Egg plums		1½	@ 2
Pears, bx		75	@ —
do Bartlett lb		2½	@ 4
Peaches box		50	@ 75
do choice		80	@ 1 00
Apples com box		50	@ —
do choice	1 00	@	1 50
Nectarines, Red		50	@ 60
do White		75	@ 90
Grapes, box		60	@ 1 25
do Muscats	1 00	@	1 25
do Rose of Peru	1 25	@	1 50
do Malvoise	1 25	@	1 50
Green Gages lb		1½	@ 2
Watermel'ns	100	10 50	@15 00
Cantaloupes crt	1 00	@	2 25
Crabapples, box	1 00	@	1 75

VEGETABLES.

Okra, dry, lb		6	@ 10
do green		6	@ 10
Parsnips, ctl	1 25	@	1 50
Peppers, dry, lb		12	@ —
do green, bx.		35	@ 60
Turnips, ctl		75	@ 1 00
Beets, sk		75	@ 1 00
Cabbage, 100 lbs		40	@ 50
Carrots, sk		50	@ 60
Mushrooms, Cultivated, lb		—	@ —
Wild, lb		—	@ —
Cucumbers box		40	@ 65
Tomatoes, bx		40	@ 1 25
Garden peas, lb		2	@ 3
Sweet do do		1½	@ 2
String Beans		1	@ 1½
Wax, do		2	@ 2½
Fountain do		2	@ —
Squash, summer, bx		40	@ 60
Marrowfat, ton	20 00	@25	00
Garlic, lb		4	@ 5
Green corn doz		12½	@ 20
do do com sk	1 00	@	1 50
Egg Plant, bx		75	@ 1 25

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE. July 23-29.	Olympia. Rain	Temp.	Wind	Weather	Portland. Rain	Temp.	Wind	Weather	Eureka. Rain	Temp	Wind	Weather	Red Bluff. Rain	Temp.	Wind	Weather	Sacramento. Rain	Temp	Wind	Weather	S.Francisco. Rain	Temp	Wind	Weather	Fresno. Rain	Temp	Wind	Weather	Keeler. Rain	Temp.	Wind	Weather	Los Angeles. Rain	Temp	Wind	Weather	San Diego. Rain	Temp	Wind	Weather
W.	.00	80	N	Cl.	00	86	N	Cl.	.00	54	Nw	Cy.	.00	108	0	Cl.	.00	94	SW	Cl	.00	58	SW	Cl	.00	104	Nw	Cl	.00	100	W	Cy.	.00	81	S	Cl.	00	68	SW	Cy
T...	.00	72	W	Cl.	.00	80	Nw	Cl.	.00	58	Nw	Cl.	.00	108	Nw	Cl	00	96	S	Cl	.00	64	SW	Cl.	00	106	W	Cl	.00	94	S	Cl.	.00	80	SW	Cl.	.00	74	W	Cl.
F...	.00	74	SW	Cl.	.00	76	Nw	Cl	.00	60	Nw	Cl	.00	106	Nw	Cl.	00	98	SW	Cl.	00	70	SW	Cl.	00	110	Nw	Cl.	.00	102	S	Cl	00	78	SW	Cl.	.00	74	W	Cl.
S...	.00	72	Nw	Cl.	.00	78	N	Cl.	.00	58	Nw	Cl.	.00	108	Nw	Cl.	00	98	S	Cl	00	64	SE	Cl.	00	108	W	Cl	.00	100	S	Cl	00	78	W	Cl.	.00	72	W	Cy.
S...	.00	70	W	Cl.	.00	70	Nw	Cl.	.00	58	Nw	Cl.	.00	104	N	Cl	00	98	SW	Cl	00	68	SW	Cl	.00	108	Nw	Cl.	.00	94	S	Cl.	.00	78	W	Cl	00	74	SW	Fr.
M..	.00	74	N	Cl.	.00	76	N	Cl.	.00	58	Nw	Cl.	.00	98	SE	Cl.	.00	86	SW	Cl.	00	60	SW	Cl.	.00	104	Nw	Cl	.00	103	S	Cl.	.00	78	S	Cl.	.00	72	SW	Cl.
T...	.00	70	SW	Fr.	.00	70	Nw	Cl.	.00	60	Nw	Cl.	.00	94	S	Cl.	.00	86	SW	Cl	00	62	SW	Cl	—	—	—	—	.00	100	Nw	Cl.	00	80	W	Cl.	.00	74	SW	Cl
—	.00	—	—	—	.00	—	—	—	.00	—	—	—	.00	—	—	—	00	—	—	—	.00	—	—	—	.00	—	—	—	.00	—	—	—	.00	—	—	—	.00	—	—	—

EXPLANATION. Cl. for clear; Cy, cloudy; Fr, fair; Clm, calm; ~ indicates too small to measure. Temperature, wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.



TRUMAN, HOOKER & CO., SAN FRANCISCO, AGENTS FOR PACIFIC COAST.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 30, 1890.

BEANS AND PEAS.

Bayo, ctl	4 00	@	4 25
Butter	1 90	@	2 00
Pea	2 20	@	2 30
Red	—	@	—
Pink	2 50	@	2 75
Large White	—	@	—
Small White	2 00	@	2 30
Lima	3 50	@	4 00
Fld Peas, blk eye	—	@	—
do green	—	@	—
do Nlles	2 00	@	2 25
Split	6½	@	—

BROOM CORN.

Choice to Extra	80 00	@	95 00
Fair to Good	70 00	@	75 00
Poor	50 00	@	60 00

CHICORY.

California	6	@	6½
German	6½	@	7

DAIRY PRODUCE, ETC.

BUTTER.

Cal. Poor to fair, lb	15	@	20
do good to choice	21	@	23
do Giltedged	24	@	25
do pickled	17	@	18½
do in kegs	14	@	16
do Creamery in rolls	25	@	26

CHEESE.

Cal. choice mild	10	@	11
do fair to good	8	@	9
Young America	10	@	11
N. York Cream.	13	@	14½
Western	8	@	11

EGGS.

Cal. ranch, doz.	22	@	23
do do sel'cted	24	@	25
do. store	19	@	20
Est'n, cold st'rage	—	@	—
do fresh	16	@	18½
do selected	21	@	22
do to arrive	—	@	—

FEED.

Bran, ton	14 00	@	15 50
Feedmeal	27 00	@	28 00
Gr'd Barley	27 50	@	29 00
Middlings	22 00	@	24 00
Oil Cake Meal	25 00	@	—
Manhattan Food Per 100 lbs	7 50	@	—

HAY.

Compressed	10 00	@	14 00
Wheat, per ton	8 00	@	10 00
do choice	12 00	@	14 00
Wheat and Oat	10 00	@	14 00
Wild Oats	8 00	@	11 00
Tame do	8 00	@	10 00
Clover	8 00	@	10 00
do cb'cered top	—	@	—
Barley	7 00	@	10 00
Barley and Oats	—	@	—
Alfalfa	—	@	—
Stock Hay	—	@	—
Alfalfa C'mpr'sd	—	@	—
Straw bale	45	@	55

FLOUR.

Extra, City Mills	4 25	@	4 50
do Co'try Mills	4 25	@	4 50
Superfine	3 25	@	4 00

GRAIN, ETC

Barley, feed, ctl	1 17½	@	1 21½
do Choice	1 22½	@	1 23½
do Brewing	1 25	@	—
do do Choice	1 30	@	—
do giltedg'd	1 32½	@	—
Chevalier cnce	—	@	—
do com to good	—	@	—
Buckwheat	1 25	@	2 00
Corn, White	1 12½	@	1 20
Yellow	1 22½	@	1 30
Oats, milling	1 65	@	1 75
Surprise	1 70	@	1 75
Choice feed	1 60	@	1 65
do good	1 55	@	—
do fair	1 50	@	—
do Gray	1 45	@	—
do Black	1 40	@	1 50
Rye	1 00	@	1 05
Wheat, milling.			
Gilt edged	1 45	@	—
do Choice	1 42½	@	—
do fair to good	1 40	@	—
Shipping, cho'ce	1 38½	@	1 40
do good	1 35	@	—
do fair	1 32½	@	—
Sonora	1 35	@	1 40

HIDES.

Dry Ight to h'vy	8	@	9
Salted	5	@	8

HOPS.

Oregon, 1889	14	@	20
Cal 1889 Choice	18	@	20
do Fair to G'd	13	@	16
1889 hops future	18	@	20

ONIONS.

Silver Skin	2 00	@	2 35
Pickling	1 25	@	1 75

NUTS—JOBBING.

Walnuts, Cal. lb	9	@	10
do Ch'ce	11	@	12
Almonds, hd shl.	5	@	6½
Softshell	12	@	14
Paper shell	15	@	—
Brazil	11½	@	13
Pecans	9	@	14
Peanuts	6	@	8
Filberts	11½	@	12½
Hickory	6	@	9
Chestnuts	14	@	—
Pine nuts	7	@	8

POTATOES.

Early Rose, sks.	65	@	90
Chile	90	@	1 00
Peerless	75	@	1 15
River Reds	—	@	—
Humboldt	—	@	—
Petaluma	—	@	—
Burbanks	1 00	@	1 75
Sweet	2½	@	3½

POULTRY AND GAME.

Hens, doz	5 50	@	7 00
Roosters, old	6 00	@	7 50
do young	6 50	@	9 50
Broilers, small	2 00	@	3 00
do large	3 50	@	4 00
Fryers	4 00	@	5 50
Ducks, tame	3 50	@	4 50
do young	4 50	@	5 50
Geese, pair	1 25	@	1 50
Gos ings	1 50	@	1 75
Turkeys, Gobl'r.	19	@	21
Turkeys, Hens	16	@	18
Pigeons	2 50	@	3 00
Rabbits, doz	1 00	@	1 25
Hare	1 50	@	1 75
Venison	12½	@	14
Dove	75	@	1 00

EGG FOOD.

Manhattan, ₩ lb	12	@	—

PROVISIONS.

Cal. Bacon.			
Heavy, lb	10½	@	11
Medium	12	@	—
Light	13	@	—
Extra Light	—	@	—
Lard	9	@	12
Cal. Sm'k'd Beef	11	@	12
Hams, Cal	12	@	13
do Eastern	12½	@	13½

SEEDS.

Alfalfa	9½	@	10
Canary	4	@	4½
Clover, Red	12	@	13
White	20	@	22
Cotton	20	@	—
Flaxseed	2	@	2½
Hemp	8	@	8½
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German	5	@	6½
do Common	5	@	6
Mustard, yellow	1½	@	2
do Brown	2½	@	3
Rape	1½	@	2
Ky. Blue Grass	14	@	16
2d quality	13	@	14
Sweet V. Grass	75	@	—
Orchard	12	@	14
Hungarian	7½	@	8
Lawn	27½	@	40
Mesquit	6	@	—
Timothy	6	@	6½

TALLOW.

Crude, lb	3	@	5
Refined	6	@	—

WOOL, ETC.

SPRING—1890.

Humboldt and Mendocino	19	@	24
Sac'to valley	15	@	22
Free Mountain	18	@	24
S Joaquin valley	12½	@	17
do mountain	17	@	22
Cala'r & F'th'll	15	@	24
Oregon Eastern	13	@	22
do valley	20	@	25
So'n Coast, def	10	@	14
So'n Coast, free	12½	@	19

Rope.

Baling, Duplex, lb	12
" Manilla, lb	15
Twine, for hops, balls, tarred, lb, Manilla	16
" " grape vine, balls, lb "	16
" " " coils, lb "	16
" spring, lb "	18
" binder (600 ft. to lb), lb	16

Duplex twine 3c per lb less.

Odd Numbers.

33 and 35 Main Street, San Francisco. Write to or call there on FRANK BROTHERS, for Farm Implements of every description and Buggies, Carts or Spring Wagons.

C. E. KIDDER'S

PATENT,

DECEMBER 3, 1889.

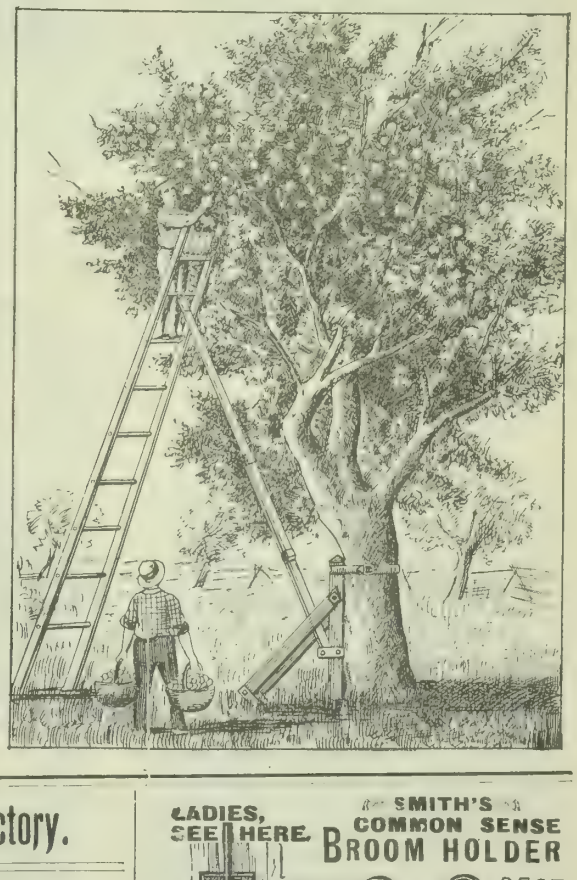
This ladder works independent of the limbs, does not rest on them, therefore does not hurt the fruit.

By raising the two braces you can swing the ladder from right to left, or clear around the tree, as the upright turns at the top in a loop in the strap, and has a spike in the bottom which turns in the ground. The two braces have a U-shaped iron, which is pressed into the ground by stepping on the lower ends, to hold the ladder steady. The ladder cannot tip over; can stand on the top of a 20-foot ladder and pick with both hands. You can place the ladder at any place or point in the tree, at the center or at the outside. The limbs may be no larger than a pipe stem and 20 feet long, or the tree may be as large as a barrel or as small as a broomstick.

It is just the thing to thin fruit or prune trees, as well as to pick fruit. It is about the same weight as a step-ladder of the same size. By removing a bolt you have an ordinary ladder to be used about the place. Replacing the bolt you have a fruit ladder. Fruit-growers will see at once that it works on the true principle for getting all around and through and over the top of a tree. Will sell the State right for California cheap. Address,

C. E. KIDDER,

Aurora, Ill.



Real Estate Directory.

SAN FRANCISCO.

GEO. BEEBE & CO., 230 Kearny St. Large tracts Timber lands for sale. Government locations made.

OAKLAND.

E. P. VANDERCOOK & CO., City and Country Real Estate, 458 Ninth St., Oakland, Cal.

O. C. LOGAN, City and Country Real Estate and Loan Agent. Office, 481 Ninth Street, Oakland, Cal

M. J. LAYMANCE & CO., Auctioneers and Dealers in City and Country Real Estate, 466 Eighth St., Oakland

FOR SALE CHEAP,

An 8¾"x10" 15 H. P.

"ECLIPSE" TRACTION ENGINE,

Manufactured by the

"FRICK" CO., WAYNESBORO, PA.

New and in Perfect Condition.

JOSHUA HENDY MACHINE WORKS,

No. 51 Fremont St., San Francisco, Cal.

HARNESS.

Take care of your HORSE. Civilized Man advances rapidly and the Horse will "Keep up with the Band" if well cared for. Horse Boots, Robes, Blankets, etc. Saddles, $5 to $75 each. Harness, $8 to $250 per set. American and English Saddlery Goods.

W. Davis & Son,

No. 410 MARKET STREET,

Between Sansome and Battery, SAN FRANCISCO.

GLADDING, McBEAN & CO.

CATALOGUE FREE

SEWER & CHIMNEY PIPE, DRAIN TILE

ARCHITECTURAL TERRA COTTA Etc

1358-1360 MARKET ST. S. F.

MANUFACTORY AT LINCOLN CAL.

ROAD CARTS in great variety, also our $35 Phaeton Body Cart. Write for Circulars, Frank Brothers, San Francisco.

LADIES, SEE HERE. AGENTS WANTED

SMITH'S COMMON SENSE BROOM HOLDER

NOTHING LIKE IT.

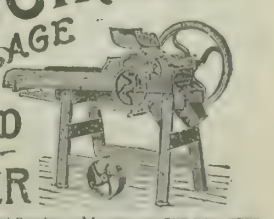
BEST IN THE WORLD.



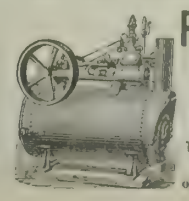
Nearly 60,000 sold.

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Electric Light Bugs.—When the first Atlantic cable was laid scientists asserted that an insect would soon appear which would attempt to destroy it; and sure enough in a short time an insect, not classified by entomologists, began its work on the insulators. The electric-lighting system in large cities seems also to have developed a similar condition of things in the shape of what are called electric-light bugs; and singularly, each system of lighting has its own peculiar insect satellite.

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Language of Fish.—Mr. W. A. Carter, in a recent lecture on "Marine and Fresh-Water Fishes," said that fish have the power of influencing one another by sounds and action. He had observed a shoal of carp following the lead of a single one, which conducted them to a quantity of food at a considerable distance away. He had also noticed that certain fresh-water fish, such as trout, were subservient to a ruler, who might be seen swimming at the head of his tribe. The same was possibly the case with some marine forms, like the herring and bass.

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Birds on the Perch.—The reason given why birds do not fall from their perch is because they cannot open the foot when the leg is bent. Look at a hen walking and see it close the toes as it lifts its foot and open them as it touches the ground.

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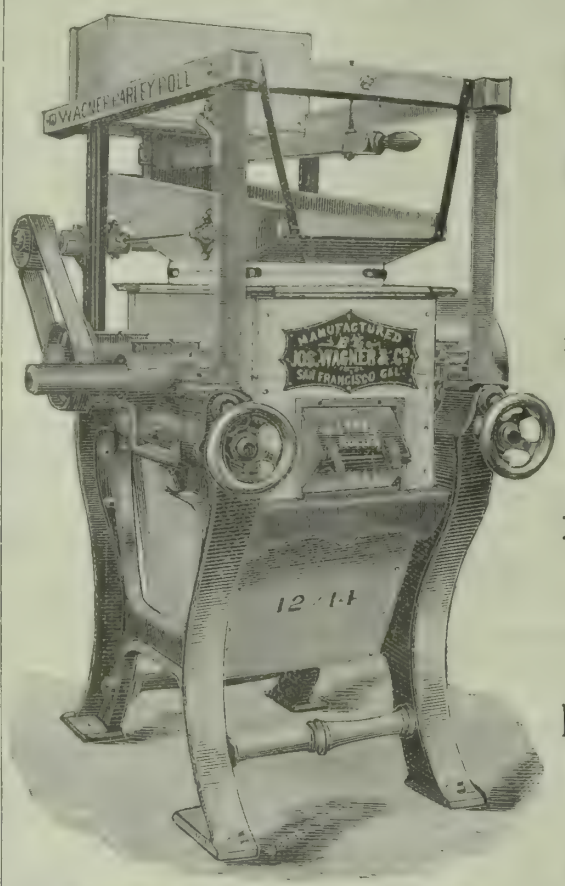
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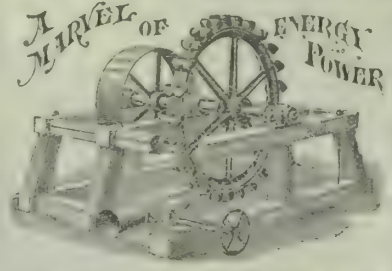


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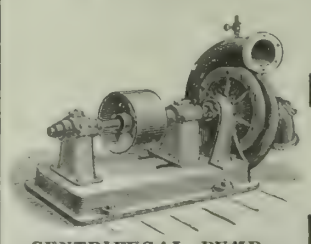
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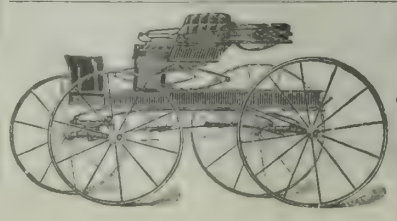
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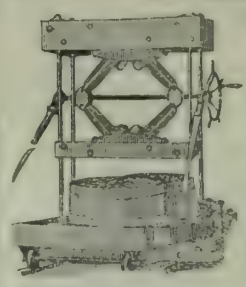
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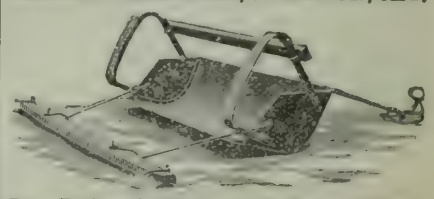
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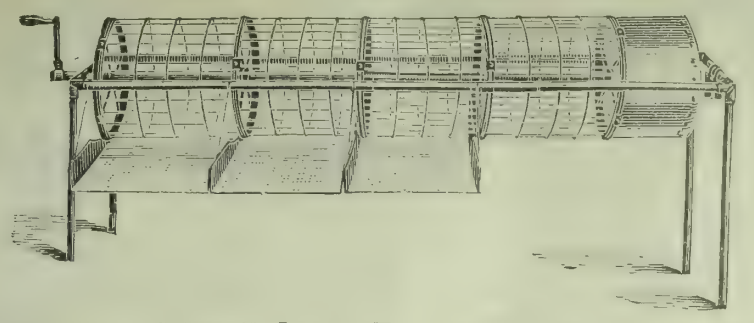
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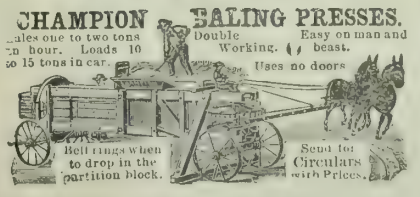
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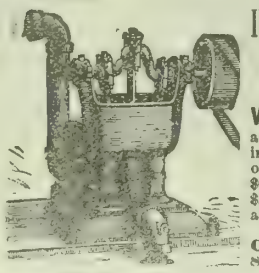
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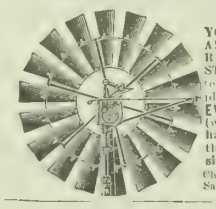
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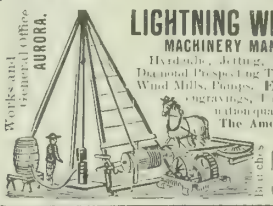
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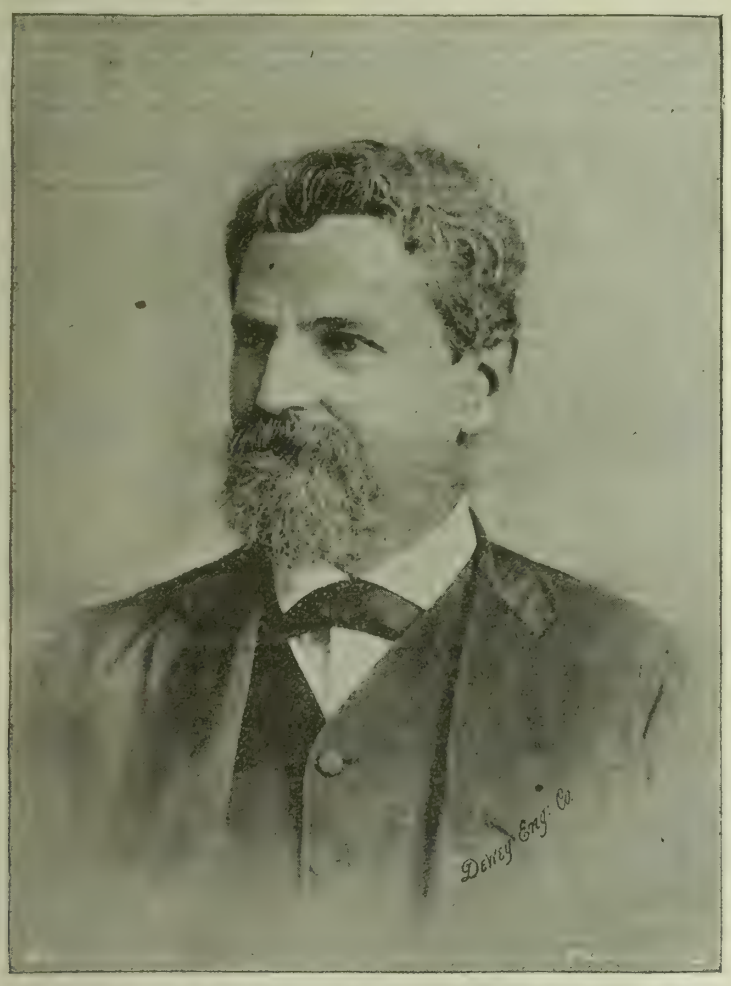
CHRISTOPHER GREEN, President.

EDWIN F. SMITH, Secretary.

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HON. F. T. NICHOLLS—THE ANTI-LOTTERY GOVERNOR OF LOUISIANA.

Gov. Francis T. Nicholls.

With pride and pleasure we present to RURAL readers a portrait of that brave and upright magistrate, Gov. F. T. Nicholls of Louisiana, whose righteous and manful hostility to the lottery abomination renders him gloriously memorable. The picture is from a photographic likeness of the Governor, sent us from New Orleans at our special request.

Francis Tillou Nicholls was born in Donaldsonville, Ascension parish, Louisiana, August 20, 1834. His father, Thomas Clark Nicholls (1790–1847) was one of the men wounded in skirmish with the British, Dec. 23, 1814, prior to the general battle at New Orleans; was a member of the General Assembly, Judge of a District Court for many years, and in 1843 was appointed Senior Judge of the Louisiana Court of Errors and Appeals. His mother, Louise H. Drake, was a sister of the poet, Joseph Rodman Drake.

Gov. Nicholls was graduated at the U. S. Military Academy, West Point, in 1855, and assigned to the 3d Artillery. He served against the Seminole Indians; was on frontier duty in 1856; resigned his commission in October of that year, and engaged in the practice of law at Napoleonville, La. In 1860 he was married to Miss Caroline Z. Guion, a descendant from Huguenot stock.

In 1861 he joined the Confederate army as Captain in the 8th Louisiana Infantry, from which he gradually rose to the rank of Brigadier-General. He served under Stonewall Jackson, lost his left arm at Winchester, Va., and was captured, fortunately falling into the hands of old army friends, who treated him as a guest rather than a prisoner. At the battle of Chancellorsville he lost his left foot also, but nevertheless continued in service until the close of the war, when he returned to the parish of Assumption and resumed the practice of his profession. He was elected Governor of Louisiana in 1876, served until 1879, was re-elected in 1888 for the term which he is now serving.

The late Chief Justice of Louisiana, Thos. C. Manning, in dedicating his publication of reported decisions, uses the following words, referring to his first term:

To the Honorable Francis T. Nicholls, Governor of Louisiana at the gravest crisis in her history; whose unsullied private life gave tone to his public acts; whose integrity of purpose inspired all classes with confidence; whose patient waiting upon events prevented a precipitation that would have been fatal to the cause he represented, and whose prompt action, when action was needful, assured success; who was content to be misunderstood and misrepresented, thoughtful only how he could serve the people who had placed him in an unsought position of power and of danger; whose maimed body attested his sacrifices in the field, as his unmaimed character enforced his policy in the cabinet; who rendered to public morals an inestimable service by showing that a man can fill political office and leave it without a stain.

At a meeting held in Grunewald hall, New Orleans, to give reception to the anti-lottery members of the Legislature, the appearance of Gov. Nicholls was greeted with the wildest enthusiasm.

A Precocious Olive.

The engraving upon this page may have a special interest to olive propagators and may reflect some of their own experience and observation. If so, we would be glad to hear from them upon the subjects involved. The engraving is a photo-facsimile of a plant taken from the propagating frames of the Agricultural Department of the State University at Berkeley. Mr. K. McLennan, the foreman, who made the cutting and has watched the progress of this plant and others of the same variety in the same frame, assures us that the variety is the Atrorubens; that the small cutting was put in the propagating bench in the greenhouse in December, 1888; that it rooted well and was put in the three-inch pot and that wood growth started in the spring of 1889, and made the size shown in the engraving during the summer of 1889. It, with a few others, was not repotted for lack of room, but has remained in the three-inch pot shown in the engraving ever since its first potting. In April, 1890, it bloomed and set fruit, but made no wood growth up to the time of taking its photograph last week. Some others of the same variety, also remaining in the original pots, have set fruit and made a few inches of new wood this season; others still having been repotted twice, also have set fruit and made over two feet of new wood. The engraving is about the natural size of the specimen represented.

Aside from the interest pertaining to such early fruiting, there is also another interesting deduction to be drawn from the history of these plants, and that is that continual drenching with water during the blooming period does not seem to interfere with the fruit-setting of the olive. All the plants mentioned above stand in the same frame and have been watered daily either with a watering-pot or a hose.



AN INSTANCE OF EARLY BEARING IN THE OLIVE.

CORRESPONDENCE

Correspondents are alone responsible for their opinions.

Santa Barbara County Notes.

EDITORS PRESS:—We are having a greater amount of warm weather and less fog than usual at this season of the year. Fears are entertained that the heat will materially shorten the bean crop, as the Lima beans set better during foggy weather than when the sun is too hot.

Bean-buyers are plentiful and are contracting the new crop at 3½, with indications of a rise before harvest. The crop will not be so heavy as usual, the hard winter having interfered with putting the land in proper condition, especially in heavy ground. Cutting will begin on small beans this week, the crop maturing early.

The flow of gas from the gas well at Summerland (Ortega Ranch) having held out well, and in fact having increased, has led to the formation of a company to develop the gas and pipe the same to Santa Barbara and other places where needed. They have leased the Ortega Ranch, including the townsite of Summerland, and the chances for successful operations are very good, as gas has been found in many parts of the section in and near Santa Barbara.

In spite of the heavy inducements offered the Southern Pacific to finish their coast road from Elwood to Santa Margarita, it looks as if the company would not commence work until they are pleased to do so. Many men, believing at the time they were working here that the company would push right through to completion of the road, were induced to invest so heavily that they have become financially embarrassed and cannot get on their feet again until through travel livens things up; and as many of these men are among the most public spirited and open handed of our citizens, the effect is very bad on the whole section. Many other reasons could be adduced for the finishing of the road, but the S. P. Company remain obdurate and forgetful or neglectful of their promises, and the work does not move.

Many tons of fine apricots have rotted on the ground on account of incomplete arrangements for drying them and moving them where the sun could do the work. Those who have dried have mostly received good prices for their fruit. Fifteen cents per pound has been paid for many lots in sacks. The Southern California Packing Co., at Los Angeles, bought several carloads, and other lots have been shipped to Santa Paula and Newhall and dried in the sun.

The walnut crop promises to be a good average in quality and quantity, and as many parties are in the field buying, the price will probably be good. Some parties have contracted their crops at eight cents for hard and nine cents for soft shell, and some others have received higher bids. Many trees have been drowned out on low lands and on upland where the clay bottom has held the water like a reservoir. On all well-drained land the trees escaped harm.

Squirrels, gophers, quails and other pests are very numerous this season. Forest and mountain fires promise to be abundant. Santa Barbara had quite a scare a few nights ago by a bad fire on the foothills and mountains north of town. One house and considerable hay, feed, etc., burned; also a barn or two was burned. The fire approached very near the limits of the city and hundreds of people were out fighting the flames.

A number of home seekers have been into the Cuyama valley buying and locating homes. A party of surveyors are locating a road from Santa Barbara over the mountains to Cuyama valley. If this road is put through it will afford a direct outlet from Bakersfield to the sea, and prove mutually advantageous to all on the line. L. B. CADWELL.

Carpinteria.

Morgan Valley.

EDITORS PRESS:—Ten miles southeast from Lower Lake is a collection of small valleys and low hills called Morgan valley. Like other sections of the county, they are complaining of short crops owing to excess of moisture, and of scarcity of money, owing to barter system of trade. We found J. Palmer busy at his heading, and quite proud of a drove of 50 or 60 fine young mules. We passed the flourishing places of Messrs. Reef, Bond, Olser, Fugua and Ebbinghousen. At Albert Morrell's we understood that it was a common thing for his pear trees to produce 3000 pounds each, and that nearly all the crop goes to the hogs. Big stories both! So we went to see and found pear trees 22 years old, upward of two feet in diameter and forty feet high. Some of these were so full from the ground to the top that you could easily fancy that the pears would touch when grown, and they were not only on the outside of the limbs but all through the tree. Some were Bartletts, some Winter Nelis. Some we should have called Seckels had they been smaller and many seemed to be Vicar of Winkfield. Mr. M. says that his apple trees rest every second year, but that he can depend on pears every year.

In 1876 a prominent fruit man prophesied that in less than five years Bartlett pears would be fed to the hogs in California, and this is about the only instance we have seen pointing in that direction. It certainly seems as though those pears might be split and dried without peeling as A. T. Hatch does with such as he doesn't care to ship, and make them net at least $1 per cwt. That is as much as it would cost to buy barley for the hogs.

Pears in Morgan valley are said to ripen much later than any other locality they hear from. There might be heavy shipments if they only had a railroad. As it is, we think they had better haul away dried fruits or nuts worth 5 cents to 15 cents per pound than grain worth 1 cent to 1½ cents per pound.

Almonds are bearing very full with Mr. Morrell. F. S. C.

Lake County Notes.

Dr. Aby's Race.

EDITORS PRESS:—We think it very unfair for the papers to report that Dr. Aby was unable to pass that Chinaman on his fruit wagon. They did not explain that half the way from his place to town the road winds between trees and rocks in such a way that Marvin himself could hardly drive Sunol past a lame cow. Any one who sees Dr. Aby driving his bays tandem on a run through Middletown would be easily persuaded that he could pass any China fruit wagon in a race that was half-way fair.

Anderson Springs.

We found the proprietors very happy in entertaining fifty as lively guests as you often see at a health resort. Far into the night they made the woods ring with their serenades. Nature has made a park here unique in its wild beauty and cool shade. The hills abound in springs that give your choice of mineral waters. The natural steam baths are a feature, and lately they have added a swimming bath. The proprietors are very active in their personal attention to the comfort of their guests.

A Fruit Pest on the Warpath.

Wm. Whittington lost 20 prune trees last year, and five so far this year, from what he supposes to be a very small borer. Clark Wilbur also lost 30 trees out of 200 from the same cause this year. Where Mr. Whittington lost trees last year, the roots have sprouted, and instead of coming up bitter almond, as guaranteed in his contract with the nurseryman, they are all peach. The bark begins to turn black on one side, the leaves to die, and soon the dead bark extends clear around the tree. When cut down, the wood smells like a kiln where they are drying basswood, and all the signs of borer you will find are a few horizontal pinholes, largest near the pith of the tree. We don't think any fair-minded jury in the world would convict these poor little innocents of having done all this mischief.

Last year Prof. Wickson sent, in reply to Mr. Whittington's communication and sample, a copy of Prof. Klee's report for 1888, where he describes (on page 49) the *Xyloborus Xylographus*. It is the professor's opinion that the insect harbors in trees whose sap has fermented and that it is the fermentation rather than the insect that has done the damage. Mr. Whittington thinks the suitable preventive is to burn each tree attacked, and the small percentage of loss this year as compared with last points in that direction. If the insects are doing the damage, of course that is the way to destroy some of them. Please give us best remedy for fermentation of sap. That seems more likely to bring relief.

Middletown's Home Market.

At Oat Hill mine the expense account is said by Supt. Newcomb to be about $10,000 per month for labor and supplies. We have reason to think that the Bradford and Great Western pay out as much more. Then the Anderson and Harbin Springs are crowded when people are visiting springs, and they tell us that Lake county resorts bring in $75,000 cash per year.

Yet still the complaint is that no money is in circulation. It seems that the stores conduct a barter trade and supply the springs and mines with produce and farmers with goods. The railroad is looked forward to as the panacea for this and other ills, but it seems to us that a shorter and more direct solution of this matter can be devised. Let us hear of remedies based on business principles. People certainly don't feel well when they work all the year and never see a dollar.

A Fine Olive and Peach Orchard.

We walked a distance said to be *one and one-half* but seeming to be *four* miles, from Rev. Jno. Appleton's mountain home to the orchard of W. P. Filmer. Here are ten acres of chemisal and stones cleared off from the summit of a mountain, and every tree (so far as we saw) growing and thrifty. The trees are planted 25 feet apart for the olive grove, with a peach tree in the center of each square. Next year we expect Mr. Filmer will have a fine crop of peaches, and already he has made a showing of which the whole section is proud. If the olives take the flavor of that mountain air, we want to order our pickles from the Filmer grove. F. S. C.

Middletown, Lake Co.

PAPER OR PASTEBOARD may be rendered waterproof as follows: Mix four parts of slaked lime with three parts of skimmed milk, and add a little alum; then give the material two successive coatings of the mixture with a brush, and let it dry.

POULTRY YARD.

Hints on Poultry-Raising.

EDITORS PRESS:—Perhaps this is a long while between articles purporting to be in series, but better late, I suppose, than never. Anything on incubation or hatching by natural means and raising of chicks I take to be always in order, as it is now being done all through the year by many, and what gets a brood of chicks through successfully at one time of the year will not, perhaps, do so at another.

During the cold, wet months, great care and unremitting attention are essential to the well-being of the chicks, and even then one must not be discouraged at meeting with considerable losses; while through the warm, pleasant days of spring and early summer, the care is much less and the losses comparatively light, and, excepting through the very warm months say of July and August, the chicks will almost take care of themselves, aside from their supplies of food and water. This of course makes incubation a much pleasanter business in summer than in winter.

To meet the high prices of young poultry ruling during the months of April, May, June and a portion of July, it is necessary to commence setting by first or middle of November, in order to have them of marketable size and condition for those months, but with me it is still an open question whether, in view of greatly added expense in the matter of keeping the chicks properly warm night and day, the high price of eggs then ruling, and the comparative lack of vigor in the egg germ at this time, and losses resulting from this cause and the inclemency of the time, do not offset the high prices one gets for chicks hatched in late fall and winter. If hatched during the months of September and October, the chicks may then attain sufficient size before the coming of cold and wet weather to enable them to meet it without requiring so much outlay, so much attention, or meeting with so much loss as would be the case with later hatched chicks; but then they would be too old to bring the high prices of young fowls which obtain during the months above referred to and would have to go as old fowls at a greatly reduced price, so that if one could hatch at a time that would insure them a profit on their product in market fowls it would be a "happy medium" much to be desired. Many fail through want of proper and unflagging care of their fowls and chicks and consequent discouragement at losses which make the business for them an unprofitable one, for only by strict and unremitting care in all details, however unimportant and "fussy" they may seem, can one hope to be successful in the raising and keeping of poultry in numbers. A dozen or two of fowls may be kept in any manner, perhaps, but when one would keep several hundred in a certain given space there must be due attention to *all* their requirements in the way of food in proper variety, clean fresh water, coarse sharp sand or fine gravel, shells, burned or ground bones, a supply of charcoal (which they greatly relish) an occasional feed of pepper and onions and a constant and ample supply of green stuff of almost any tender kind which they can eat readily or it may be chipped for them. I feed cabbage, young corn, carrot tops, onion and turnip tops, all they will eat every day chopped in an ordinary hay-cutter, running the stuff through two or three times to get it fine enough for the fowls to eat it all. At present such as this forms fully one-half of their feed. For morning and noon, feed a mush mixed as dry as possible and composed of two parts middlings and three parts green stuff chopped fine and mixed twice or three times a week with a soup of scraps or refuse meat from the butcher's and at all times with milk instead of water, if I have it. For a feed at night, I use dry grain of some kind. Then if you keep them supplied with clean, fresh water, clean, well-ventilated and comfortable quarters and shade and a dusting place, you are pretty sure to have healthy, contented and productive fowls, and without all this you may be equally sure of having sickly, mopy fowls that have all they can do to exist without the added drain of laying eggs. Fowls must have first what is needful for the keeping up of a proper condition and a surplus for the making of eggs, or there will be no eggs.

Each day almost sees now an addition to the ranks of poultry-raisers, the greater part of them with an experience to acquire and seeking for what information they find themselves in need of, and while so many are coming in, many are also going out because of want of success or perhaps through finding the business an irksome one, full of care and work, and not paying, because it will not pay one who does not attend to it properly any more than any other business imperfectly attended to will. Not long since a friend of mine who is becoming somewhat advanced in years said to me: "I'm getting too old to work hard, and I think I'll get me 300 or 400 hens and live a little easier." "But," said I, "if you yard your hens, as you apparently will have to do, and care for them properly, you will have perhaps more hard work than you do now."

"Why," he says, "what work can there be to throw them a little grain morning and night, give them water and gather the eggs," and the last I think he *would* find easy enough.

Poultry-raising is beginning to be recogniz d as a business much more so than formerly, not only a business for women but for men as well, for there is much in it that women would perhaps find beyond their strength, or at any rate until a continuance in it had sufficiently improved their health and hardened their muscles, and not only that but it is being learned also that it is capable of paying as large a profit on the capital invested as many other kinds of business which are considered good and legitimate.

Several new incubators have been received in this vicinity lately, and several new parties have gone into the business of poultry-raising—in fact it is getting not uncommon for a farmer's wife to say to him here, "Well, I'll have to raise poultry to live on while you amuse yourself raising wheat," and in not a few cases that has been about the way of it. Statistics show conclusively, I think, that poultry-raising merits a place among the important industries not only of California but of the country at large, a very few only showing larger results in dollars and cents than this or adding more to the make-up of the sum total of the nation's industry.

But after all this is not telling how to incubate or how to brood chicks, neither can that be told in one or two articles, for, as with kaleidoscopic views, there is always something new. True, you set your eggs, watch temperature and moisture and turning of the eggs morning and night and your chicks in due course of time are hatched, and then the labor and the care commences. My practice has been to take the chicks off night and day as they are hatched, as if many collect in the pans they are apt to overlie and smother those which are trying to get out of the shell, and although I have seen it recommended that the machine should be closed and kept closed until the entire hatch is out, I think it bad practice, and can only result in harm to the chicks. I find it much better to take them off and put them in a brooder at the right temperature—perhaps about 90 degrees—but the chicks will inform you when they are too warm by peeping and separating or huddling and peeping when they are too cold.

As I have before said, I have fallen in with the practice of giving during the warm, pleasant weather from 40 to as many as 80 chicks to a good, motherly hen who will take them off and teach them how to scratch for food and gravel. Of course one has to feed them at short intervals a little at a time and supply them with water and skunk tight quarters during the night, or on some morning you may find that all your labor has been in vain. Just a little carelessness in the closing up of two boxes on one night cost me 160 choice Brown Leghorn and Langshan chicks, the skunk getting into one little house at a hole three feet from the ground where I had supposed a rat could not get in, and in the other the board closing the front of the box by some means became displaced and neither "hide nor hair" of that lot remained, the others lying dead on the floor of their house.

For colder weather and wet, stormy weather so many chicks for one hen would not be found good; she must then have only what she can brood well and must be herself confined in a wet-weather coop and the chicks allowed to go out and in at will, keeping them in until the day is somewhat advanced. You may find it better to have a little run fenced for them so that they may not wander too far from the hen. If the hen is an exceptionally good one that hovers the chicks often and does not drag them about too much, it would be found better to let her run with them. When you can have hens of this kind and keep all free from lice, they are better than brooders, as they are self-regulating as to air and warmth, while the best of brooders are apt to be at times (principally at night) too warm and not rightly ventilated; still I do not by any means condemn brooders or give up the use of them.

Lodi, Cal T. B. GEFFROY

THE VINEYARD.

Hints on Raisin-Making.

J. M. Elmiston gives the National City *Record* (San Diego county) the following interesting paragraphs:

As the time for securing our splendid grape harvest is rapidly approaching, there will be many new beginners anxiously watching the changing color and taste of the fruit and inquiring when it will be ready to pick. As such beginners are always in a hurry to see their fruit turned into the raisin, and are consequently apt to make more haste than is wise, permit me through your paper to suggest that if such persons would secure the best results they must be patient and give the sun and vine time to do their complete work. The Muscat is a grape that ripens slowly, and to the novice it will *appear* to be ripe while there is really but little of it but skin and sweetish water. The saccharine matter of the grape is principally stored after this period, and if the vine has sufficient moisture to keep it growing, the process will continue for weeks.

It is impossible to give any very definite rule for determining the proper time to pick, as conditions vary so much.

Some say let the grape remain on the vine until the first soft period has passed and the grape has become firm and the skin brittle, so that it will crack when bitten in two. But the

only real test is the amount of saccharine matter the grape contains. This should not be less than 20 to 24 per cent. A person of acute taste will soon learn to tell that way, and others will discern by its looks. The beginner will naturally try them all, and if he can it is well for him to obtain the aid of some one who has succeeded in making good raisins, in teaching him to discern the proper condition. If, however, his vines are vigorous and healthy, it is safe to let the fruit remain until all possible doubt is gone, for every day's waiting will add both to the weight and quality of the fruit. Of course the question of drying must be considered, and not wait until there is danger of losing the crop by early rains.

Again if the vine and fruit is perishing for want of moisture it is useless to leave the fruit on the vine. It will in that case dry up without filling out with saccharine matter in either event and only make a poor dried grape at best.

Again, it is no evidence that grapes are ripe because they begin to dry up, or sunburn, as it is called. What is termed sunburn is a *disease* which usually attacks the *stem* of the grape, and the grape simply dries up the same as if it had been severed from the bunch. Or, sometimes it will attack the main stem of the cluster, and all of the cluster beyond that point perishes.

I cannot urge too strongly upon those whose vines are troubled with this disease, or whose fruit is small and immature for want of moisture in the vineyard, the necessity of irrigation as a remedy. I never saw vines well irrigated and cultivated in mid-summer that were seriously troubled that way.

I would urge upon all who fear such trouble in their vineyards the advisability of irrigating, as an experiment, a patch of such vines, even as late if necessary as the 20th or last of July. Wet such a patch thoroughly and carefully note the difference in weight and quality. But after irrigating cultivate the ground, so as to avoid baking and retain the moisture. In making such experiment let the water run in furrows or some similar method for several hours so that the ground is soaked down deep enough that it will remain. It will all come up again where the roots can get it. Such experiments are worse than useless unless *thoroughly* done, as they would convey a wrong impression.

To illustrate what might be considered a light irrigation, the writer last week had 7500 gallons of water put on 81 vines in a square block 9 vines each way. Had I been able to run the water over the vineyard I should have used more than double that amount; but I believe that amount will be sufficient to show a difference in results.

THE DAIRY.

Butter Produce of Jersey Cattle.

The following is an abstract of the English Jersey Cattle Society's butter tests, from their commencement in October, 1886, to May, 1890. It appears in the recent report of the Kempton Park Show:

Since this society made its first experiment in butter-testing at the Agricultural Hall, Islington, in October, 1886, ten tests have been made, at which 133 Jersey cows, varying in age from under 2 to over 12 years, have been put to proof.

The results of these tests have been published from time to time, but it seems desirable to collect them together and to present them in a concise form. For this purpose a table is annexed, in which all the cows are classified according to their age at the date of trial; and in opposite columns are recorded the total number tested in each class, the average number of days since calving, the average yield of milk and of butter, and the average quantity of milk required to produce one pound of butter or butter ratio.

It appears from this table that the development of the butter capacity is very gradual, and it seems probable that even at the end of her fifth year the average Jersey cow has not attained her maximum point of butter production.

The milk yield, which between the age of two and three years, reaches an average of 2½ gallons, or say 25 pounds per day, continues to increase till the fifth or the sixth year, when it stands at rather over 3 gallons, or 30 pounds, per day. At the same time the butter shows a corresponding increase from 1 pound 3 ounces to 1 pound 8 ounces per day. During the whole of these four years it appears that the average richness of the milk varies but little from a standard of two gallons to the pound of butter. The exact figures are as follows:

Between 2 and 3 yrs.,	average butter ratio 20.10 lbs.,		about 3 qts.
" 3 and 4 yrs,	"	"	20 24 lbs. "
" 4 and 5 yrs.,	"	"	19 41 lbs "
" 5 and 6 yrs,	"	"	20.75 lbs. "

At or about the age of six years the Jersey appears to attain her prime. Her milk increases materially in richness and her yield of butter shows a proportionate advance. It seems probable that she maintains this maximum value for some two or three years afterward:

Between 6 and 7 yrs.,	average butter ratio 17.81 lbs.,		about 7 qts.
" 7 and 8 yrs,	"	"	18.01 lbs "
" 8 and 9 yrs.,	"	"	18 64 lbs. "

This view of the prime age of the butter cow derives further confirmation from a comparison of the ages of those cows which succeeded best throughout the series of ten tests. These are as follows:

	Yrs.	Mths.	Dys.
Ave. age of 10 first prize cows	7	3	10
" 10 second-prize cows	6	2	0
" 10 third-prize cows	5	8	2
" 10 reserve number cows	5	5	8

The total number of cows of nine years and upward is too small to afford a basis for judgment, but it is sufficient to warrant the statement that some Jerseys maintain a high dairy value in their tenth year, or even beyond. It should be noted that two of the society's gold medals were won by cows in their eleventh year.

Maximum Yields of Butter.

The following cows gave the most remarkable results in their respective classes:

	lbs.	oz.
2 to 3 years, Mrs. A P. Norris' Stella	1	15
3 to 4 years, Mr. Simpson's Pandora 11th	2	0½
4 to 5 years, Rev. S. H. Williams' Tiny 3d	2	7½
5 to 6 years, Mr. Adams' Meadow Pride	2	0½
6 to 7 years, Mr. Brutton's Baron's Progress	3	5
7 to 8 years, Dr. Watney's Sherry	2	8½
8 to 9 years, Mr. Carter's Coquette	2	4
9 to 10 years, Mr. Baxendale's Bramble	1	14½
10 to 11 years, Mr. Baxendale's Broom	2	4½
11 to 12 years, no entries		
12 to 13 years, Mr. H. C. Smith's Lady Savage	2	0½

JOHN FREDERICK HALL.

Scharcombe, Wells.

HORTICULTURE.

System in Fruit-Drying.

EDITORS PRESS:—In riding through the orchards and stopping at the packing-houses in one of our leading fruit districts, the degree of system to be expected in so prominent an industry was not generally apparent. For instance, one leading grower was drying apricots that would not be ripe in ten days. Of course they were sour and unfit to eat, and drying will not help the matter. Somebody will buy them because they are dried apricots and bleaching has made them look well, but that fellow will not want any more dried apricots.

Another very heavy grower was drying his fruit without grading. Side by side on the same tray were apricots all the way from half an inch to an inch and a half in diameter. The small ones will be dried to a chip before the large ones are dry enough to keep. This man said that the little ones would absorb moisture while they were coming into case and that they would not bring much any way if sold alone, but would go if mixed with the others.

Anybody who has ever bought or sold anything ought to know better than this. Suppose Ames had done that way with his shovels, or Faber with his pencils. Who would be looking for their goods in market? A man who puts up fruit that way is ruining his own prospects and injuring every neighbor in the same line of trade.

Another thing noticeable was that in many cases there seemed to be no headwork done. They hire so many Chinamen and set them picking and another lot and set them cutting. You find them sitting all about curled up in all sorts of shapes, spending more time to reach for the apricot than it takes to cut it. At a few places benches were arranged to have the fruit and trays as handy as possible, under a cool shade where the hands would feel like working.

One place showed marked system. Cutters sat on opposite sides of a long table. Enough apricots to cover the tray when spread were poured upon it. Each cutter began on the side next him, and dropped his pits in a cup or saucer right where he was spreading, and each worked toward the center. They were skilled in cutting, spreading the fruit neatly in the fewest possible motions. It makes quite a difference whether you reach a couple of feet for your fruit and then make six or eight motions in cutting and spreading, or whether you only reach an inch or two and then cut and spread your fruit in three motions. Those who cut and spread 1000 pounds a day or more don't fool away time in false motions. It is even reported that Mr. Spalding once cut and spread 1600 pounds of fruit in one day. We thought that a thoroughly competent foreman could take most of the crews we saw at work and double their output in a week's time by careful arrangement of fixtures and training in doing most with a given amount of labor.

F. S. C

Olive-Growing in the Interior.

EDITORS PRESS:—In a former issue of your excellent paper, you were kind enough to print What I Know About Olives, after an extended experience of *three years;* and about the wonderful growth our trees had made, upon an annual dinner of a wheelbarrow load of barnyard manure, washed down with two draughts of Adam's ale in midsummer.

This time I write for information concerning a few things that I do *not* know. (Please note the rare modesty expressed in the alove paragraph.)

Wishing to graft Manzaniello olives into Picholine stock, we (my partner and I) have made several experiments at different times, from March to June, without success. We have also budded several trees, and this, too, has failed. No one could be more successful in grafting deciduous trees, for our grafts seldom fail to grow, on apple, cherry or plum stock.

I have sought information from every available source, not omitting the high science of the State Horticultural Bulletins, but all in vain.

Will not some of your readers who have been successful in grafting the olive in the hot and dry climate of the Sierra foothills furnish information on this subject to the RURAL PRESS?

Many who have planted the much-abused Redding Picholine wish to graft upon it the Queen olive, thinking that pickles will prove more remunerative than oil.

We have 50 plants or more of the Redding olive; and in our search for information upon grafting, we applied to an official of high rank, in whom all men trust, and he advised us not to be in haste about grafting our Redding Picholines, as he "had no doubt that we would obtain quite as much oil from this variety as from any other."

There are several fine groves in and near Auburn, and if the growers there have grafted or budded successfully, their methods as to time of year and manipulation of grafts or buds would be equally adapted to this climate (Butte county). Please let us hear from you, gentlemen.

I wish to divulge my experience with rooting olive cuttings. I set over a thousand cuttings in boxes, and put the boxes in an open hotbed over stable manure for bottom heat, and succeeded in rooting only 50 plants, and this was much better than most of my neighbors did who tried it. Will not some one rise and explain how we can strike olive cuttings in the open air (if possible to be done) in this execrable climate?

I add a remark, that all may know by these presents beyond a peradventure, that I belong to the fairer, "softer" or "gentler" sex; that my postmaster at Pentz may not chaff me so unmercifully upon the receipt of letters addressed to "Jessima Leigh, Esq." He now calls me "Square Leigh." JESSIMA LEIGH.

Pentz, Butte Co.

[We trust some of the many successful horticulturists of Butte county will write us their experience in answer to the above appeal.—EDS. PRESS]

THE APIARY.

Some More Bee Talk.

EDITORS PRESS:—On a recent visit to my friend C., we spent a couple of hours looking at his apiary.

"Now, Mr. W.," said he, "I wish you would explain to me why the bees tear out the foundation I put in the section-boxes. I am inclined to think that there is some foreign matter—some chemical of some kind used in the manufacture of the foundation that the bees don't like, and as a natural consequence they tear it out."

"Did they tear it all out?" I asked.

"No; several sections are drawn out fine."

"Well, in that case I should say it was caused by not being properly fastened in. What do you use for fastening the foundation in with?"

"I generally use melted beeswax. I believe that is the best, all things considered."

"Yes, it is if you mix a little rosin with it; otherwise, after you heat it a few times, it loses its vitality or grit and becomes crumbly after it is cold. By mixing rosin with it you overcome this to a great degree, and it makes a better wax for fastening foundation. To keep the wax in a fluid state, I use a coal-oil lamp, and by turning the blaze up or down, I regulate the temperature of heat to suit myself. I have the coal-oil lamp in a tall box with one side removed, so that it is easy to set the lamp in and out."

"Then I expect the reason that the foundation was torn out was because it was not properly fastened in, as I noticed that the wax was very crumbly. The foundation was not the best in the world, anyway. I had it come by mail, and when I received it, the edges were so badly bruised up that I had to cut off considerable in order to get a straight edge on it again."

"No, never have foundation come by mail; all that I ever got that way was more or less bruised up. Get eight or ten pounds at one time and have it come by express; that is the best way."

"Well, I intend to after this; no more foundation by mail for me. Now for introducing the queen you brought me. What do you think is the best plan of introducing?"

"The queen you see," I answered, "is in a Peet cage and therefore we will use the Peet method of introducing. What hive are you going to put her in?"

"That blue one yonder," and he pointed in the direction indicated.

"All right; light your smoker and we will proceed to business."

"This colony, you see," he said, as he lit the smoker, "has an old queen, and instead of the colony prospering it is going down hill."

"It don't pay to keep old queens," I observed; "you should supersede the old queens at once, when you see a colony beginning to decline. It is not much of a trick to take the old queen out and have a new one laying in a few weeks. Now for finding the old queen in the hive: you give them a little smoke, as I tell you, and I will handle the frame. Here is your queen," I exclaimed, as I handed her to him a few moments later; "she is a very poor queen—has only two frames of brood and at this season of the year she should have at least eight or ten. Now hand me the queen cage with the queen in. You see here is a very smooth piece of comb with a few cells containing honey; it is always best to fasten the cage over some honey. Now you see the cage is held in place by these two strips of tin, and it is no trick at all to fasten the cage or remove it from the comb. To-morrow morning, you must examine this colony and see if they have liberated the queen; if they have not, remove the cage and keep a careful watch of the queen. If they form a half circle around her and appear to be feeding and caressing her, it is all right, but if they attack her by biting or otherwise, you should cage her for at least 24 hours and then liberate her again. I don't think you will have any trouble introducing this queen, as the bees are rapidly gathering honey and are naturally good-tempered at this season of the year."

"Mr. W——, in your apiaries how do you do when two or more swarms go together—how do you prevent them?"

"I don't prevent them. I wait until they are settled, then I shake them on a sheet until I find the queens, and then divide the bees up into as many swarms as I have queens; I shake each swarm of bees in front of an empty hive, and let a queen run in with them. Of course you must have your queen-cages handy, so as fast as you catch the queens, cage them. Sometimes, though, it is very difficult work finding queens when there are so many bees; and if not running for increase, I should hive them as they were, without finding the queens—that is, providing not too many swarms went together. It is a good idea in swarming-time to have a long pole with a queen-cage attached to the end of it, said cage containing a fertile queen, and when the bees start to settle, hold this pole among them, and in nine cases out of ten they will settle on the pole. An old sack should be wrapped around the end of the pole in order to give the bees a good footing. It is a strange fact that bees will settle a good deal quicker where there is a fertile queen than where there is a virgin."

"That is strange, surely. What is the reason of that, do you suppose?"

"It is hard to tell. You know fertilized queens always have a marked respect and attention shown them, while as virgins the bees have very little honor or regard for them."

"Yes, that is so. I have noticed that myself," said Mr. C. "You ought to ask some of those bee scientists that question: Why does a fertile queen attract bees when swarming quicker than a virgin queen?"

"I believe it would be a good question," I answered, "and I guess I will ask them."

Grizzly Flat, Cal. S. L. WATKINS.

That Transaction in Bees Explained.

EDITORS PRESS:—I wish all bee-keepers and the public at large to know that I am the person alluded to in the letter headed a "Transaction in Bees" in the RURAL PRESS of July 26th. Yes, I am the culprit, the swindler, the thief, or whatever name you may please to brand me with.

First of all, allow me to say that the bees were sent to the gentleman in question nearly a month ago (now July 30th).

Next, I do not for a moment question that queens can be raised and fertilized by Feb. 1st and had ready to send out by April 1st, but let me advise any one who wants a good queen not to purchase any that are reared so early in the season by artificial methods.

It is now a well-known fact that the best, the most prolific and the longest-lived queens are those raised in the hight of the swarming season by the natural method (all my tested queens are raised by this method), and perhaps our Grizzly Flats apiarist will be surprised to hear that I had three swarms come off only a week ago, nearly three weeks after the gentleman in question received his bees and "long after all swarming has ceased." According to Mr. Watkins' assertion, San Mateo bees are either not so hot-headed or early as the Grizzly Flats bees—in fact I think they are something like myself, rather slow. I still contend that any apiarist who raises queens by the natural method cannot guarantee the purity of their progeny before May or June, and taking into consideration the fact that there were numerous orders on file previous to that of the gentleman in question, I cannot see that I have sinned so egregiously after all, but I wish to say that after this date I shall inform all customers of the earliest date when they may expect to receive any bees ordered, and if they are not satisfied they can have their money back immediately. WM STYAN.

San Mateo, Cal., July 30 1890.

AMERICAN SCISSORS IN SHEFFIELD.—A trade which at one time was regarded as one of the dying industries is again reviving rapidly—that in scissors. German competition, says the London *Engineer*, has been excessively keen in scissors for domestic use, particularly those in the cheaper qualities. The Americans beat both English and German of the tailors' scissors, which are perhaps the most important branch. American-made tailors' scissors are preferred even in Sheffield.

Patrons of Husbandry.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

Look Out for a Good Legislature.

The Patrons, in common with other good citizens of California, desire that our system of balloting shall be reformed. We can conceive of no one Act of the coming Legislature that can be of greater or more lasting good to the commonwealth. Remember how you were euchered out of the passage of such a bill by the influence of the "Boss" two years ago, and work regardless of party lines for the election of good members.

We want an Enabling Act for the establishment of Farmers' Co Operative Insurance Associations. Remember that there has heretofore been an immense amount of money and a tremendous pressure brought to bear upon the Legislature, to prevent such an enactment. Nominate and vote with an eye toward electing the best of all men to accomplish the measure needed.

We want men chosen who will pass a law for the re-assessment of railroad taxes, that the just dues of this State may be collected from the railroads which tax the people so heavily. Remember that the sum of the unpaid taxes of the railroads for school and other purposes has to be made up by farmers and others who do pay their annual taxes. The sum approximates millions in this State alone.

These are only a few of the reasons why voters of this State should stand no further nonsense in the nomination and election of the men to represent them in the next Legislature.

State Grange Items.

Worthy Master H. E. Hayes of Oregon will be in attendance at Watsonville. The presence of other able visitors is anticipated.

Sister Roache and the Literary Committee will, no doubt, have a splendid program.

Watsonville has the largest beet-sugar factory on this side of the continent.

Watsonville lies between two of our celebrated watering-places—Santa Cruz and Monterey.

Regular fare from Watsonville to Monterey, 90 cents; to Santa Cruz, 60 cents. Sunday excursion rates from Watsonville to either Monterey or Santa Cruz, 50 cents each way. Distance from Watsonville to Monterey, 26 miles; to Santa Cruz, 20 miles.

There are four passenger trains a day from San Francisco to Watsonville, leaving San Francisco at 7:50 and 8:30 A. M. and 2:30 and 3:30 P. M. Distance, 101 miles. Running time, three and a half hours. Returning, arrive at San Francisco at 10 A. M., 11:15 A. M., 6:30 P. M.

There are nine Granges in Monterey and San Luis Obispo counties. We hope every one will have a large delegation at the State Grange.

Would it not be a good idea to appoint a committee in each subordinate Grange on State Grange meetings, to make all arrangements of advantage possible for the occasion?

By resolution of the session of 1888, all officers of the State Grange are required to send their annual reports to the Secretary for printing by Sept. 1st.

We wish to hear of the health and prosperity of our recent distinguished visitors to the National Grange. Send us friendly criticisms and good hints for our annual session, National brothers and sisters.

Pescadero Grange.

Editors Press:—Pescadero Grange met on the 21 inst. to confer the third and fourth degrees on a class of seven and to enjoy the usual Harvest Feast, but postponed conferring of degrees on account of sickness.

The feast and a pleasant social time was enjoyed by all who were able to be present.

I. C. Steele.

Capital is grasping and labor exacting, but we are glad to observe that each is learning the importance of mutual concessions and union, and to respect the power of the other. They both now see that capital cannot prey upon labor, nor labor demand of capital more than the value of its product without mutual injury. Between these two there should be no discord, for the one can accomplish but little without the other, and a want of harmony is certain to bring loss to both.—*Farmer's Friend.*

The Master's Desk.

E. W. Davis, W. M. S. G. of California.

If any Patron has anything in the line of Grange work for the next session of the State Grange, now is the time to send it to the Chairman of the committee. If it is a resolution, send it to S. T. Coulter, Santa Rosa. If it is an amendment, send to I. C. Steele, Pescadero. If it is for the Good of the Order, send to W. L. Overhiser, Stockton. If it is on the subject of co-operation, send to Wm. Johnston, Courtland. If it refers to legislation, send to Geo. Ohleyer, Yuba City. If it be literary or musical, send to Sister A. P. Roache at Watsonville. If on the subject of finance, send to D Flint, Sacramento. If it is of such a nature that you are in doubt what to do, send it to W. J. Hill, Salinas. If, after this disposition, there is yet one who has something that ought to come before the State Grange, send it to the Executive Committee, care of A. T. Dewey, Secretary, 220 Market street, San Francisco. There is much to do. Let us then be at it at once.

That must have been a grand Grange meeting held at Chautauqua last Friday. Just think of three such eloquent, learned and zealous Patrons as Gov. C. G. Luce of Michigan, Gerard C. Brown, "the eloquent," of N. Y. State Grange, and Hon. Mortimer Whitehead, the Worthy and magnetic Lecturer of the National Grange, all to speak from the same platform on the same day. It is an event that will not soon be duplicated. What a treat! Who can listen to such men in such a cause, and not be moved to thought, aye, to tearful thought? How I wish we of California might have such a literary feast. It was an oratorical, mental, and fraternal banquet.

The Grange undertakes to defend and uplift the weak, and to repress and punish the evildoer.

It has been claimed by a very earnest friend of the working classes that there are 2,000,000 men out of employment in the United States. This is a sorry condition of affairs. Would it not be well for laborer and capitalist to consult together, and then let capital put labor to work? There are many acres of land to be cleared, cultivated and made into homes; there are many public improvements much needed; there are streams to dredge; mines to develop and work; highways to be built, and a thousand and one ways of labor helping capital and of capital assisting labor. Let common sense and confidence assume control, and let greed and want stand aside! There is enough for all. A common understanding would redound to the benefit of each class; and don't you know these 2,000,000 men would do a great amount of productive work every day in the year?

The *best* one can do, at the time, is the thing *to* do.

Now is the time to begin to prepare for the State Grange. Calculate you are going; then go. Calculate that when you are there you will do something for the Good of the Order; then do it.

Lake county has again fallen into Grange line. When will Napa county be ready?

Remember the Constitution of the State Grange can be amended only after a month's notice to the several subordinate Granges, and then only at a regular meeting of the State Grange and by a two-thirds vote.

The By-Laws may be amended at any regular meeting of the State Grange by a vote of two-thirds of the members present.

Thanks to Bro. W. M. Hilleary, Sec'y of Oregon State Grange, for a copy of proceedings of the 17th annual session of the Oregon State Grange. It is evident that our brothers and sisters in the North have a full and just conception of the purposes and principles of the Grange. Brother Hayes' annual address deserves to be read by all.

If the farmers would take half as much interest in building up and organizing Granges as they should, they would have less taxes to pay and would enjoy better Government for less money. The Grange is an adjuster.

Teach your children, while they are yet on the farm, to be studious, to be self-reliant, to be independent (not saucy), to feel that they have a niche in the world to fill, and resolve that they are going to find that niche and fill it. Let them suggest plans. Correct them if the plans are faulty and praise them if they are praiseworthy. Help them to climb—anybody can fall. To succeed is work—hard work.

Stand by your *true friends! Be* a true friend, and you will *have* true friends.

The "old oaken bucket, the moss-covered bucket," has been to you a friend and solace many a time. So the old gray-haired friend has befriended you times numberless. Don't forget your other-day associates, provided they were good ones.

Never laugh at another's misfortune, for it is a long road that has no turning.

The Wanderers Return from the North.

Editors Press:—The morning of the 13th inst. found us once more in the dear old home, after an absence of nearly two months in Oregon.

The first week of our visit was delightfully spent with Bro. J. B. Stump's family in Salem, where we were royally entertained. We attended the State Grange, then in session, and listened to the eloquence of many of the brothers and some of the sisters, who delivered sage and seasonable remarks.

Salem, the capital of Oregon, is a beautiful town of 10,000 inhabitants, located in the Willamette valley. The land on the Willamette river is rich and productive, with a pleasant climate.

From Salem we proceeded to Portland, a fine, growing city of 60,000 inhabitants; thence to Eastern Oregon, passing some very grand scenery on the Columbia river. The mountains and palisades here compare favorably with some of the scenery in Yosemite valley.

The Multnomah Falls are wonderful indeed, being 800 feet in hight. The scenery all along the Columbia is grand and varied, the evergreen forests presenting a pleasing and attractive appearance.

There is little farming country seen from the railroad between Western and Eastern Oregon until we reach Pendleton and the Umatilla Indian Reservation. Here is a fine country for wheat-raising, and much is shipped hence annually. Pendleton is a thriving town of 3000 inhabitants. A portion of the reservation is soon to be sold to settlers who will live on it.

From here we pass on for 90 miles through finely timbered country and reach the beautiful Grande Ronde valley in Union county—a fine, rich district, producing large quantities of wheat, barley and other grains.

This valley is 30 miles long by 15 wide, surrounded by a range of blue mountains, comprising several pretty growing towns. La Grande, the largest, is centrally located and has a population of nearly 3000, four churches, good schoolhouses, several stores and hotels, an elevator 120 feet in hight, several railroad buildings and many handsome residences, altogether showing the intelligence and enterprise of the people. There was a flourishing Grange here a few years ago, but for some reason unknown to the writer it is now dormant.

We spent five weeks in La Grande with a friend from whose home we could overlook much of this fine region, and enjoyed several delightful drives around the valley and through the lovely grain-fields. At times the scenery was so charming that we felt we were nearing Paradise; and well we might, for about 20 miles distant is a place called New Jerusalem. The towns of Union and Summerville are at the extreme ends of the valley. Island City is two miles from La Grande, and in the near future will form a part of that place.

July 10th saw us on board the cars again for California. It was with some reluctance that we bade adieu to our new-made friends in La Grande, but stronger ties brought us to the Golden State. The route is a pleasant one and full of varying interest. As we come into the Siskiyou mountains, we are filled with wonder at the grandeur and wildness of the scenery. Mt. Shasta is indeed sublime, with its lofty summit towering heavenward to the hight of over 14 000 feet. We are winding around the mountains in sight of old Shasta for nearly half a day. There is a vast amount of snow on this mountain throughout the year, especially during the winter season. There are many pretty growing towns in Northern California and along the Sacramento river beside which lies our course for many miles. We have traveled almost the entire length of the State and have yet to find a pleasanter or sunnier valley than the Sacramento. L. C. M.

Elk Grove, Cal, July 28, 1890.

Farmers' Reflections.

Reports of a recent discussion of the agricultural situation by several Illinois farmers of evident intelligence show varying views, all interesting, and some obviously useful. Following are expressions as to the rural cloud—with silver lining:

"The profits of farming date back so far from these jobbery, robbery days of syndicate monopolies that it is only a mockery to talk about farmers' profits....At present prices of produce the farmer who supports his family and keeps his farm up square needs all of the combined pluck of a score of live Yankees.... Under present conditions it is safest for the farmer to cut down crops to the home capacity of tillage and avoid the extra bill of hired help. ....Farms at present yield no interest on the money invested, but a man with a crop in the field or barn is at least fairly sure of food and raiment, and that is no small count in the sum of human happiness....Those who have never tried it don't know the comfort there is in watching thrifty crops grow, or in the daily management of a sleek and healthy herd of farm animals. It is nature's own work and best tends to a contented mind."

The suggestions offered for self-help and possible betterment indicate thoughtful consideration of available means worthy of trial in times hard or easy, and include these, in favor of intelligent voting and shorter hours:

"Farming should have less of the rugged routine of back-racking day's work in it, and more of politics, until no man can go to Congress who takes more stock in millionaires and monopolies than in guarding the rights of the common people....No reform has more pressing need of a big boom than the highly moral one that will shorten the day's labor of the overworked farmer....Early and late, every-day devotion to hard work cripples many a man before he is thirty years old, and it doesn't begin to pay, even if it counts up in acres and dollars.... Overwork leads to careless work and the slipshod habit soon grows and leaves its ugly mark all over the farm....One cannot see or say that longer hours yield any more money in the long run of the year....A small farm well tilled gives more profit and pleasure than a large one lacking help to keep it in good shape."—*N. Y. Tribune.*

From Yuba City Grange

Editors Press:—It is very gratifying to note the forward movement all along the line to realize the benefits to be derived from the organization of the Order of Patrons of Husbandry. It must be a holy and glorious cause that elicits such wisdom and patriotism weekly from the Master's Desk of the State Grange! How much more pleasant and profitable would be the lot of the isolated farmer and his family were the Master's teachings heeded and carried out!

There is, to my mind, a growing disposition on the part of agriculturists to trust each other and to make common cause in the furtherance of their interests. I cannot indorse the oft-repeated assertion that the farmers of our land, alone, of all professions and callings, are incapable of coming together for mutual protection and advancement. The assertion is a severe reflection on the most important and ancient industry of civilized life. The farmer is merely the caged lion that knows not his strength, else the cage would be demolished in a twinkle.

I notice that the "Central South" is becoming aroused over the approaching meeting of the State Grange at Watsonville. No doubt the annual convocation of Patrons of Husbandry will be very large and a grand success, the locality being among the most popular seaside resorts, to which the entire State contributes liberally of means and members. And then, who so indifferent as to withstand the eloquent appeal and cordial invitation of Sister E. Z. Roache, W. M. of Watsonville Grange? Of course everybody will go that can, if they have to wear last year's clothes in consequence of a six-month drizzle-drazzle—as I heard the last rainy season described.

Crop Notes.

But if the wheat-farmers have short crops and light purses, it is not the lot of the fruit-grower, for his purse and bank account have swelled to unusual proportions. The crop in these parts is a fair average—not what it would have been with an ordinary amount of moisture; but with the increased acreage in bearing, the grand total will be above that of last year, both in quantity and quality, and the market, too, is all that could be desired, of canned and dried as well as fresh fruits. Every one is glad of this good fortune, whether he is a fruit-grower or not, since it opens to the world the intrinsic value of our glorious climate and matchless productions.

Yuba City Grange

Is still marching on, has not missed a meeting during the current year and has at every meeting labored to advance new candidates in the several degrees.

A month ago the members promised themselves an ice-cream treat for recent triumphs and to convince the new applicants that the Grangers are not such horrid creatures after all—to take effect on Saturday last, their regular August meeting.

The affair was a grand success in every particular, including one of the best-rendered literary programs ever given by the Grange. It consisted of vocal and instrumental music, recitations, select reading, and one of the most mirth provoking dialogues imaginable. The characters were two young ladies and two gentlemen; and the plot, to encourage a bashful lover with a big little brother in the background. It was very funny and the absent missed a rare treat.

A Suggestion.

By the way, friend Grangers, such things occasionally will fill your halls and will repay for the time consumed in study and in listening to their recital. I suggest that something of this kind be recited at the next State Grange, and the selection be based on the portrayal of the beauties and independence of farm life.

The next regular meeting coming on the last day of the Marysville District Fair, the Grange decided to meet a week earlier, i. e., the last Saturday in August, at 10 o'clock A. M., to confer the third and fourth degrees with a Harvest Feast and the customary literary exercises.

Yuba City, August 4th, 1890. Eureka.

From No. 1.—Sister Rogers, wife of C. S. Rogers, W. M. of Pilot Hill Grange, No. 1—the first organized on this coast—called in and paid a year's subscription for our Grange edition. She reports that Bro. Bayler, who instituted the Grange and was long its Master, is now keeping a large pleasure resort at Lake

Tahoe. A number of the members of Pilot Hill spend their summers in the mountains with their stock and are now absent from their homes.

The Paso Robles Picnic.

Both the *Moon* and the San Miguel *Courier* contain reports of the basket picnic held Saturday, July 26th, at the Southern Coast Range Experiment Station, under the auspices of Paso Robles Grange. More than 200 substantial farmers attended with their wives and daughters, and the occasion proved interesting and enjoyable.

Bro. R. D. Cruickshank, who is in charge of the Station, had everything in good order and busied himself all day in ministering to the comfort and pleasure of the visitors. In one of the rooms he had neatly arranged over 90 fine specimens of grain, comprising wheat, barley, oats and rye, that were grown on the grounds this season. This collection is to be sent to the State Fair, and a duplicate sent to the District Fair at San Luis.

Appropriate addresses were made by Worthy Masters J. V. Webster of Creston—who, it will be remembered, donated the 20 acres for this Station and assisted in raising money for the buildings—and Rufus Fisk of San Miguel, and vocal music added to the pleasures of the meeting.

The Experiment Station.

The benefits derived from the work at this Station are hardly yet realized by the people of the district. Its purpose is to experiment with and ascertain the adaptability of various kinds of fruits, cereals, grasses and plants to the soil and climate. Here the result of experimental work may be carefully observed by the farmers without incurring any expense—and every practical farmer knows something of the cost of individual experiments. Though the Station only comprises 20 acres, yet there are four different varieties of soil represented—the red hill soil, heavy adobe, light-colored sandy soil, and what is termed "hog-wallow." This may be considered a fair representation of the greater portion of the Upper Salinas valley.

A note from Bro. Cruickshank says: "When those who did not come heard what a fine time we had they were much annoyed at not having been there. Worthy Master Lindner kindly lent me the wood he had intended to build a house with and let it be cut up for trestles and shading for the people, so you may guess that neither his interest in the cause nor mine has flagged. We intended to see the thing right through."

Tulare Grange Department.

Notes and Extracts from the "Register."

Of late years the only perceptible difference between the "grand old parties" has been the difference between tweedle-dum and tweedle-dee, *i. e.*, a small percentage in tariff duty, and a vague historical or traditional illusion, which manages somehow to preserve a solid South and a united North. In the differences, however, the interest of the farmer plays a very small part indeed. Let farmers of all parties, kickers included, pledge themselves that they will be represented only by one of their own class—a farmer. That while lawyers, clergymen and other professionals, including colonels and generals, may all be excellent men, very learned and very eloquent, they cannot feel a farmer's feeling, nor take the lively interest in agricultural needs and demands that the enlightened farmer can. Nominate farmers; work for farmers; vote for them and elect them. We can do it. Then the g. o. p's will respect us and give us a seat at the table. The farmer need not even then be thankful. He is strong enough in a united effort to reach out his brawny arms and seize these antiquated g. o. p's by the neck, one in each hand, and play Yankee Doodle with their heads.

J. S. Barbee writes us from Armona that he is State Organizer for the Farmer's Alliance, and is desirous that we act as Deputy Organizer for the county. It is pleasing to be well thought of, and our vanity might yield to the request if we did not know that even standing room does not exist for further reforms desiring active service. We wish the Alliance well and hope that it will be a faithful coadjutor with the Grange in uniting the farmers. We must "get there," no matter the road on which the traveling is done.

The late "Kickers' Konvention" at Visalia did not emanate from the Grange, but as it promised co-operation among the dissatisfied, received its hearty sympathy. In the committee appointed to draft a platform of principles the Grange was not represented, though four of the committee were members of Tulare Grange. This is the manner of the politics of the P. of H.—nowhere visible, but everywhere felt. But the Patron is a visible unit, whether in his own special political party or out of it.

We met Bro. E. B. Taft in Visalia. He represents the RURAL PRESS and should receive a hearty greeting and welcome from every Patron. We are sorry that other duties prevented us from meeting him in the Grange. We found him to be a well-informed, level-headed brother, in short a representative Patron of Husbandry.

Accepting Responsibilities.

[Written for the RURAL PRESS by J. C. MOORE.]

We have often had occasion to notice with disapproval the desire so common among men—and not altogether unknown to women, also—for high and prominent positions in political, commercial, literary or social life, and unworthy and undignified efforts to obtain them.

From the longing of the schoolboy for pre-eminence in his baseball club to the secret craving for the Presidential chair, this spirit is rife among us, and to it we may trace much of the inefficiency of execution, the perversion of means, the unfaithfulness to trusts, and the general corruption which inflicts such grievous stains upon our organizations, and frustrates so much of their power for good.

There is, however, an opposite extreme into which another very different class of people is in danger of falling, and which, while winning a kind of sympathy from its utter antipathy to all trickiness and wire-pulling, is yet to be regarded a deplorable public calamity. We allude to the unwillingness of good and capable men and women to assume positions of trust and importance to which they may be appointed. It may be thought that this is so rare a defect, and forms so refreshing a contrast to the eager feverishness of office-hunting, that it needs but little reprobation. Yet this is not the case.

It is surely quite as important that all places of trust be filled with suitable officers as that the unsuitable ones be excluded. Indeed, it is only by the former coming to pass that the latter is made possible. So, whenever the right man declines, from any cause, to fill the place for which his talents, or education, or native qualities peculiarly fit him, he inevitably assists in putting the wrong man in.

Probably but few persons realize that this is so. To decline an honor seems so natural a thing to a modest person, so merely negative a course, so utterly innocent of any ill intention, that it cannot involve any responsibility, or be cause of any injurious effect. Yet when we reflect that for one person well-fitted for an honorable position, there are probably a hundred eager aspirants who are not at all qualified to discharge its duties, we shall see that the retirement of that one is the decisive act which throws the work, almost certainly, into incompetent hands. True, the lack of competence is the usual plea made by those who shrink from assuming responsibility; but unfortunately it is usually the best qualified who feel this lack, while the careless and unthinking, eager only for the emoluments or the *eclat* of the work they sue for, are loud in proclaiming their general abilities and special fitness. Such modesty, then, however pleasing to look upon, should give way before the judgment of others, and learn to distrust its own convictions, rather than suffer them to imperil a good cause.

Many other reasons, also, are urged for refusing positions of trust, want of leisure, pressing duties, the thanklessness of office, its publicity, the criticisms passed upon officials, and oftentimes their unmerited censure.

It is true that such objections are often based on facts. Valuable public work by no means receives all the honor and gratitude that it deserves. Self-sacrifice is sometimes rewarded with obloquy and earnest effort with indifference or scorn. But what then? Is there not another side to be considered? Is not all this effort, self-denial, and even suffering for the good of the community, a means of paying a large debt which is due to society? Ancient civilization taught the strong to use the weak, and the wise to use the foolish as stepping-stones to further power and wisdom and glory for themselves, but the civilization which is born of love and charity teaches that strength, wisdom and talents, and education, money, and leisure, and every other privilege should be freely offered as stepping-stones on which those less favored may climb to hights which would otherwise be wholly inaccessible. All or any of these advantages are so many obligations to use them for the general good. *Noblesse oblige* is as true as it ever was in feudal times, and bears even a higher application.

If each one who possesses any good thing is bound to see for himself that it is doing its reasonable work for the world, then surely when his fellow-men, conscious of their need of it, combine to ask him to use it for their benefit, he should have weighty reasons indeed to justify him in declining. It is no longer the honor done *him* that should be uppermost in his mind, but the service that is due to *them*. The first he might resign, but the latter he dare not if he would be faithful to his trust. There are some with health, talents, culture, taste, judgment and wisdom who in most things seem to have a loyal and generous nature, who shrink from no reasonable demands on their purse, who express sympathy with every worthy enterprise, and who yet decline the very means of doing the highest good in their power by refusing to fill positions of public responsibility. They wish well to schools, churches, hospitals, libraries, city and county governments, State interests; they have their own opinions, and sound ones, on the state of the country and the various questions of the day; they weigh political parties and their respective merits and duties; they hope to see good and true men in high office, and selfish and mean ones removed; and yet when they themselves are urged to take an active part in these things, to put *their* powers out at interest in the service of their city or county, their State or their country, to accept responsible positions for which they are eminently fitted, they shrink back into retirement and plead inability! Does this seem altogether loyal and true? Does not the whole future of our country depend largely upon the character and ability of those who are to lead its enterprises, and if those who are its natural leaders sit down supinely to watch the progress of events, instead of bravely rising to guide and direct them, can they avoid the responsibility of having left it to drift into the hands of incompetence, recklessness and selfishness?

Let all who are disposed thus to bury their talents, their opportunities and their energies in the retirement of private life, against the advice of the good and wise, reflect on the consequence of such a step. Let them remember that it is no more empty honor, but a serious call to duties and responsibilities from which they have no right to shrink; an opportunity to pay a debt which grows naturally out of every endowment of nature and every advantage of circumstance, and which is as much a debt of honor as any that money can discharge, and one which they should equally scorn to repudiate.

If any such persons, loving truth and purity, and seeing so much of the muddy waters of deceit, selfishness and corruption in the social or political arenas to which they are called, fear to plunge in and debase their instincts, let them remember that, as the lily loses her whiteness and beauty when detached from her native soil, so purity and truth lose their life and significance when taken from the soil of active and earnest effort. Only in shedding their luster upon others can they retain it in themselves; only by vitalizing the world can they retain their own vitality.

Those love truth best who to themselves are true,
And what they dare to dream of, dare to do.

Otay, Cal., July 29, 1890.

From General Deputy Steele.

A. T. Dewey, Secretary State Grange:—I have offered my services to every Grange in the sixth district as Deputy Lecturer, and held myself in readiness to respond to every call. I have visited San Jose and Salinas Granges, and labored to the best of my ability in Pescadero. I expect to visit Hollister on the 9th of August, and hope to get a meeting of Santa Cruz Grange, and organize a Grange at Bonny Doon in time for the State Grange. Have written to the Master and Secretary of Gilroy Grange, but received no reply.

I am ready and willing to respond to every call and to do the best I can for the Order.

Farmers have been very busy for the last two or three months. I trust there will now be opportunity for Grange work. Many farmers and their families are occupied with their own affairs and know little and care less about the efforts being made to better their condition. Those who take and read the RURAL PRESS are better informed on the subject, but even then it requires considerable effort to get them to join the Grange and take hold with a will in the accomplishment of its purposes.

It is frequently said: "Farmers will not pull together." The fact that many Patrons of Husbandry do pull together most unselfishly for the general good is a sure prophecy of what may be. To those who have labored and waited long for the triumph of Grange principles, I wish to say: Progress is the *law;* never falter in well-doing. The evils we complain of will surely yield to better counsel.

Pescadero, July 29, 1890. I. C. STEELE.

Thanks to Bro. Past Master Steele for his information and good work for the benefit of all. We hope to hear soon, often and favorably from all officers and deputies.

Anti-Debris Conference.

The following circular has been issued by H. C. Ross, chairman of the Board of Supervisors of Sacramento county:

You are hereby respectfully, but earnestly, requested to attend a conference of the Boards of Supervisors of Sacramento, Yolo, Colusa, Yuba and Sutter on Friday, Aug. 8, 1890, at 11 o'clock A. M., at the Court House in the city of Sacramento.

The object of this convention is to take into consideration the present status of the hydraulic mining question, and how best to secure the enforcement of injunctions against illicit mining.

Open Meeting at Hollister.

On Saturday, Aug. 9th, I. C. Steele of Pescadero, Past Master of California State Grange, will be here. Grange will open at 10 o'clock A. M., for the purpose of conferring the third and fourth degrees and for other business.

Harvest Feast in the hall at noon, and at 2 o'clock will be held an open meeting to which all are invited, farmers especially.

Bro. Steele is working under orders of State Grange as visiting Deputy of the Sixth District. He is an excellent speaker, and no farmer can afford to miss hearing what he will have to say. A. DUNLAP, Sec'y.

Watsonville Active.

EDITORS PRESS:—"War and rumors of war" continue to jar unpleasantly on peaceful ears. The political caldron has already begun to sputter and boil. Grain-farmers are heard bewailing their ill luck, while fruit-growers (except those who contracted their crop too cheaply) are rejoicing. So the old whirligig called the Present reveals itself in varying phases, showing to some its crying side, to others its laughing side, to yet others its sober side, its alarming side, or even its wicked side, while all the sides correspond exactly to the range of the mental telescope through which they are viewed.

In conformity to these facts, Watsonville Grange has been scanning the department of mind with the improved telescope of progression, and has made the important and pleasing discovery that she has located the largest number of stars of the first magnitude in her Grange firmament of any subordinate Grange in America. Her new class is super-excellent, and her motto "Excelsior," while whispers of "well done," "superb," "incomparable," are wafted hither on the wings of the wind.

Figuratively speaking, this Grange has leaped from childhood to maturity at a single bound, and has so outgrown its hall that members jog elbows, as "do recruits when flinching."

Another special meeting has been called for this Saturday at 2 o'clock, to receive yet another lot of applications; also for degree work and drill of officers, choir practice and other business.

The third and fourth degrees will be conferred Aug. 16th, while a grand harvest feast, followed by an open meeting, is to be held at the Opera house Aug. 23d. On this latter occasion, E. W. Davis, the silver-tongued Master of the State Grange, and other State Grange officers, are expected to be present and address our farmers. A select program will be rendered and a general good time is anticipated. All farmers and their families are especially invited to the open meeting, as are all others who can see good in their fellow-man, who would learn something of the Grange and what it is, and all who are interested in the reform of abuses which engender discord and entail hardship on the teeming millions whose strong arms of labor support the proudest and best nation terrestrials have ever known.

A. P. R.

FARMERS' INSTITUTES.—In his report as Secretary of Agriculture, just issued, Hon. J. M. Rusk says: It is a matter of no little gratification to me that this great work has nowhere been more fully tried than in my own State, where it was my privilege and pleasure to encourage it in every legitimate way, and nowhere has it reaped a more abundant harvest than in Wisconsin. Experience there and in other States has fully demonstrated the extraordinary benefits arising from these institutes, and I am strongly of the opinion that, without going into details as to the precise way in which aid to the movement should be furnished, the National Government, in pursuance of the policy so strongly marked out by the establishment of the agricultural colleges and experiment stations, should put it in the power of the Department of Agriculture to foster and encourage the work of the institutes in the various States and Territories. The institutes have been justly designated the farmers' colleges. No truer title was ever conferred. I will only add that the strongest lever to raise and uphold the work of superior agricultural education represented by our system of agricultural colleges and experiment stations is to be found in this institute and kindred work.

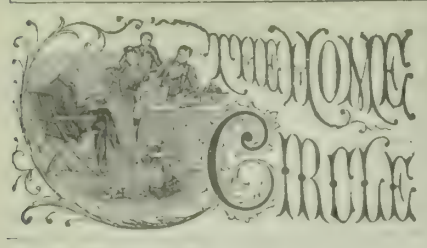
THAT'S SO!—One of our good Matrons writes brightly as follows: Bro. E. W. Davis, W. M. S. G., made a mistake when he proposed writing less for the RURAL PRESS if others would write more. I am sure none would like to write under those conditions. If he had said he would increase *his* correspondence if other Grangers would write too, then many would have been induced to write, for we all much enjoy Bro. Davis' articles in the RURAL PRESS.

POTTER VALLEY.—Bro. Wm. Eddie, W. M. of Potter Valley Grange, writes us that they would like to have Bro. Coulter visit them about the 1st of September, when harvesting will be over, and think they can get up a good meeting. Bro. E. reports a fair hay crop—all housed—wheat and barley light, corn looking well.

BRO. T. T. HOOPER, with whom all old Patrons sympathize in his paralytic affliction, has left Bartlett Springs, where he has been staying for a season. We are sorry to report to his old friends that Bro. Hooper has been growing weaker the past year. He looks forward with faith and hope to attending the State Grange at Watsonville.

AT HAYWARDS.—Worthy Master E. W. Davis, in a letter of the 4th, states that he will attend Eden Grange Aug. 9th, on the occasion of an ice-cream festival tendered by the Grange to Bro. and Sister Amos Adams.

WATSONVILLE GRANGE, Bro. Roache writes, had a splendid special meeting on the 26th of July, received seven more names and indorsed as a whole the Creston resolutions.



Almost Out of the Woods.

[Written for the Rural Press by Lura.]

PART I.

"We are almost out of the woods," she said,
As they softly smoothed her silvery hair;
"Yes, the path is narrow, but go straight on
Till you see the light—we will soon be there."
On the wrinkled cheeks and the trembling lips
Lay the heated curse of the city air,
But her spirit strayed in the darkening woods
As she whispered still: "We will soon be there.

"'Tis a long, long time since we started, dear;
I will take your basket, 'tis big for you.
Now you run ahead till you find the rest.
No, the path is narrow just here for two.
Never fear for me, for I long since learned
All the steps to take and the work to do.
Keep your strength, dear child, till a time of need,
There's the light ahead, so we're almost through."

As her eyes unclosed with a puzzled look,
And her groping hands lay at rest at last,
She was murmuring still of the narrow path
And the gloomy wood that was almost past,
Till the setting sun kissed the patient face.
"We have found the light! Oh, I knew we should!
But do you go first; there is time for me."
She had dropped her load, she was through the wood.

PART II.

Afterthoughts.

Yes, afterthoughts that will not down!
She bore the cross to wear the crown,
Or so you say, and yet I pause
To weigh the justice of your cause.
Why must a good be bought by pain,
And earthly loss bring heavenly gain?

It seems to me her course on earth
But proved—did not create—her worth;
Yet not *all* worth, for if she shone
By depth of contrast, that alone
Is certain sign of something wrong—
Of great and small, of weak and strong,
Of struggling powers of good and ill,
Of birthright, vice and weakened will,
That cannot conquer when it would,
Of souls *kept* selfish by the good,
And all unequal things that try
Our faith in God with "whence" and "why."

She was a type from out that past
Which wrought the present, bowing low
To forms established long ago,
Till in some fierce, resentful hour,
A daring soul gained birth and power,
Leaped from the brain to eye and thrilled
The wondering world with plans fulfilled
Of crushing vengeance, war's hot thirst
That changes first for last and last for first;
And so the mighty force which saves
But raised up tyrants and their slaves.

But why repeat? You only sigh
As if descending from on high,
And with a faint, indulgent smile
Answer: "Beware of Reason's guile!
I cannot tell. I only know
That she was *good*, she *loved us so*."

A Strike for Eight Hours.

[Written for the Rural Press by Clara Spalding Brown.]

"The carpenters struck for eight hours to-night, Martha. There'll be no more work done till the builders come to our terms."

Mrs. Dayton looked across the table at her husband with a dubious expression on her face.

"Do you think they will give in? I am afraid you will be out of work some time."

"I don't care if I am; eight hours are enough for anybody to work, and it's time the people who have to do the labor of this world showed some spunk and rebelled against being tied down to one eternal grind."

"But you will lose three dollars a day, and we don't want to run in debt. Mouths must be fed, you know, just the same, and the children's shoes——"

"There you go, borrowing trouble right and left! What's the use of trying to cross a bridge before you come to it? I guess there'll be a way provided."

Mrs. Dayton said no more, but she looked anxious as she cleared away the tea things, put the children to bed, and finally sat down to a big basket of mending, just as her husband's snores began to penetrate the sitting-room from the adjoining bedroom. She was very tired, but she could not think of going to bed before eleven o'clock. There was always just so much to be done, and only one pair of hands to do it all.

Eight hours a day's work! Mrs. Dayton smiled grimly. What would become of the work in that house if *she* "rebelled against being tied down to one eternal grind"? Six children, the eldest but twelve years of age, the youngest an ailing baby which she sometimes feared did not receive due attention with so many other cares devolving upon her from early morning until late at night; and Mrs. Dayton was not robust—never had been. She could not "turn off" her work as some women do, but she did the best she could, without complaining.

"If Silas has made up his mind not to go back to work, nothing I can say will change it," she mused. "There's one good thing about it—if he is going to be at home, he can help me in a number of ways."

Comforted a little by this reflection, she plied her needle with renewed vigor, and at last crept wearily into bed, partially arousing her husband, who muttered, testily, "Don't talk to me! I tell you, eight hours are enough," then turned over and started a new series of snores.

"Do you mind holding baby a few minutes, Silas, while I skim the milk?" queried Mrs. Dayton after breakfast the next morning.

Silas had settled himself into his chair with the air of a man who has all day before him and owns no man for a master.

"Hold baby!" he ejaculated. "Do you think I'm here to do women's work? I guess when I get a day off I'm going to enjoy it."

"He's sick with a tooth coming through, or I shouldn't have asked it. I really don't know how I can attend to my work and care for him as I ought. There, there, poor little dear, don't cry."

"Well, if this is the sort of racket I've got to listen to, I'll clear out. Great Scott! just hear him yell! I thought I was going to have a little peace in my own house. You needn't wait dinner for me—I don't know when I'll get back."

The irate man hurriedly got out his fishing tackle and strode off to the nearest wharf. The Daytons lived in the outskirts of a large seaport, had their own little cottage, a cow and chickens, and were altogether very pleasantly situated. Mr. Dayton was a good husband in most respects, and would have stared in amazement if any one had suggested that he was not always perfectly kind to his wife. He was thoughtless, like many other men who do not stop to consider how manifold the duties of a housekeeper are. He would have scouted the notion that his wife worked harder than he did, and the idea of lightening her burdens in any way had never occurred to him.

Mrs Dayton had trained her children to be useful to some extent, but the oldest was a boy, and his ten-year-old sister could only render some assistance in dressing the little ones mornings and do a few chores after school at night. The week passed by. Mrs. Dayton was disappointed in her hopes of deriving any benefit from her husband's idleness. If she asked him to repair something about the house he would do it to-morrow, but to-morrow came and it was not done. When churning-time came he was not to be found. He never seemed to notice when she lifted heavy kettles of water or emptied the wash-tubs, and she strained her arms as usual putting up the clothes-line. Seeing how disinclined he was to have anything to do with the domestic affairs, she ceased asking for his help.

Silas Dayton was enjoying his vacation. He was a good workman and he meant to make the most of his leisure; so he read and he smoked, took naps in the hammock and indulged in long gossips over the fence with neighbor Jones, a professional man whose office hours were short. Did you ever notice how fond the average man is of gossip? He likes to have his fling about the chattering of women, but at heart he relishes a bit of news. When Almira Smith becomes engaged to be married, or her father sells his pasture lot, or Jim Downs gets a clerkship in a store, he is always glad to hear about it, and two men can beat any two women of my acquintance in holding a protracted sidewalk meeting.

Martha Dayton lay awake nights and thought. Saturday morning she arose with an unaccustomed look of determination on her face. In a way that ordinarily mild women sometimes have, she had suddenly become firm as a rock in her resolution to adopt a new course of conduct. "I'll begin at six o'clock," she said to herself. The work was accomplished magically that day; every step was made to count, every minute was used to advantage. By three o'clock the house was in order and a generous baking adorned the pantry shelves.

Half an hour later Mr. Dayton came in and found his wife sitting in the parlor, with her new gingham dress on, reading the morning paper, while the baby crowed on a rug at her feet.

"Expecting company?" he inquired.

"No, I'm just resting."

It was something new for Martha Dayton to be "resting" in the daytime, and it had been years since she had "fixed up" like that, except on the rare occasions when she went out somewhere.

When the supper was served, Mr. Dayton missed some of the usual accessories of the meal. No hot biscuit, no baked potatoes or nicely broiled chops—nothing warm but the tea, which had been made on an oil stove.

"How's this?" he grumbled. "Ain't you cutting us short to-night with your cold victuals? I like a hot supper."

"Oh, I've struck," replied Mrs. Dayton in a serio-comic tone. "I've come to your conclusion that eight hours are enough for any one to work, and that it is time to rebel against an eternal grind. It will necessitate some changes, but since you are firmly convinced of the right of the matter, of course you will be willing to put up with the inconvenience of it, as I have to with the loss of your wages on account of the same principle." That was a long speech for Martha Dayton to make. Silas glared at her with open mouth. She looked smiling and at ease, not at all as if she were bereft of her senses. It wasn't like her to joke, but she must be "funning" now. Trying to be smart, eh? He didn't quite like it.

"What rigmarole are you getting off now?" he said rather roughly. "If you took a lazy streak and didn't want to cook a good supper, why don't you come right out and say so, not throw up that eight-hour business to me? Man's work isn't woman's work. You just attend to your cooking and baby-tending, and I'll see to my carpentering."

"You think I don't mean it, Silas, but I do. My work is just as hard as yours, and more wearing to the nerves. Hereafter I shall consider eight hours of constant labor a day's work, and outside of that I shall do only what cannot be avoided. A woman needs time for rest and recreation just as much as a man does, and the way I have been living it has been impossible to be anything more than a mere housekeeping machine. I should like to improve my mind a little."

"You ain't turning woman suffragist, I hope. I'll bet that Miss Skinner has been talking to you." Miss Skinner was a somewhat noted platform speaker who lived near the Daytons.

"No one has been talking to me, and this has nothing to do with suffrage. It seems that when you said 'people' you meant 'men,' giving no thought to women; but I fail to see why they should not be included in the labor question."

Mrs. Dayton had not been a self-assertive woman, and her husband gave but little thought to her unexpected outbreak. He attributed it to a "cantankerous spell" which would not last long. A strike of housekeepers! Refusal to work more than eight hours a day! It was absurd, ridiculous. I am not sure but Silas Dayton went farther in his thoughts and pronounced it *lazy;* for what did woman's work amount to, anyhow, compared to the hard tussles of a man with the world?

The subject was not mentioned the next morning, when they partook of the usual Sunday breakfast of beans and brown bread. Mr. Dayton, who was not in the habit of attending church, started out for a stroll about town. Mrs. Dayton very seldom went, as she generally had a baby too small to leave. To please Silas, it was her custom to prepare the most bountiful meal of the week for Sunday afternoon, and the day of rest often left her so fatigued that it was an effort to begin anew on Monday morning. If any one called, she was not fit to receive them in her working garb and with her heated face.

It was nearly three o'clock when Silas returned. "Who has he brought home now?" wondered the little woman as she heard strange voices. Silas often brought people home with him to the Sunday dinner; he was hospitable, and he knew that there would be an abundance of good things to eat.

"I ran across my old friend Jabez Hunter and his wife," he explained, as Martha went into the front hall. "Haven't seen them for years. They've got a farm only twenty miles from here, it seems, and they've been to town time and again, and didn't know we were living here."

Martha was shaking hands with a stout, fresh-faced man and a large, comfortable looking woman, and Jabez was declaring that he knew Si in a minute, and he was mighty glad to see Si's wife and babies.

"Si haint changed hardly any," he continued, "but you ain't lookin' well. Kind o' dragged out, ain't ye? Better come out to the farm; we'll fat you up."

Silas was secretly pleased to see that his wife was neatly dressed, and seemed less "put out" than usual by company. Jabez Hunter had been one of his best friends in the old days, and now that Jabez had the air of being well used by the world, Silas was anxious to have his wife, children and home appear in a favorable light.

Soon Mrs. Dayton called them into the dining-room where the long table was spread, and the children already sat in their places, the baby industriously drumming with a spoon on his waiter. With pride, Silas named his boys and girls, who were embarrassed just enough to make their behavior unobtrusive.

"By George, Si, you're a rich man with such a family as this," exclaimed Jabez. Don't it do your heart good to look around and see 'em? I tell Lucy sometimes its pretty lonesome for us out on that big farm where youngsters would have such a good time. Wouldn't you like to go fishing in my trout brook, young man?" addressing Jack, the oldest boy.

"Yes, sir," replied the boy with a broad grin. By this time all were settled and Silas' face wore a look of blank astonishment and dismay. Cold meat, cold bread, berries, cake, and a cold custard pudding.

"My wife, it seems, has made a change in the bill of fare," he finally said ill-humoredly; "we are in the habit of having a good Sunday dinner."

"I don't see anything the matter with this," declared Mrs. Hunter.

"Silas has forgotten that I've struck," said Mrs. Dayton. "I've adopted the eight hour plan, and no unnecessary work on Sunday. Men don't work Sundays—why should women when they can avoid it?"

Silas' face was red with suppressed wrath. A pretty impression of things his friends would get!

Jabez Hunter gazed at Mrs. Dayton admiringly. Given half a chance, she would be a pretty woman.

"What's that?" he chuckled. "Struck? Come now, that's good. Why shouldn't women strike as well as men? I'm sure they have more to put up with. I haint never let my wife grub all day long and half the night as lots of 'em do. Have I, Lucy? And Sundays we don't do nothin' at our house that we can git out of."

"Half the time we make our dinner on bread and milk Sundays," said Mrs. Hunter, smilingly. "I'm bound to have one day in the week when I ain't tied to the kitchen."

"Your wife must have a pile of work to do, Si, with all these youngsters; it's enough to make her look peaked. Lucy finds chores enough on the farm, but we hain't no children and I help her considerable. I s'pose you're handy in the house when you're out o' work, aint ye, Si?"

Silas' face was a study. Mr. Hunter continued, as he took another slice of cold lamb:

"You'd laugh, I expect, to see me with one of Lucy's big aprons on wipin' dishes or turnin' the wringer. I s'pose I do cut a figger, but it reminds me of the time when I used to ketch Lucy unawares a makin' pies or somethin' before we was married, an' she used to git my face all flour behind the pantry door."

"Law, now, Jabez, ain't you ashamed?" Mrs. Hunter's face was rosy.

"I like to think of them old courtin' days, don't you, Si?"

Tears sprang into Mrs. Dayton's eyes; she did not look at her husband. He mumbled an inarticulate answer. The children were delighted with the turn of the conversation; such a jolly fellow had not visited them for many a day.

"I made up my mind when I got married that my wife wa'n't goin' to be drove to death. I'd got her an' I meant to take care of her an' keep her. Seems though some men took partic'lar pains to git their wives out o' the way so they could git another. I ain't anxious for No. 2. Lucy don't look's though she was fadin' away, does she? Tipped the scales at one hundred an' ninety-five pounds (stop yer nudgin', Lucy) the other day."

Jabez beamed affectionately on his discomfited spouse, the children tittered and Mrs. Dayton ventured to smile across the table at her unusually silent husband.

"Now, Mis Dayton, I don't b'lieve *you* weigh much mor'n a hundred pounds. Looks to me like you was pretty near tired out an' needed a change. Bundle her up, Si, with her babies, an' send her out to the farm. You can git along without her a spell better'n you can spare her for good. I don't b'lieve you want a No. 2 to mother all these youngsters."

Silas found his tongue and a chance to use it at last, and the conversation drifted into other channels. Sooner than any of them desired, the time came when the Hunters were obliged to leave, and the Daytons were left with the feeling that a warm, invigorating rift of sunshine had been let into their lives. Evidently Silas had "food for thought" that evening, and it was he who lay awake that night, and his wife who slept. When she was ready to begin her washing the next morning, she found her tubs filled with water and the clothesline ready for use. Volumes could not have told her more than those two simple acts did. In the afternoon, as she sat making aprons for the children, Silas said: "If you want to go out to the farm, Martha, I think likely I can get Mandy Johnson to come and keep house."

"But the children?"

"You can take the baby and Freddy and Stella, and the rest will get along all right going to school here." So it was arranged.

When Mrs. Dayton returned, almost a new woman, she found that a compromise had been effected and Silas was working. She did not attempt to keep up her own strike, but life was henceforward made easier for her. She hired help on extra hard occasions, many little things that had been expected of her were omitted, and Silas, now that his eyes were opened, found that he could save his wife from backaches and help her to get a leisure hour in ways that detracted not a whit from his manliness. The time came when he said to her: "That was a cute idea of yours, Martha—that strike for eight hours. I was mad at the time, but when I saw how much better Jabez Hunter treated his wife than I did you, it made me feel that maybe I hadn't been doing right. I guess I think as much of you as he does of Lucy, and I mean to give you as good a show as I can."

"I am satisfied," said Martha, looking lovingly at her husband; "but I was not before my strike. I was really getting vicious. We are lots happier now, aren't we?"

"I only wish all strikes might end as well as yours did."

A Few Bluets.

A lady was walking through Washington street, Boston, a few days since. She had a bunch of Houstonia in her hand. A little girl on the street, without a hat, and with nothing very definite in the way of shoes, and a dress that needed to visit the washerwoman's, was suddenly attracted by the bunch of blue flowers. She was not one of the shrinking kind. She had been brought up in that street school of independence which teaches a boy and girl not to forego anything which they can get by asking. She ran up to the lady. "May I have a few flowers, please?" The lady stopped, took a third of the flowers from her bunch and

put them in the soiled hand. The "Thank you" was not wanting, and the little girl ran off in perfect glee to share them with her comrades on the corner near by.

We have seen such a sudden glow of interest produced in a crowd of small boys by scattering a few pennies among them, to be followed by a sudden flight to the nearest candy store; but if this little girl had received a five-dollar bill, she could hardly have shown more delight than she did at this little gift of flowers. Her face beamed with smiles, and she went skipping along in joy and exultation.

We do not know for whom the flowers were originally intended, but we wondered if they could have found a better mission. What better office could a flower serve, gathered from wood or hillside, than to bring some of its color and its cheer to the eye and heart of a child in the hot and dusty city? When the flower mission was started in the hospitals, there were some who sneered at the sentimentalism of this form of benevolent activity. But its mission has well been justified. It has brought not only the color, fragrance and beauty of nature to the sick and suffering, but has brought the cheer of kindly words and helping hands. The flowers have served to bring the giver and the taker nearer to each other. Even the street gamin knows that life is not made up wholly of bread and butter. The flowers, too, have their message and their blessing.—*Christian Register.*

Hints for Home and School.

[Written for the RURAL PRESS by MRS. J. HILTON.]

Dear "Lupa" and others who feel as you do, please do not think that I do not know all about the hurried rush and the large mouthfuls, for I also am a farmer's wife; but there are times and times. When we know that there will be haste, as during the seedtime and harvest, there is little use for beauty on the tables. But there are so often other times that a scant meal can be made to appear more satisfactory by a little added beauty; and many little children can be taught to help mamma beautify the table, thus taking them from under foot and amusing them at the same time; and, dear sisters, do not try to eat during the rush when the men do, for the body being so heated and the nerves unstrung always spoils the appetite. Either take your meal first or have a little side table for yourself and baby away from those unsightly fragments, or do as I often do—take your dinner into the cool sitting-room, sit in the rocking-chair or lie on the lounge, take a book or paper and read and eat, or if you do not read, your dinner will be relished and you will be rested and refreshed for your after-dinner work.

Another thing I want to mention: Don't wait five minutes for any one when the meal is ready. Eat your meal and let the rest eat when they get ready. There is no use having your meal spoiled and your body famished because of others. I used to wait and wait, and all the comfort I got was: "Well, what did you wait for?" Some claim that it does not matter to them if they do not have their meals regularly, but I notice that their temper is not nearly as good after an irregular meal as at other times. I know it spoils my good nature when I do not eat regularly. It is impossible to have a cheerful countenance when you know that your well-prepared meal is being spoiled and your stomach is empty. Just eat your meal and then you can be much more cheerful.

Do, dear sisters, think of your own bodily needs. There is no danger of your getting selfish, especially if you have children, for they won't give you time to think much about yourself; but treat your own body as well as you do theirs, and it will be better for them and you, too. It is easy to talk, I know; but if the mind is willing, ways appear.

Dear RURAL, I want to suggest to all who are building schoolhouses or refurnishing such buildings, do have the desks high enough so that all scholars will have to sit straight when their arms are on the desk. If I was a school superintendent, I would insist on all desks being made higher than are now used. We have nice patent desks in our building, but the children are getting so round-shouldered that I feel very uneasy about them, and wherever I go I notice the young people would have very good forms if the head could be turned completely around. The back is much fuller than the chest, and the more studious the pupils are the worse it is for them. A little thought in arranging the desks will save many from having weak lungs. I do not advocate high seats, for I know that the feet must rest firmly on the floor. But where it is possible, do have high desks.

Los Alamos.

Chaff.

JUDGE: Prisoner, do you confess your guilt? "No, your honor; the speech of my lawyer has convinced even me of my entire innocence."—*Fliegende Blaetter.*

SHE: I've been told that you are grave and sedate, but I'm sure I find you jolly! He: Yes, I lose my specific gravity when you are the center of attraction.—*Chicago Post.*

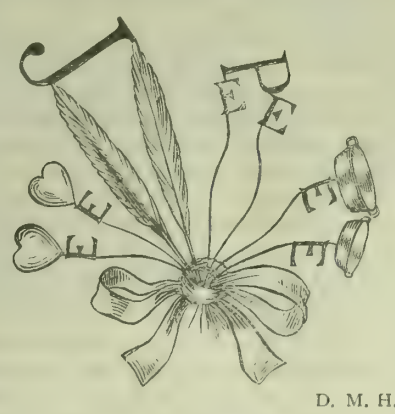
JUDGE: Do you think you could give a verdict in accordance with the evidence? Would-be Juror: I do. Lawyer (for the defense, hastily): Challenged for cause.—*N. Y. Weekly.*

YOUNG FOLKS' COLUMN

Tangles.

Enigmatic Snarls, Both Hard and Easy, for Young People of all Ages to Untangle.

214.—A BOUQUET OF FLOWERS.



D. M. H.

215.—ANAGRAM.

I'm "a wonderful thing," and so
'Tis little of me any know.
Some say that I was never known,
While others claim I have been shown,
And many a "CLAIMER" makes pretense
To show me to deluded sense.
Much faith in things that are id al
Is needed to believe me real.

NELSONIAN.

216.—DECAPITATION.

The ocean's strong incoming tide
No one may think to check;
And those who in its course abide,
Their lives expect to wreck.

But I've a plan which will produce
Its decrease speedily;
Behead, and you its bulk reduce—
'Tis much depressed, you see.

BITTER SWEET.

217.—A DISJOINTED NAME.

1. To impair.
2. To liquefy by heat.
3. A forest tree.
4. A common ending to a participle.
5. The aristocracy.

Arrange these words in the order in which they are given, and you will have the name of a lady who is well and favorably known in history.

ETHYL.

218.—DECAPITATION.

The *whole* and gracious sun
Smiled on the waiting *two*,
And warmed its surface through,
And summer was begun.

Up sprang the verdant blade,
To clothe the lifeless sod;
Three every sun-kissed clod
Tokens of life displayed.

BITTER SWEET.

219.—CHARADE.

One two is a pasture lot for *one*;
I've seen *one two* in a *one two*;
In a *one two* I've seen *one* run;
In *one* a quadruped we view,
In *two* a thing to *two* upon. NELSONIAN.

ANSWERS.

209.—Excuse excesses; I am in exuberant spirits.
210.—Mesmerist.
211.—Tom, $1.30; Dick, 70 cents; Joe, 40 cents.
212.—Fate, feat.
213—
DISMEMBER
INTERIOR
STONERS
MENACE
ERECT
MIRE
BOS
ER
R

Tramp and Trinkets Abroad.

Tramp and Trinkets went next to Japan, and at last came home by way of San Francisco.

Thus, as one can see from the geography, they traveled all round the world. Flo's papa says he'll wager they are the only dog and doll that ever did.

They got to Yokohama a short time before the great Doll Festival. This is a pleasant custom observed by the people from ancient times. Each year, on the 31 of March, almost every family in Japan gives a grand feast in honor of all the charming race of dolls, and especially of the dolls of the household.

For days before little Flo noticed that the shop-keepers seemed to forget their regular business, and everybody in the whole town took to selling or buying dolls and toys and knick-knacks for the festival. In every house there was the sound of hammering, and of getting ready for the holiday.

At length it came. The special feast to which Flo and Tramp and Trinkets were invited was a very elegant party.

In one corner of the parlor were a set of shelves covered with red silk. On the top shelf were displayed a royal company of dolls dressed in splendid costumes, with a pretty screen behind them for a background. The next shelves were crowded with plainer dolls and all kinds of odds and ends; the lowest held many small, gold-lacquered boxes filled with candies and cake. Arranged on this shelf, also, were a number of scarlet and black-lacquered tables, about five inches square, painted in gold and ornamented with ivy vines and grapes. Set out upon each of these was a tiny dinner service. That they were only mites of things may be known from the number on each table. On the first, for instance, at the left-hand corner, was a rice cup, then a soup tureen, at the other end a covered dish containing stewed fish with gravy, in the center another deep dish. At the right were two wee fishes baked whole, and between the corners sliced vegetables laid on bamboo leaves, the latter cut in the shape of a plum flower. Upon the next table the course following was served, and so on till the last was reached—an almost endless number.

Flo and Tramp and Trinkets, with a very bright little Japanese girl, sat at these dainty tables, and enjoyed the feast of the dolls. Trinkets, to be sure, was too excited to eat much or to take tea from the tiny cup, but Tramp had his own share and hers too, and then what did the dreadful fellow do but tip over one of the beautiful tables! Trinkets was so ashamed of him!

But the prettiest part of it all was when Yona, the little Japanese hostess, went out to the street and asked all the stranger children, rich and poor, who happened to be passing, to come into the feast, as the custom is. Of course they came, and what a merry time they all had, for the children of Japan know how to play as well as Flo does.

Flo's papa and mamma sat at a large table with the other grown folks, but the dinner served to them was just like that prepared for the dolls. Trinkets thought everything was lovely and as it should be. Too much could not be done for dolls! But Tramp growled: "It's all nonsense! all but the cakes and candies!"

Not quite, Tramp. It is not nonsense to make people happy.

They drove back to the hotel at twilight, past the orchards of plum trees, covered with fragrant pink and white and red blossoms.

The next day our friends sailed for home, and in a few weeks Tramp and Trinkets and their little mistress were all back in Flo's nursery again.—*Mary Catherine Crowley, in Pansy.*

GOOD HEALTH

Injuries and Diseases of Nerves.

Nerves must be renewed through the medium of the nuclei which are in the inner side of the sheath discovered by Schwann. These fibers receive impressions and expend stimulus. The process of degeneration in a nerve is first a destruction of the myeline, multiplication of the nuclei and loss of continuity of the axis cylinder. There are not, as previously supposed by some, a special set of nerves which have as their function the creation of trophic conditions; the motor and sensory nerves are of themselves able to produce such a condition.

The return of sensibility to a part of the body supplied by a nerve which has been cut quite through does not indicate positively that the nerve has been reunited; the power of muscular action and other evidences are also required. When nervous power has been lost and partially restored, hope must not be abandoned, even if progress is slow, because months may be required for the recuperating process. Feeling generally returns sooner than muscular power. Nerves which have been injured may have pieces taken out and the sound end stretched till they meet, when they will reunite. Even nerve-grafting according to this author may be possible.

No benefit has been conferred on victims of St. Vitus dance by surgical experiments on the nervous system, but when epileptic fits occur, because of an injured nerve, these fearful spasms have been stopped by dividing the injured nerve between the injured part and the higher ganglion. Tetanus is not found to be caused by injury to the nerves. The best cure for facial neuralgia is found to be nerve-stretching, and is much better than cutting the nerves. —*Journal of Anatomy.*

POISONOUS CHARACTER OF THE OLEANDER.—A German paper says: It is perhaps not generally known that the leaves of the beautiful and gorgeous oleander are endowed with extremely poisonous properties, and that injurious effects may follow the cultivation of the plant in inhabited houses. The poisonous character of the plant is mentioned by Pliny, and recent investigations have shown that the old Roman naturalist was right. In Madrid, a few years ago, several people were poisoned by eating game which for some reason had been roasted with oleander leaves. In the southern parts of Spain and Italy, the grated bark is used as poison for rats, mice and vermin, and places where the oleander grows in abundance are considered as unhealthy as the terrible fever swamps, and are shunned by the people. In Northern Africa, where the oleander grows luxuriantly and adds a wonderful charm to the banks of every stream, it is not tolerated near human habitations, and in some districts its cultivation near houses is prohibited by law. It is a significant fact that the flowers of the oleander are shunned by bees. As the oleander is very common in California, the children should be carefully warned against it, or, what would be better, train it into a tree and prune high enough to keep the leaves and flowers out of the reach of little fingers.

THE HUMAN BREATH A POISON.—At a recent meeting of the Academie des Sciences, Prof. Brown Séquard referred to some experiments he had conducted with a view to determine what, if any, were the toxic effects of the human breath. In condensing the watery vapor coming from the human lungs, he obtained a poisonous liquid capable of producing immediate death. This poison is an alkaloid (organic) and not a microbe, or series of microbes, as might have been imagined. He injected this liquid under the skin of a rabbit, and the effect was speedily mortal. The animal died without convulsions; the heart and large vessels were engorged with reddish blood, contrary to what is observed after ordinary death, when the quantity of blood is moderate and of a dark color. In conclusion, this eminent physiologist said that it was fully proved that respired air contained a volatile toxic principle far more dangerous than the carbonic acid, which was also one of its constituents, and that the human breath, as well as that of animals, contained a highly poisonous agent.—*Medical Press.*

DOMESTIC ECONOMY

LEMON MARMALADE.—Peel lemons and extract the seeds. Boil the peel until soft, add the juice and pulp with a pound of sugar to a pound of lemon. Boil until thick.

SOFT GINGERBREAD.—One cup of molasses, one cup of warm water, half a cup of soft butter, one teaspoonful of soda dissolved in the water, a teaspoonful of ginger and cinnamon mixed, and two cups of flour. When well mixed, drop a tablespoonful in the pan and bake quickly.

STRAWBERRY TEA CAKE.—Two eggs, reserving the whites of one, one cupful of sugar, butter the size of an egg, half-cupful of milk, two cups of flour, one teaspoonful of cream tartar, half a teaspoonful of soda. Bake in three layers. Filling: White of one egg beaten very stiff, three-fourths of a cupful of sugar; beat again, then add half a cup of fresh strawberries bruised to a pulp, and beat till stiff enough to stand alone. This gives a filling of a lovely pink color.

SPICED BREAD.—Sift into a pan one pound of flour, put into a half pint of warm milk a half-pound of butter; stir the milk and butter into the flour and a wineglassful of good yeast and a little salt; mix these well together and set in a warm place, but not too warm to rise; let it rise a full hour, then add a half-pound of sugar, a half-grated nutmeg, large spoonful of cinnamon and a wineglass of rose-water; mix these well into a sponge, pour into a pan, and set to rise again; let it rise a half-hour, and bake in a slow oven.

APPLE PUDDING.—Pare, core and slice a dozen good-sized apples. Measure a half-pound of brown sugar. Melt four ounces of butter. Cut a stale loaf into thin slices. Grease a baking-dish that will hold two quarts, cover the bottom with the slices of bread dipped in the melted butter, now cover this with a thick layer of apples and a layer of sugar, and another layer of bread dipped in the melted butter, and so continue until the dish is very full, having the last layer bread. Pack it down well, cover the baking-dish with the lid, and bake in a moderate oven two and a half or three hours. Let it stand in the dish 15 or 20 minutes before turning out. Serve warm with hard sauce.

MAKING ICE WATER LAST.—A useful attribute of paper not generally known is for preserving ice in a pitcher of water. Fill the pitcher with ice and water and set it on the center of a piece of paper; then gather the paper up together at the top and place the ends tightly together, placing a strong rubber band around the coil to hold it close, so as to exclude the air. A pitcher of ice-water treated in this manner has been known to stand over night with scarcely a perceptible melting of the ice. —*Ex.* [This plan might work to advantage with water taken cold from the well or spring and thus excluded from contact with a heated atmosphere. Will some subscriber try it and report?]

GOOSEBERRY PUDDING — There are green gooseberries already in the market. This calls to mind the delights of a fruit-batter pudding made with gooseberries. An English batter pudding is a delicious dessert, especially when made with fruit, but it requires care in preparation. The ingredients are a pint of milk, a teacup of pastry flour, five eggs, half a teaspoonful of salt and a pint of fruit. If gooseberries are used, simply head and tail them and set them aside till the batter is prepared. Separate the whites and yolks of the eggs. Mix the flour with enough milk to make a smooth batter, add the yolks of the eggs, beaten thoroughly, and then the rest of the milk and the salt, and finally the whites of the eggs. Turn half the batter into a well-greased tin mold, add the gooseberries and the remainder of the batter. Suspend the mold in a pot of boiling water, and keep the water boiling around it for 1½ hours. Serve it with a nice hard sauce.

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Business Announcements.

[NEW THIS ISSUE.]

Buggies, Wagons, Etc.—Deere Implement Company.
Seed Sowers and Harrows—Baker & Hamilton.
Agricultural Implements—Meador & Ogan, San Jose.
Shorthorn Cattle Sale—Pacific Coast Shorthorn Cattle Breeders' Association, Sacramento.
Agricultural College—B. L. Arnold, Corvallis, Or.
Trees and Vines—Chiles & Godfrey, Davisville.
Trees, Seeds, Etc.—Felix Gonzalez.
Attorneys-at-Law—Haven & Haven.
Gas Specialists—Colton Dental Association.
Peach Trees—D. S. Myer & Son, Bridgeville, Del.
Polled Angus Cattle—Dr. G. M. Dixon, Sacramento.
Poultry—Dellwood Poultry Yards, Napa.

See Advertising Columns.

The Week.

Are the heavy rains at the South an indication that we shall have heavy and early rains in the central and northern portions of the State? Some regular weather experts claim that such is the case, and some who do not usually require much data for their conclusions, hold that last year the heavy fall rains in Arizona were followed by a very heavy October rain in California. However the indications may be, it is only the part of wisdom to get produce under cover at the earliest practicable moment and to arrange to protect raisins and dried fruit which, for the next 10 or 12 weeks, will be spread out under the sky. There is usually occasion for such protection before the season is over, and he is wise who arranges for it.

The fairs at Los Angeles and Ione are in progress this week. Next week's list includes the exhibitions at San Jose and Willows.

The Irrigation Surveys.

It is difficult to learn yet the fate of the irrigation work at the Government expense. So far telegrams seem to indicate the likelihood of the withdrawal of the appropriation for the continuance of the work under the Geological Survey, as both the House and Senate have acted thus far in that direction.

There seems to be a serious conflict in the statements put forth as to the character of the reservation of public lands under the Act of 1888, to which allusion has been previously made in these columns. For example, Senator Dolph of Oregon writes to a Portland paper as follows:

It has been construed by the Attorney-General and Secretary of the Interior as withdrawing all irrigable lands of all the arid region from the operation of the land laws without any action of the department, and it is held by the department that, as the irrigable lands cannot be segregated from the arable lands without a survey, the operation of the general land laws in all the arid region is suspended, not only as to irrigable lands, but as to arable lands, timber lands, etc.

This region, as marked out by Major Powell and adopted for the action of the Interior Department, is substantially bounded on the north by the Dominion of Canada; on the south by Mexico; on the east by a line drawn nearly through the middle of North and South Dakota, Nebraska, Kansas and Texas; and on the west through Oregon and Washington by the Cascade mountains; and through the upper part of California by the Sierra Nevada mountains to about the latitude of Santa Cruz, from which point the Pacific ocean is the boundary, being a tract of land containing approximately two-fifths of the area of the United States.

Such a reservation of public lands from settlement naturally would awaken the strongest opposition from representatives of sections which depend largely upon the settlement of adjacent public lands for their development, and suggest the conclusion which they freely make that the Texas representatives relish that because Texas owns all her own unoccupied lands, and to shut up Uncle Sam's real estate office would send customers to the Texas land-dealers. But this conclusion does not seem to be a fair one if the statement attributed to Secretary Noble in the following telegram is the true one:

An answer to inquiries regarding the irrigation surveys contained in the recent Senate resolution was sent to the Senate to-day by Secretary Noble. He states that the Director of the Geological Survey actually surveyed and marked the boundaries, and that the areas of the sites for reservoirs were by him selected under the Act of 1888, and that the tracts so segregated were so marked that they can be discovered on the ground and delineated on the Land Office maps.

In the reservoir site selections only so much land has in each instance been reserved as is intended to be used for storage of water. It was not intended, the Secretary says, that the surveys and selections under the Act of 1888 should be carried to the extent of planning a system of canals, ditches, checks and furrows for the distribution of water over farms, as it was deemed that people, when they come to cultivate these lands, can better do this themselves.

The general purpose and plan of the department, the Secretary says, is to preserve the sources of water supply from the possession or appropriation of individuals or corporations. It is believed, he says, that it will be the duty of his Department, so long as this statute remains, to enforce it, that its fruits, at least in the preservation of the sources and reservoirs of water, may be kept under either national or State governmental control.

This would indicate that only sites suitable for actual use in the storage of water are reserved and they are clearly marked on the land office maps, and that the claim that "two-fifths of the area of the United States" is locked up is not true. Probably a little more time will straighten out these matters.

The Fruit Crops.

The fruit business continues most actively. Our Market Review gives the details of the trade both at eastern and local points, and shows what an immense amount of fruit is being disposed of at prices unusually excellent and profitable. It is proving to be a fruit-grower's year, and we are sincerely glad that planters are, as a rule, reaping a good reward for their years of working, waiting and bug-fighting. The amount of money which they are bringing into the State will redound directly or indirectly to the benefit of our whole population, for even at high prices, the grower distributes the greater part of his money to his workmen, to the box-makers, wagon-makers, implement dealers, etc., etc., and thus all share his prosperity. This should be remembered when the fruit-grower comes forward asking favors of the Legislature. Other lines of produce are, with some exceptions, also winning good figures this year, but, unfortunately, many find that the reduced weight of their produce is so great that increased market value cannot compensate for the lack in quantity.

Nearly all tree fruits are doing excellently, and choice drying and canning fruits like prunes and peaches are advancing, so that those who sold early at what they considered good figures, could have done better by holding on. There is naturally a strong sentiment now prevailing against too early selling. It is, as a rule, a mistake to sell too early, but of course it would also be a mistake to expect that all coming years will be like this one. Humanity is prone to draw too sweeping conclusions from limited experience.

Just now there is complaint that the grape crop is being reduced by the very hot weather and by the sad effects of careless cultivation. The latter was scarcely avoidable perhaps with the ground in such condition as it was last winter and spring, and yet some who will suffer this year may find some way to do better another time. The officers of the State Board of Viticulture are in receipt of information from various parts of the State, which shows that the hot weather in the interior counties is doing considerable damage to the vineyards. It is said that one-quarter of the crop on Senator Stanford's ranch at Vina, Tehama Co., is destroyed.

At Livermore, Alameda county, 25 per cent of the Mataro grapes, the principal variety raised there, has been spoiled. Damage has also been done in Napa, Sonoma and Fresno counties. The hot weather has, however, had a good effect on the raisin industry. Much more drying has been done this year than any previous season, and while the products of California raisins will be large, the prices will be well up to the standard.

A. C. Morse of this city, who is a land-owner in Southern and Central California, has just returned from an extended trip of nine weeks, looking over the vineyards and orchards of Southern California. Mr. Morse, after visiting and carefully inspecting the large raisin vineyards and deciduous orchards of the southern country, says the fruit crop down there is far in excess of any previous year. The raisin crop, unless the grape-growers meet with an unexpected drawback, will far exceed any former crop. The driers and canners are all running day and night with a double force of help. Prices are high and the fruit men are happy.

Home-Grown Fruit Trees.

Although it is undoubtedly better for most orchard planters to buy trees from nurserymen, and thus secure bearing trees sooner, it is perfectly practicable for those who have no money to invest in trees, even at the low prices at which they are now sold, to grow their own trees from seeds or cuttings which can be had for nothing. Even the enterprising nurserymen themselves encourage this, for they know that any effort which increases the disposition to tree planting will help their business in the end. If the new settler or the farmer with no capital begins by planting a few trees of his own growing, he is apt as his means increase to enlarge his plantations of trees and to seek the nurseries for new or popular varieties.

Fruit-tree growing on a small scale for home planting is not a difficult matter if one has suitable soil and enough water and will take a little pains to inform himself in the art of propagation. Our book "California Fruits and How to Grow Them" gives full and plain instructions which will enable any careful man to grow his own trees, bud, graft and prune them, and in the case of the beginner, will show how leisure time can be turned to excellent account in this effort.

This note is suggested by the experience of a Tulare man in amateur tree-growing, as related in the *Register*, as follows:

J. M. Shackelford has in a small space back of his blacksmith shop on Tulare street a young fig nursery which is an illustration of prosperity under difficulties. Last spring he got hold of some cuttings that had lain around without care for two or three weeks, and they were planted in a little plat in the rear of the shop. They have been watered at times when there was nothing else to do, but have never been cultivated. These cuttings have become fine, thrifty trees, some of them three to four feet high and still growing. To this case is called the attention of those who "haven't money to do anything," as they put it. Here are trees enough to set probably two acres, and they didn't cost two bits. They will be good trees and will be right at hand when wanted.

When such an excellent tree for fruit and shade, and one so well adapted to the hot interior, as the fig can be grown with so little cost and trouble, how unnecessary it is that the valleys should still show so many parched and treeless dooryards and corrals. It is painful to think of such places as homes and it is a duty as it should be a pleasure to transform them into cosy and grateful abodes by a little attention to tree planting. Figs and olives and vines grow readily from cuttings if given a little water and hoeing; apricot and peach trees grow from pits almost as easily as corn from seed and can be easily budded or grafted to good varieties at some later time; walnuts, chestnuts, oranges, etc., are also easily grown from seed—in fact there is hardly anything in the fruit bearing or shade-yielding line which cannot be easily produced on a small scale for house planting if the home-maker will only try and use a little brains and perseverance. It is almost a sin in this State to have a place called a home without its environment of fruit and shade trees.

Saving the Sequoias.

We had a paragraph recently about the arrangement of a Government reservation of sequoias in Tulare county, and commended the wisdom of the act on the part of the authorities. It seems, however, that there is some danger threatening the realization of the project, for Governor Waterman sent the following telegram to Secretary Noble on Monday of this week:

The newspapers report that the surveys suspended by Commissioner of the General Land Office Sparks, including lands in the eastern portion of Tulare county in this State, are about to be declared open to location. These surveys include tracts of land covered with sequoia gigantea—the big trees of California. There is now, I believe, pending in Congress a bill setting aside a portion of these suspended surveys for a national park In view of these facts, I would most respectfully ask that such townships as are mentioned in the bill now before Congress be not declared open for location until Congress decides whether such lands shall be set aside for park purposes or not. The ruthless destruction of these magnificent forests, the largest and grandest in the world, would be an outrage, which I must ask your assistance to prevent.

It seems a little strange that one department of the Government should authorize work which will conflict with measures pending in another, but such conflicts frequently happen. The officers are so bound up with red tape that sometimes their acts, though technically correct, are unwise, if viewed from a common sense standpoint. We hope that Governor Waterman's appeal may result in protecting the trees until Congress shall pass the Act necessary for their reservation.

At the meeting of the California Academy of Sciences on Monday evening of this week, Dr. Gustav Eisen described a visit from which he had just returned to the headquarters of the Tule river. He said that there and on the south side of the south fork of Kings river, in a territory about 15 to 20 miles long and 8 miles wide, can be found the largest number of big trees to be seen anywhere in California. Until a few years ago the territory was unknown. Now the land has been almost all taken up and the beautiful sequoias are being ruthlessly destroyed. On Tule river, said the speaker, he had seen the stump of one tree which had been cut down. It was called the "Philadelphia," measured 41½ feet in diameter and was 250 feet high. Another is called the "Centennial Stump," and still another the "California Tree." The latter is 33 feet in diameter, and when felled, 60,000 shakes were cut from it. The waste of lumber there, had, he said, been simply shameful. The sequoias are a great curiosity, and at once the pride and beauty of California, and he thought the Academy of Sciences should take some steps to preserve what is left. In accordance with Dr. Eisen's suggestion a committee was appointed to memorialize the Washington authorities on the subject.

A Bounty of $10 a head will be paid by the Supervisors of Siskiyou county for lions.

Resistant Vineyards.

NUMBER I.

[Written for the RURAL PRESS by W. B. WEST.]

My apology for writing upon a subject which has been so often discussed and almost exhausted is that the recent accounts of the success of resistant vineyards of France now coming into bearing show that there is but little doubt that the phylloxera problem has been settled, and that it is to the use of the American resistant vines as stocks that we can attribute the success. Nowhere has the combat against this insect been carried on more energetically than in France, and nowhere has so much success been achieved. Insecticides, such as bisulphide of carbon and sulpho-carbonate of potassium, have been freely used. Submersion for weeks has been tried and all have been successful in checking the destruction, but they are very expensive and not so satisfactory as resistant vines; and, notwithstanding their plucky fight for more than 20 years, the formidable insect still goes on ravaging new districts every year.

In Bulletin No. 10, Vol. 2, United States Department of Agriculture, is found the report of the Superior Phylloxera Commission of France, which gives the latest opinion of those experts regarding the phylloxera problem in Europe, as it appears at present. Each year has shown an increasing acreage of reconstructed vineyards on resistant American stocks. The number of acres of these in France was in 1881, 22,000; in 1889 it had increased to 719 500; at the same ratio, in four years, it will have reached the unprecedented amount of 6,500,000 acres. From the report of Consul General Rathbone, I find that the total area of vines in France before the ravages of the phylloxera was 4 542,000 acres; thus it will be seen that in a few years France will have recovered her lost acreage and resumed her place as the foremost wine-producing country of Europe.

All the vine-growing countries of Europe have resorted to vigorous measures to suppress this pest, such as strict quarantine and destroying vineyards infested, so that some countries have not suffered in the same degree as others. Switzerland, Germany and Russia have suffered but little; in Italy, about 4000 acres are affected. The system of defense was very complete, but has been given up and resistant American vines adopted. In Hungary, about one-third of the vines were attacked and one-eighth destroyed. Austria suffers about in the same proportion.

Spain is suffering severely. Letters from an intelligent gentleman, an Englishman who owns a raisin vineyard in the Malaga district, and who has lost a portion of it by phylloxera, gives me the following information: "The planting of resistant American vines has been quite extensive, but I look at the raisin industry with little hope. In their best days there was but little profit for the grower; the merchant took the lion's share, and now when we have to fight insects, to replant the vineyards, to take a less price on account of American competition, and pay an increased price for labor," he thinks there will be nothing left for the proprietor. The diminished crop of Malaga raisins from 1,500,000 boxes in 1878 to 800,000 in 1889, shows how severely this district has suffered.

The difficulty in restoring these vineyards with resistant vines is great; the climate is dry, and the soil is worn. Still the *merchants* are sanguine of success and look for the time when the vineyards will be replaced with resistant stocks. At present the condition of the small proprietors is deplorable. They are reduced to the necessity of abandoning the cultivation of their properties or selling them at much depreciated prices. At Denia there is more irrigable land, and the consequence will be that the vineyards, should they be attacked by the insect, can be replaced with less difficulty.

Portugal is perhaps in the worst plight of all; the land of the northern part is poor and hilly, consequently little able to resist; over 90,000 acres out of 250,000 are dead. The Douro loses 80,000 acres out of 125,000. The following is the

Present Condition of the Phylloxera Question

In Europe: France, knowing that the loss of their vineyards meant the loss of a large portion of their income, has, by a vigorous, liberal policy, followed persistently for more than 20 years—practically settled the phylloxera question. The Government has offered a high premium to any one who should discover a practical remedy. In 1887 it passed a law remitting the land tax for four years on newly planted or reconstructed vineyards (a good commentary upon *our* method of assessing vineyard, which is to assess the land at its full value and then the vines as improvements, and that in face of the fact that our products are lower than they are in France).

Societies have been formed in all the different departments with governmental aid, to diffuse knowledge and cheapen the chemicals used in the insecticides, and in every way possible has the policy of the French Government been liberal and enlightened.

Spain and Portugal, by their dilatory action, have allowed the enemy to get possession of a large portion of their vineyards, then, after realizing their loss, have commenced to plant resistant vines. In the meantime the small proprietors have suffered severely, as the immense emigration from both countries to Brazil and the Argentine Republic shows in ten months of 1889, 53 884 persons emigrated from Spain. In five months of same year, 11,000 persons left Malaga alone. Most of this exodus was caused by the decline of the raisin industry.

Italy has found its defensive policy useless, and has accepted the American vines. Germany depends upon its defensive policy, but I am unable to say to what extent the American vines are used. Austria and Hungary must have accepted the American vines, as I find different kinds of stocks in the parts of the State where phylloxera has existed for some time, but in new localities experiments will have to be tried. Wishing to inform myself about this matter, I have spent much time in the two years past visiting vineyards in different parts of the State and getting the views of the proprietors. I find great apathy regarding the question; but comparatively few are making any effort to reconstruct their vineyards. I have been one of those who were not discouraged, and have been planting a little as my old vines die out. I have made some brilliant failures, but think I am now on the right track, and will give my ideas of the right method of reconstructing vineyards in another communication.

Stockton, Cal.

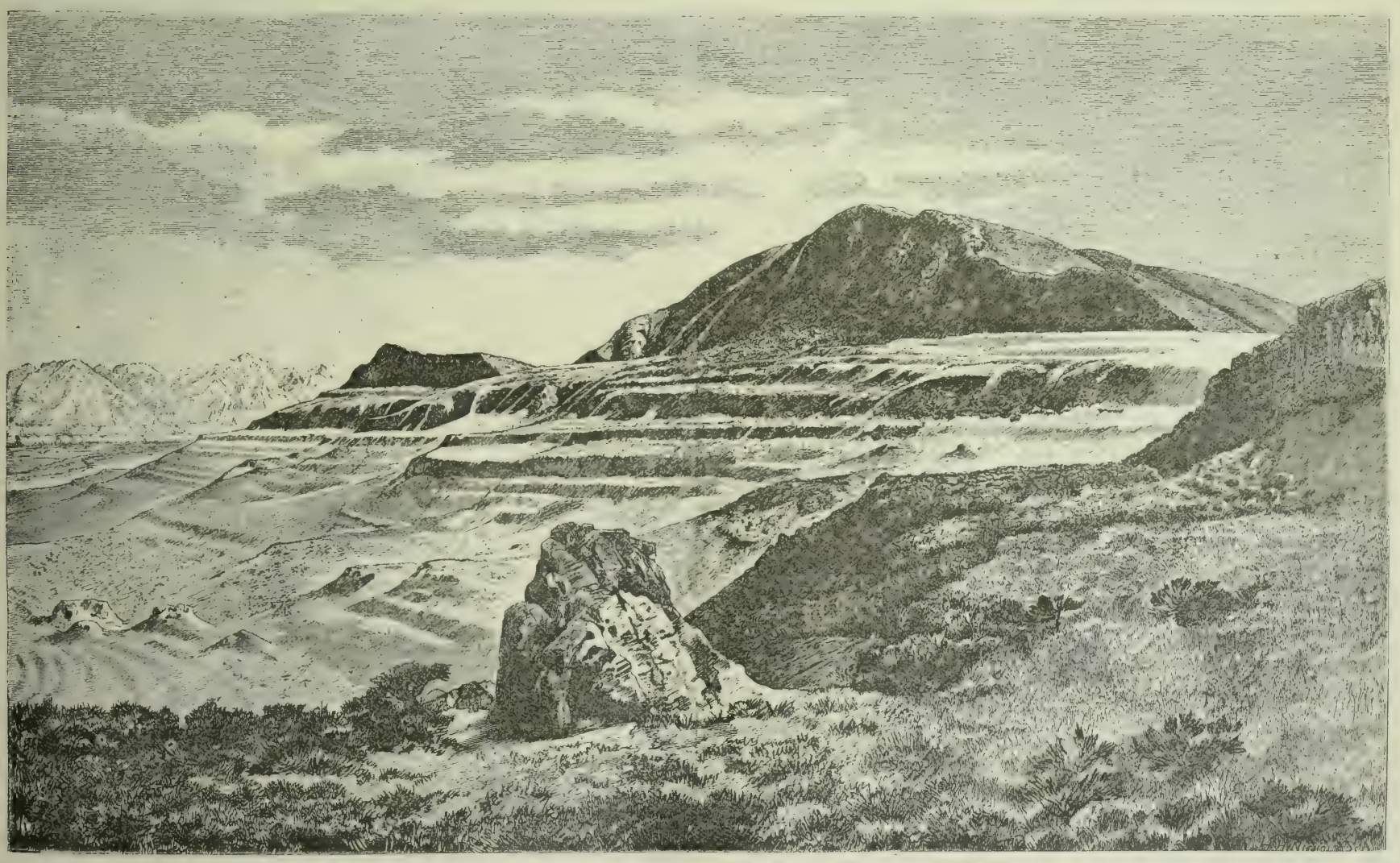
[We are glad to state that Mr. West promises to follow this important communication with another on grafting, stocks, etc. Mr. West's experience in these matters is so large, and his method of thought so careful and conservative, that his words will be given due weight by all who know him, and to others we can earnestly commend his statements.—EDS. PRESS.]

What Is California Doing?

It is a well-known fact that many of the vineyards in the northern part of the State are badly affected and some of them ruined; we also know that it is only a matter of time when all will be destroyed. Is it not better to commence and plant American stocks as soon as the vines show decay? In many parts of the State, land is of little value except for grapes. Shall we let our growing industries, raisins, table grapes and wine, die out for the want of a little pluck to renew them? But that is just what many are doing; they are timid; are afraid that they will not succeed; they say that some one has told that resistant vines are a failure. Think of 719,500 acres in France planted on worn land full of phylloxera. Do you suppose they do not understand the matter?

The fact that there are large vineyards in this State wholly upon resistant stocks and that many plots of 20 to 40 acres are coming into bearing is not fully understood by those who, not having fully investigated, pronounce the resistant vines a failure. There have been some very bad mistakes in using stocks not suited to the soil in which they are planted—mistakes in after-management, such as allowing the scion to form roots; but as a rule, success has attended all intelligent effort.

Enough is now known about the value of notices of large sales to them from the French nurseries. This is the condition of Europe.



SEA CLIFFS AND TERRACES CAUSED BY THE WAVES OF LAKE BONNEVILLE, ON THE NORTH END OF THE OQUIRRH RANGE, UTAH.

ADVANCE IN PRUNE PRICES.—The Pomona *Progress* says: Prune crop all is all contracted. Two months ago $27 to $30 a ton was paid for prunes delivered, then began to advance $2 a ton until $40 was paid July 1st, and at the close of the month $45 a ton was paid for prunes delivered.

Ancient Lake Cliffs and Terraces.

The facility and certainty with which the vestiges of ancient water margins are recognized and traced depend on local conditions. The small waves engendered in ponds and sheltered estuaries are far less efficient in the carving of cliffs and the construction of embankments than are the large waves of larger water bodies. The element of time, too, is an important factor. A system of shore topography from which the parent lake has receded is immediately exposed to the obliterating influence of land erosion and gradually loses its character and definition.

The wave-built terrace is distinct from the wave-cut terrace in that it is a work of construction, being composed entirely of shore drift, while the wave-cut terrace is the result of excavation and consists of the pre-existent terrane of the locality. The wave-cut terrace is overlooked by a cliff rising from its upper margin, and only appears on the margin of an open basin broad enough for the propagation of efficient waves.

The great Lake Bonneville (of the Quaternary period), in the division of the Great Basin of Utah, is known by the records on its ancient shore-lines. All about the Great Basin of Utah the lower slopes of the mountains are skirted by level tracings—not a single line merely at a single level, as in the Coast Range of California, but a series of lines at many levels, testifying to a system of oscillation of an ancient lake. The highest water-line is 1000 feet above the level of the Great Salt Lake, and over every foot of the intervening profile can be traced evidence of the action of waves. The point of outlet of this ancient lake was at the northern extremity of Cache valley. The sill over which the water at first discharged was soft, and yielded easily to the wear of running water, permitting the lake level to be rapidly lowered, but eventually a reef of limestone was reached, by which the erosion was checked and held at a nearly constant level until the outflow was finally stopped by climatic changes which diminished the water supply.

The history of this great lake is written by wave-sculptured topography and by lacustrine deposits. The Bonneville basin is surrounded by and interspersed with mountains. Form and substance conspire to prove that the lake had a beginning as well as an end, and before its inception the lake basin was for a long time subjected to the ordinary laws of sculpture by the action of rain. Nevertheless, the Bonneville shores are almost unmodified.

We give on this page a view of a portion of the shores, showing the sea-cliffs and terraces carved by the waves of Lake Bonneville, on the north end of the Oquirrh range, Utah. This is only one of the many evidences of the existence of this great Quaternary lake.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

DRYING GRAPES.—Livermore *Herald*, July 31: The vine-growers of Livermore valley are now thoroughly committed to grape-drying. Nearly all who have no wine-making facilities have contracted to sell their common wine varieties in the dried state.

GOOD PRICE.—Haywards *Journal*, Aug 1: Our prune-growers have a bonanza this year. As an illustration, we make mention of the sale just concluded by L. H. Brown of Collinsville, who sold 12½ tons of dried prunes, 50 to the pound, coming crop, being future delivery, for 10 cents per pound net, in 25 pound boxes. He was also offered for sale the same size prunes, in cotton sacks, at Elmira, 9½ cents per pound.

Butte.

LARGE FRUIT YIELD.—Chico *Enterprise*, Aug. 2: We interviewed Col. C. C. Royce, manager of the Rancho Chico, and from him we got the following amounts of fruit of different varieties picked in the Rancho Chico orchards:

	Lbs.
Cherries	240,000
Cherry plums	10,627
Apricots	201 [illegible] 0
Peaches	3[illegible]9,150
Blackberries	32 08
Plums	195,367
Apples	114,[illegible]76
Pears	[illegible],[illegible]03
German prunes	13 8 9
Nectarines	1,400
Sweetwater grapes	2 276
Total	1,151,091

Thus we have up to this date one million one hundred and fifty one thousand and ninety-one pounds of fruit picked, which makes a fraction over 575 tons, and would fill 287 cars. But the season is not near ended. The peach crop is only half picked, pears two-thirds, and apples one-fourth. The demand for apples has been greater than the pickers can supply. The crop of French prunes, almonds and Bartlett pears has not been touched yet, and it is estimated that there will be over one million pounds of grapes to pick.

Colusa.

PROGRESS OF THE CANAL.—Maxwell *Mercury*, Aug. 2: Five miles of the canal have been completed from the railroad at a point in the southeastern suburb of Willows, extending northward. The width is 60 feet and the depth a little over seven feet. The canal presents a fine appearance and will look like a small river as it meanders through the valley. Ten more miles of canal remain to be built under Turten & Knox's contract, and they will finish up within six or seven miles of Maxwell.

Fresno.

FRUIT PRICES.—*Republican*, Aug. 1: Driers are paying $40 per ton for green peaches and from 13 to 16 cents per lb. for dried. Green plums bring $25 a ton and green pears from $20 to $25. Dried apricots range from 12 to 14c. per lb, according to size and quality, and dried peaches from 13 to 16c. Expect to begin packing raisins about the middle of September. They are offering 5½c. a pound for unassorted Muscat raisins in the sweat-box, from 5 to 5½ for Sultanas, from 3½ to 4 for Faherzegos, and 3c. for dried grapes.

SULPHURING FIGS.—M. Denicke says: Dried fruit, such as figs, which are to be eaten raw, should not be sulphured. It is as injurious as dyeing candies with mineral or other poisonous colors—improving the appearance at the risk of health. Sulphuring fruit, for that reason, is strictly prohibited in European countries. Sulphur also deteriorates the flavor and eating qualities of the fig and renders it too laxative. It is improper.

Kern.

TWO CROPS AND THEN GRAPES.—Bakersfield *Echo*, July 31: W. Canfield has just finished planting 75 acres of Egyptian corn Last winter he seeded the same land to barley and got a good crop. When that was harvested he irrigated the field thoroughly and then planted the corn. He expects to harvest the corn principally with steers. About the time it is ripe they will be turned in, and experience shows that they will eat the stalks as well as the corn; the fodder and the corn together make a very fattening feed. Next spring he intends to plant the whole field to raisin grapes.

PUMP IRRIGATING—*Echo*, July 31; H. Swain's 30 acre vineyard out in the weed patch is said to be doing remarkably well. He waters it altogether from a pump. The water is carried to the vines in a tank, a small hole is dug and five or six gallons poured in. When it has settled into the ground the hole is filled up. Three men will pump the water and irrigate six or eight acres a day.

Lassen.

THE RESERVOIRS — Susanville *Advocate*, July 31: John C. Davis is working a large force of men and teams on the Honey Lake Water Co.'s Skedaddle reservoir, and within two months will have the dam completed to a hight of 60 feet.... Alex Smith, a stockholder and Sup't of the Red Rock Reservoir Co. of Sacramento, of which E. M. Luckett is president and State Controller J. P. Dunn secretary, has just arrived and is putting on men, teams and scrapers enough to complete their dam this year to 50 feet in hight.... The Antelope Ranch Co. of Madeline are pushing their developments along as fast as men and teams can do it.... Mr. Hutchinson and associates have just purchased two miles of 22 inch pipe, by means of which water will be conveyed from the Hutchinson & Leavitt system on the south to their lands on the north side of Susan river, for their reclamation.

Los Angeles.

FRUIT CROP.—L. A. *Herald*, Aug. 2: The following estimate of the deciduous fruit crop this year is made by one of Pomona's fruit-growers and fruit buyers, and one who has been in the business some years: Apricots, 1600 tons; peaches, 1100 tons; prunes, 530 tons; pears, 350 tons; figs, 95 tons; plums (not known); nectarines, 80 tons; raisin grapes, 200 tons.

FRUIT AND VEGETABLE SHIPMENTS.—L. A. *Herald*, Aug 2: A Santa Fe railroad official says: "We have shipped 75 or 100 cars already, and I have only heard of two which did not arrive in good condition. It is experimental, to a great extent, yet; the science of preparing the stuff and packing it is not yet thoroughly understood, but, as I said, the loss as yet has been a bagatelle. We send large shipments almost every day; last night we sent out ten carloads. I don't know how well it pays, but judging from the eagerness of shippers, there must be a big margin in it."

DRIED FRUIT PRICES.—The prices which agents for wholesale fruit firms in Pomona have offered for fruits range as follows: Dried apricots, 14 cents a pound; dried peaches, 17 cents; dried prunes, 8½ cents.

Mendocino.

HOP CROP.—Ukiah City *Democrat*, Aug. 1: The hop crop in the vicinity of Hopland promises to be up to the usual standard of excellence this year, and the warm weather we are having is just the thing to make hops grow.

Mono.

FOX TAIL.—*Chronicle Union*, July 26: G. B. Day has Indians at work clearing his land of the pest, and every land-owner in this valley should follow suit and do their level best to eradicate it, or it will soon ruin our meadows.

HAYING.—Bridgeport *Chronicle-Union*, July 26: The farmers throughout the county are busy cutting their hay, of which there will be large crops, particularly in the Bridgeport Big Meadows. In Antelope valley, the outlook is not so promising, as the "fox-tail" grass has made serious inroad, particularly on the bottom lands of Kirman & Rickey's ranch, where the wild hay will not be cut this year, there being too much of the obnoxious grass on the bottom lands to make the hay worth cutting.

Napa.

GRAPE CROP.—St. Helena *Register:* S. Adkins writes as follows: Wishing to correct some reports of recent date in reference to the grape crop, I have conversed with a number of grape-growers and have myself examined a number of vineyards, to find that it is a fact that the black variety of grapes are certainly not more than one-half an average crop. The white grapes are a little better, but a light crop. It will be the lightest vintage for a number of years past without question.

San Bernardino.

FROM STOCK TO FRUIT.—Ontario *Record*, July 31: A large flock of sheep passed through town Monday, going East. Eight years ago Ontario was part of a sheep ranch, and the only thing within the present colony limits in the way of artificial vegetation was the group of eucalyptus trees on A street. To-day we have over 4000 acres of orchard and vineyard, and a band of sheep constitutes a first-class sensation for the children that play on our streets.

San Diego.

BEET ANALYSIS.—*San Diegan*, July 28: Secretary Nolan of the Chamber of Commerce has received another letter form John D. Spreckels, giving analyses of beets grown in this county and forwarded to be tested for their sugar-making qualities. The beets were grown by C. M. Schwarzauer of Linda Vista, John Schussler of Tia Juana, and Viric Thompson of Lakeside. According to the analyses, 100 pounds of beets from the different samples would produce sugar as follows: From Linda Vista, 1 51 pounds; from Tia Juana, 6.6 pounds; from Lakeside, 11.3 pounds.

LARGE YIELD OF HONEY.—San Diego *Sun*, July 28: Walter Brothers of Temescal have taken from a single hive this season 150 pounds of honey, and they expect to take 80 pounds more from it before the season is over, making 230 in all.

DISTRICT FAIR —The El Cajon Horticultural Society have issued a call for a mass meeting of the citizens of El Cajon and adjoining valleys for the purpose of arranging for a district fair some time during the month of August.

PROLIFIC POTATOES —San Diego *Sun*, July 29: P. N. Soule of Oneonta brought in some wonderfully fine potatoes, of the Burpee Extra Early. In March of last year he ordered one pound of seed from Philadelphia. He planted the same the first of April and dug in June, the yield being about one bushel. Last winter these were planted, and the yield, dug about a month ago, was two tons, a record without parallel.

APRICOT CROP.—Escondido *Times*, July 31: The apricot crop is about all taken care of by this date, and the peaches will hold the market for awhile. The ruling prices for apricots and peaches are very satisfactory to the fruit-growers, netting from $100 to $200 per acre for four and five year old trees.

IRRIGATION DISTRICT.—*Times*, July 31: An irrigation district has been organized at Anaheim. The people became so tired of the Anaheim Union Water Company, that has so long furnished them with water (it being one of the oldest water companies in the State), that they have organized for relief. They propose to buy the franchise and ditches of said water company. Here is a pointer for the people of this district, and it is a very solid argument in favor of districts owning, building and controlling their irrigation systems.

San Joaquin.

STEALING WHEAT.—Stockton *Independent*, July 30: The officers have discovered the modus operandi of the parties who have been pilfering wheat for several weeks past. At night while box cars were standing on the switch track near the warehouses, the thieves would manage to gain entrance into the warehouses by wrenching the lock, and they would transfer several sacks from the building to the car. The following day the car would probably be switched off to some other location. The schemers would give the number of the car to Fritsch and it was his part of the business to get the wheat from the car and sell it.

Santa Barbara.

THE PECULIAR SEASON.—EDITORS PRESS:—Hot weather the past few days, the thermometer occasionally reaching the nineties. Fruit abundant, apricots selling sometimes at a cent a pound; sometimes suffered to rot under the trees. My blackberries commenced to ripen ten days later than usual, and then mostly ripened all at once, and many bushels of them went to waste, as I could not get pickers and buyers fast enough. The season is peculiar—unprecedented in my experience of California climate; extremely dry and lumpy on the surface and abundantly moist deep in, and crops mostly very tight. I saw several patches of fine-looking Lima beans in Carpinteria, and that is nearly all the good crops I have seen this season. On the whole, farmers are only moderately well off this year.—S. P. SNOW, *Santa Barbara, July 28th.*

Santa Clara.

FRUIT PRICES AT CUPERTINO.—S J. *Herald*, Aug. 1: There is much activity prevailing in the fruit business out our way, and buyers are active seeking contracts. Dried fruits seem to be the chief demand, and Mr. L. Sellinger was offered the other day 9 cents per pound for his prune crop, dried, and many expect that 12 cents will be offered before the season is over. Everything in green fruit is in demand, and holders of Muscat grapes will realize handsomely. Wine grapes are by no means backward in the general advance. A prominent vineyardist says that he was offered $12 per ton all around for his grapes, and the season yet in the future.

Santa Cruz.

BEET SUGAR —Watsonville *Rustler*, Aug. 2: Matters are assuming a lively appearance in and around the beet factory. The graders on the new railroad have reached the factory yard, and a big gang of men is employed in erecting a large double bin and other buildings necessary for handling this season's beet crop. The employes already engaged at the factory number 60, and the force will be increased from time to time, as necessity demands, until the season opens. It is expected that the railroad will be completed on or about the 1st of September.

THE FOURTEENTH DISTRICT FAIR, Sec'y Gordon informs us, will open Oct. 15th and close Oct. 18th.

Solano.

PEAR PURCHASES.—Dixon *Tribune*, Aug 2: J. W. Gates of Vacaville purchased the pear crops of several orchards in this vicinity. The exact price paid in each instance is not known, but it is in the neighborhood of $30 a ton.

LOSS OF TREES.—EDITORS PRESS:—The loss of trees from "sour root" is a leading topic and one giving rise to many diverse estimates. While some have lost nearly all their trees, other large orchards have a loss too small to figure a percentage. Mr. Robbins of Suisun and Vacaville, whose interests are very heavy, says he has spent eight days' steady work to find out the percentage of loss in Suisun and Vacaville, and that it will average less than five per cent.—F. S. C.

Sonoma.

HAY CROP.—Santa Rosa *Democrat*, Aug. 2: The hay crop in this county is unusually heavy this season, but the quality is not up to the standard. As a consequence, the price will range high for the superior article.

HOP CROP —*Democrat*, Aug. 2: M. J. Netter informed a *Democrat* reporter that while the hop crop of the county will not be as large this season as last, the harvest is destined to be one of the most profitable for years. The hops are of a better quality and larger in their development, while the foliage is scanty. Last season the crop of the county was about 6700 bales; this year it will not be over 6000. Eighteen cents is the price offered at present, but the growers seem to think that 20 cents will be paid before the crop is harvested.

HOP GROWERS. — Santa Rosa *Republican*, July 31: At the annual meeting of the Sonoma County Hop-Growers' Association held in Santa Rosa Saturday afternoon, there was a good deal of informal talk in regard to the general outlook of the crop indulged in, and the tone of the discussion indicated that all expected a very good return from their crop. The price for picking white hops, on motion of Mr. Solomon, was fixed at $1 per hundred, growers of red hops to fix their own rates. The association agreed, by motion, that if the State Hop-Growers' Association will change to and adopt the New York standard of tare on hops of 3½ pounds, to adopt the same as a standard, and that the State Association be required to adopt that standard. The communication from the Donahue road agreeing to make the following rates was read by the secretary: Santa Rosa, 18 cents; Healdsburg, 27; Sebastopol, 22; Green Valley, 30; Carrigers, 20.

Stanislaus.

FIELD FIRE.—Modesto *News*, Aug. 1: On Friday afternoon last a fire was started from Wilson & Nye's traction engine on the ranch of E. L Sturgeon, eight miles from Newman, and destroyed about 1200 acres of fine wheat. The grain was insured for $10 per acre.

Sutter.

LARGE YIELD.—*Farmer*, Aug. 1: The productiveness of the soil along the Sacramento river is shown by the following yield of barley from some lands in that section that were not overflowed last winter: Chas. Wood, near Meridian, has harvested 40 acres from which he received 23 sacks to the acre. Geo. Wood, also a resident near that place, harvested 20 sacks to the acre from a 30-acre field.

BANKS CAVING.—*Farmer*, Aug. 1: The long wet season last winter softened the soil to a considerable depth, especially along the banks of our rivers, causing the current to act more effectively on the lower strata and resulting in the caving off of the most exposed places. Along the Sacramento river, in many places, the bank has caved in as much as 15 feet, taking portions of the levee with it. At the warehouse in Meridian, a bad cave took place last winter which will result in compelling the owners to move the building farther back from the river. The levee in many places cannot well be made safe unless it is built some distance inland.

Tehama.

HIGH PRICES FOR DRIED FRUIT.—Chico *Chronicle-Record*, Aug. 1: We are credibly informed that on Wednesday last there were at Vina five different agents representing as many firms, endeavoring to contract for the dried peaches there being made. Competition ran high, and 2½ carloads were contracted for, some of it as high as 20 cents a pound. It seems that some of these fruit dealers have contracted in the East to supply a certain amount and find that it will be almost impossible to meet the engagement at any price. Last year the dried peaches at Vina were sold at three cents a pound—indeed they could scarcely be sold at any price.

Tulare.

RABBIT DEPREDATIONS —*Register*, Aug. 1: We hear much complaint about the depredations of jackrabbits down upon the plains. They are said to be thicker than ever before, and now that the grain fields are being cleared off, they are devouring every green thing they can discover. Here is an opportunity for concerted action. If all hands will put out poisoned watermelon liberally, thousands can be killed at small cost to each, and what are not done away with in this way should be finished up with big drives this fall.

DRY FEED BURNED.—*Times*, July 31: A fire at Adams Flat has destroyed about 40,000 acres of dry feed. The fire is said to have been started by a Portuguese. At last advices the fire was rapidly extending toward Camp Badger, and it was feared that B. Pendola and others would be burned out. If Dry creek on the east and the county road on the north does not stay the flames, they will extend into the pineries, in the vicinity of the Moore & Smith and the Fewell sawmills.

Ventura

REMARKABLE GROWTH.—Ventura *Free Press*, Aug. 1: Two years ago the station of Montalvo was a barley field. In the first 21 days of this month passenger tickets to the value of $300 were sold. During the season there have been shipped 500 tons of fruit.

Yolo.

DRIED GRAPES.—*Yolo Democrat*, July 31: Agents of Eastern and San Francisco houses are offering prices for dried grapes, which, in view of the price of wine and wine grapes, are extraordinary. We hear of houses that are contracting for any quantity of dried grapes at as high as $65 per ton. This is equal, above all expenses, to $16 per ton for the fresh grapes. Nearly all purpose to dry, and it looks now as if the greater part of our common black grapes would be disposed of in that way.

GRAPE CROP, ETC.—Woodland *Mail*, Aug. 2: Yolo county vineyardists are already preparing for the grape-picking, packing and shipping season, which will soon be upon us. The yield promises to be heavy this year, and growers expect a prosperous season. Sweetwaters are now ripe and on the market, also other varieties of early grapes. The majority of the vineyardists have already disposed of their grape crops to San Francisco and Eastern agents, who have visited our county in large numbers during the past week or two.

Yuba.

MARYSVILLE FAIR.—Briggs *Argus:* The 13th District Agricultural Fair will be held at Marysville, commencing Tuesday, Sept. 23, and continuing five days. Premiums and purses aggregating $100,000 are being raised, and fruit-growers are offered liberal inducements to compete in the horticultural department. The races promise to be the best ever held in the 13th district. Accommodations are provided for an immense crowd of people.

State and County.

El Cajon Raisin District.

Editors Press:—A few miles east of San Diego is the Valley of El Cajon (the box), perhaps the best known valley in the county. It is also in some respects the oddest. Standing upon the hills or mesas that entirely encircle it, one can readily see whence came the name. Looking down we see a huge "box" of perhaps 7000 or 8000 acres almost circular in shape without any water-course, and at first sight seemingly without an outlet. The winter rains, however, find their way through the north side of the valley into the San Diego river.

A local writer says: "Here we find boxes within the box, each round-topped knoll helping to mask some small cajon that nestles at its base. They break upon one unexpectedly, a sudden gap between wild oats ridges disclosing at frequent intervals a plat seemingly planned by nature for cultivation, with perhaps a pretty cottage and emerald vines and spreading groves adorning it of whose existence the traveler by steam would never dream." This valley, first a sheep range and next a barley field, is now in fair shape to be called a vineyard.

Perhaps the oldest fruit-grower in the valley is Major Levi Chase, and at his country home, the Villa Cajon, may be found quite a variety of fruits, including apples, peaches, apricots and prunes. Much of this fruit is dried on the place. There are also quite a number of raisin grapes and English walnuts. The major also grows oranges quite extensively, shipping the past season by the car.

Adjoining the Villa Cajon is the home of Mr. Uri Hill, another of the pioneers who came, I believe, in 1869. The fruit crops grown by Mr. Hill are in variety essentially the same as Major Chase's. He has, however, devoted much of his time to the breeding of fine horses, and has done much to better the grade of horse-flesh used throughout the valley. Next to Mr. Hill is the H. T. Christian ranch, Mr. Hill's first effort, and consequently one of the oldest improved places in the valley. West of this are the lands of Dr. C. M. Johnson, who has about 115 acres in raisin grapes and 50 acres or 3600 of orange trees. He is here making for himself a very pleasant home.

West and north of this are the lands of Mr. S. M. Marshall and the El Cajon Vineyard Co. Mr. Marshall personally has about 115 acres in raisin grapes and 100 acres in trees, 35 being in olives and 65 in oranges and lemons; of trees a total of about 7000. As manager of the El Cajon Vineyard Co., Mr. Marshall has under his care about 400 acres in grapes besides his own.

On the opposite side of the valley is, I believe, the banner raisin vineyard of Southern California in size. This, the "Boston Ranch," Souther & Crosby owners, is managed by Mr. J. Donald and consists of 572 acres, all of which, with the exception of 42 acres of oranges, is planted to grapes. The vines were planted 10x12 on this ranch, but having decided to irrigate, the vines were doubled, making them 6x10. Last winter 80,000 vines were thus set between. The water used for irrigating is obtained from the S. D. Flume Co., of which I will give further mention. The water is carried to and partly through the vineyard in flumes 8x10 and 8x12 inches in size. Of these there are 14,000 feet. It is then taken up by riveted iron water-pipes. In exact figures there are of these, of 8½ inch, 11,552 feet; 4-inch, 14,029 feet; and of 2-inch, 2100 feet. Although late in getting the pipe, nearly the whole ranch will be irrigated this season. About two miles of roadways and avenues have been bordered with palm, cypress and other ornamental trees.

For packing, Mr. Donald has a packing-house, 50x80 feet, two-story, to which he is now adding a single story, 26x66, for stemming and sweating. He has also provided some 40,000 trays and sufficient sweat-boxes, and is ready for the crop, which he estimates at from 12 000 to 15,000 boxes of raisins. This vineyard is all young, some not yet bearing anything at all.

Mr. J. T. Gordon, president of the Sweetwater nurseries, has about 150 acres of raisins and 30 acres of citrus fruits. He is demonstrating in a practical manner the utility of the foothills for vineyard purposes, by planting some vines on the same, which are coming on in a satisfactory manner. Messrs. C. B. and H. S. Richards have about 200 acres in grapes. The Cowles estate, which is one of the oldest in the valley, has 140 acres in raisins and 40 in mixed fruits, all bearing. The Holt ranch has perhaps 150 acres in grapes, besides some fruit. Among the other larger tracts of 40 to 100 or more acres are those of Messrs. Asher, Gilbert, Hall, Hawley, Peel and Pennel. These are all principally raisin grapes. Many acres more are held in smaller tracts. Very few ranches except the "Boston" are as yet irrigating. The water mostly used for irrigating is obtained from the San Diego Flume Co., whose reservoir is some 30 miles above, among the Cuyamaca mountains. The flume, in its course toward the city, half encircles the valley, giving abundant opportunity to those wishing to irrigate to do so.

Raisin Trays and Sweat-Boxes.

As some difference exists in sizes and kinds of material used for trays and sweat-boxes, I give sizes used here, which I believe are Riverside sizes also. These items (of trays and boxes) have been kindly furnished by Mr. J. M Edmiston, superintendent of the El Cajon Vineyard Co.

Trays are 2x3 feet, made of four ⅜ inch boards nailed to end cleats ⅞x1¾ inches. Tray boards are usually redwood and cleats pine. The sweat-boxes are 2 feet 1 inch by 3 feet 1 inch in the clear and 8 inches deep. Sides and ends are ¼-inch stuff; the bottoms of ⅜-inch stuff, all pine.

The sweat-boxes, you will observe, are one inch larger each way than the trays. This permits of the easy removal of the trays from the boxes. In storing, after the season is over, much room is thus saved by filling the boxes with trays. Many use the common shake, but this being too light is very unsatisfactory.

The vines are planted all widths, from 6x10 to 12x12. About 3300 acres are in vines, almost every acre of which is raisin grapes. Perhaps 300 to 400 acres are in fruit, which includes everything from a lemon to an apple. With all due deference to the vine "experts" who last season had the vines dying (in their minds), I must say the popular opinion is that they should go into some other business. The report from all sides of the valley is the finest of crops and the healthiest of vines.

El Cajon, 15 miles east of San Diego, is connected with the same by rail, telephone and telegraph. Since the advent of the railroad, some 15 months ago, the valley has made marked progress and is still rapidly improving.

Yours, J B H.

El Cajon San Diego Co.

The Field.

The Snoqualmie Hop Ranch.

The ensuing description of the Snoqualmie hop ranch appears in the *Washington Farmer* for July 25th:

It is owned by a company, incorporated, with capital stock $120,000. Over $200 000 have been expended in improvements. The principal stockholders are Richard Jeffs of White River, president; Geo. W. Gove, vice-president and manager; H. Dutard of S. F., treasurer; G. K. Baxter of Seattle and H. E. Levy of Victoria, B C.

The company began operations here in the spring of 1885. That year they planted 200 acres to hops, and they now have 310 acres of the finest-looking hops that mortal eyes ever rested on. They also have over 100 acres of timothy hay, yielding three tons to the acre; 13 acres in potatoes, and several acres in other vegetables; will harvest 4000 bushels of oats; they have the handsomest orchard in the State, covering 20 acres, and containing apple, pear and plum trees so large that when the pioneers of the State recently held their reunion picnic, they had their festivities under their umbrageous boughs, laden with the choicest of fruits. These trees were planted by Jeremiah Borst, 23 years ago. He now resides at his home adjoining the east end of the great hop ranch. The company purchased of Mr. Borst 700 acres, and obtained 500 acres more of other parties.

The average force employed on the ranch is 20, and during the month that the vines are being tied up to the poles, there are 40 men on the pay-roll. During the month that picking is being done, 800 Indians and 100 white men are employed. From appearances now, this ranch will harvest this year 3000 bales of hops of 200 pounds each. Buyers generally come to the ranch and contract for the crop. Last year the product sold at eight to 9½ cents. Hops are now worth 18 cents; and the 600,000 pounds that the ranch will turn out will command at present prices the neat little sum of $108,000.

Capt. Geo. W. Gove, the manager of this immense plantation, says that, from his experience, and, in fact, from the most authentic statistics, the best time to sell hops is at the time of picking, when a great many buyers from different directions are vying with each other. Capt. Gove says that on old and new contracts over 20,000 bales of this year's crop in this State have been contracted at an average of 14 cents. By "old" contracts is meant those contracts made previous to this year. Some growers contract several years ahead.

The Snoqualmie hop ranch is situated in a natural prairie, surrounded by a dense forest. The soil is a deep loam. The Snoqualmie river flows through the hop-fields, and in bygone ages, before the barrier of rock over which leaps the great falls was reduced to its present level, the site of this ranch was evidently a lake.

The day after our arrival, Capt. Gove hitched up a double-buggy team and drove us three miles through the plantation, which extends almost to the new town of South Bend on the east. We viewed the splendid fields and the improvements with delight. We found 15 hop-houses, two of which are double and five are triple, making on the whole 27 kilns, each 24 feet square. Twenty sheds are distributed at convenient points on the plantation for shelter of Indian pickers. A dozen houses are occupied all the year by Indian families employed on the premises. On the railroad is a warehouse 60x80 feet in which the baled hops are stored for shipment. Leading from this warehouse is a nicely turnpiked driveway to the hotel, a three-story building, situated in the midst of the orchard, and surrounded by a charming lawn, with beds of lovely flowers and rare plants. * * * To the east of the hotel is a boarding-house for employes of the farm, two stories, 36x70 feet, with L 30x36 feet, and between this boarding-house and the hotel is the company's store, 40x100 feet, with warehouse on one side the full length of the store. The average stock of general merchandise is $18 000. Across the lane from the store is a large barn, and near the center of the farm is another. The one near the store is a very complete structure, 90x120, three stories high. Near by are the blacksmith and wheelwright and carpenter shops, and the sheds in which stand the thrashing machine and engine and the wagons and carriages.

This is conceded to be the largest hop ranch in the world. Some years ago, A. J. Luce & Co., at Cazaville, Canada, had 400 acres in hops; but they have since reduced the area under cultivation, and this leaves the Snoqualmie ranch at the head of the list.

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[COPY OF LETTER FROM GEN. BIDWELL.]

Chico, Cal., July 14, 1890.

To whom this may concern: The bearer, Mr. J. Luther Bowers, having been in my service for some time, several years ago, as a practical fruit-grower, it gives me pleasure to say that I found him competent and reliable in all respects, and as such I very cheerfully commend him to the kind notice of all persons. Very respectfully,

John Bidwell.

Can also give good Eastern references. Address,

J. Luther Bowers,
Herndon, Fairfax county, Virginia.

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Dissolution of Partnership.—The dissolution of partnership between James M. Haven and Arthur F. Low, under the firm name of Haven & Low, is announced. James M. Haven will continue the practice of law at the former office of the above firm, No. 530 California street, in partnership with his son, Thomas E. Haven, under the firm name and style of Haven & Haven. Judge Haven has been known to us as an able and reliable attorney for over a quarter of a century and we bespeak for himself and son the continued patronage so well deserved.

For Sale.—Valuable land in Tulare county artesian belt. 160 acres, 1½ miles southwest of Tulare city; 480 acres, 7 miles southwest of Tulare, with large flowing artesian well, well-finished two-story horse, large barn, etc.; 160 acres, 2 miles southwest of the above; 480 acres 3 miles southwest of Pixley and about 4 from Alila. For sale by owner in lots to suit at low prices, low interest and very easy terms. For further information, address LAND OWNER, Box 2517, S. F., or A. T. DEWEY, No. 220 Market street, San Francisco, Cal.

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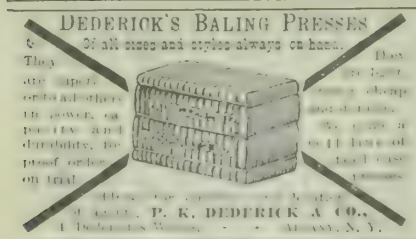
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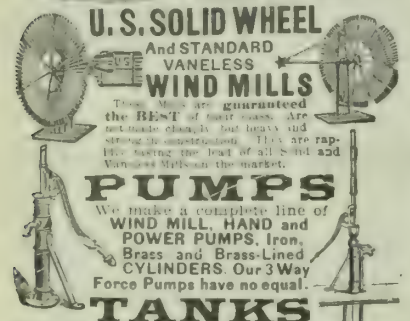


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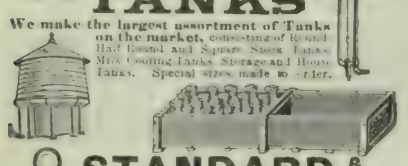


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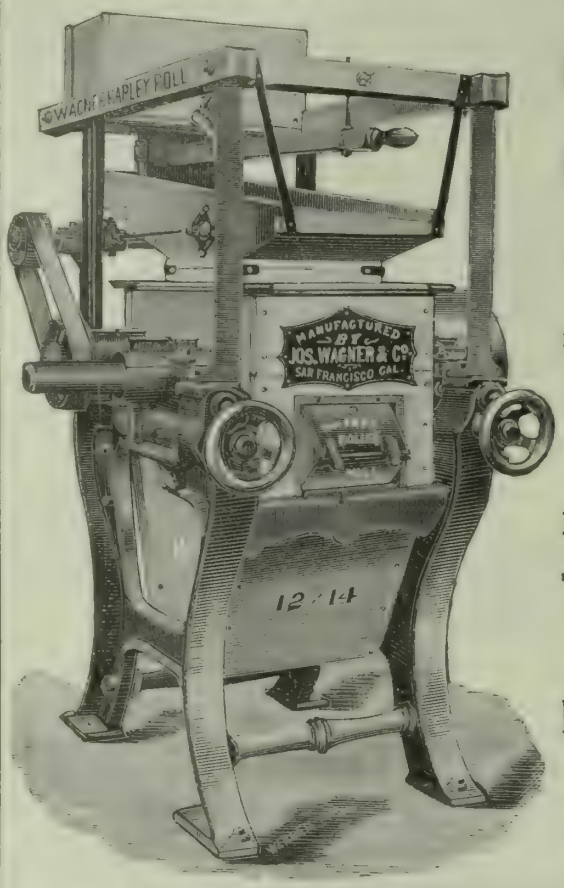
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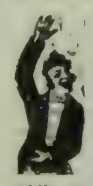


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Track and Farm.

California-Bred Runners.

During no year in the history of the American running turf, says a *Chronicle* writer, have so many records been beaten as during the present racing season. From seven-eighths of a mile to one and one-half miles all former performances have been cast in the shade by the equine heroes and heroines of 1890. The latest record-breaking feat was that of Raveloe in a mile race yesterday over Monmouth course at Long Branch, N. J., the colt traveling the distance in 1:39¼—one-quarter of a second faster than the time made by Racine on June 28th last at Chicago. Both Raveloe and Racine are California-bred colts, and the mile-record breaker is by Joe Hooker, dam Illusion, by Alarm. He is bay in color, three years old, and his previous performances would lead one to think that there had been any number of colts superior to Raveloe bred on Theodore Winters' place. The record of Ten Broeck—1:39¾—stood for 13 years before the Californian, Racine, cut therefrom a quarter of a second. Raveloe and Racine carried 107 pounds each in these record-breaking races, and George Covington had the mount on the former yesterday.

Raveloe does not receive from horsemen the credit of being the hero of a grand performance. The race was run on the straightaway course, and a comparison of the race with those run on the oval tracks does a marked injustice to former record-breakers, unless an allowance of at least three seconds is made in favor of the circular track.

The Trotting Record Lowered.

Another record stands to the credit of California. Yesterday Adonis passed a second heat at Cleveland in 2:11½—the fastest mile ever made by either pacer or trotter in an actual race. Adonis was bred by Count Valensin, and was sired by Sidney, sire of Gold Leaf, 2:11¼, Fleet, 2:24½, and others. His dam was Venus, said to be by Captain Webster.

Previous to Adonis' effort the record was held by Little Brown Jug, who covered the track at Hartford, Conn., on August 24, 1881, in 2:11¾.

For the trotting brigade Maud S established a mark of 2:13½ in 1880, and although thousands have aimed at it since, none have succeeded in tearing it down, unless Sunol's 2:10½ made in the Stanford stakes can technically be construed into a record made in a race. She had a walkover for the event and made her mark while trotting for the stakes, but the affair was conducted with the usual preparations that accompany an effort against time.—*Post.*

Plan for Corrals Wanted.

Editors Press:—Can you or any of your subscribers give me a plan of two round corrals with connecting chute—the chute to be used for haltering and branding horses and cattle? It may interest other subscribers as well as yours truly, S., *Contra Costa Co.*

[The information would surely be of general interest. If readers will write us descriptions and give sketches, we shall be pleased to illustrate their letters with engravings.—Eds Press]

High Prices for Thoroughbreds.—The enormous amount of money in the market for high-class thoroughbreds nowadays is simply astonishing, as witness the recent four-days' sales at Newmarket, when the fabulous sum of £90,000 was realized. At the sale of the Queen's yearlings at Hampton Court, Lord Marcus Beresford, acting on behalf of Baron Hirsch, established a new record by giving 5500 gs. for a sister to "Memoir." This is a fancy figure, but the filly is said to be a very good one, Lord Dudley drew a check for 12,000 gs. to pay for six, two of which were knocked down to his lordship for 3000 gs. each, one for 2100 gs., and the others from 1500 gs. upward. Colonel North gave 3200 gs. for a filly by "St. Simon;" Mr. Hamar Bass 3000 gs. for a sister to "Energy," which was sent up as a part of the Yardley stud, Mr. Douglas Baird's bid of 2000 gs. secured an own brother to "Geologist," and a yearling, a brother to "The Rejected," was taken by Mr. Cooper at 1500 gs.—*London Farmer.*

Selling Horses by Electric Light.—Charles Reed, who owns the Fairview stud at Gallatin, Tenn., and who for many years was proprietor of the Saratoga, N. Y., race-course and grounds, has concluded to sell his yearlings hereafter at night by electric light in Tattersall's of New York, which has for its auctioneer William Easton. Owners of thoroughbreds and racing enthusiasts anxious to purchase youngsters can now attend the races in the daytime and occupy a box at Tattersall's in the evening. That California breeders will follow in the footsteps of Mr. Reed, the originator of this novel scheme for getting a larger crowd out to buy horses, and therefore much better prices, is not to be doubted.

There are more than 22,000,000 acres of unsold land in the Carson Land District of Nevada State, says the Reno *Gazette.*

The Veterinarian.

Pigs with Cough.

Editors Press:—Kindly tell me what to do for pigs affected with cough. They are 14 weeks old.—J. H. D.

A cough is only a symptom of a diseased condition, and not a disease of itself. Cough in pigs may arise from stomach derangement, intestinal worms, irritation of the air passages from parasites, from cold, bronchitis, or disease of the lung structure, each of which would require a different method of treatment.

If the pigs have got cold from exposure, try the following: Chlorate of potash 1 drachm; nitrate of potash ½ drachm; powdered aniseseed 1 drachm. Dissolve in milk sweetened with molasses. Provide shelter and a good bed.

Management of Donkeys.

The donkey is perhaps the hardiest of all domestic animals, and rarely ails much if it gets anything like fair treatment. It is quite unusual for it to be lame, and it more often succumbs to old age or ill-treatment than to actual disease. There are so many who have never seen a dead donkey that I think the prevailing impression is that they do not die.

For children's work, except during the winter months, a donkey should be able to find his living in the fields, and if this is supplemented with a daily feed of oats, it would do well. A shed, if water-tight, will answer the purpose of a stable as well as a more elaborate building. During the winter, oats and hay should be the diet. Carrots, or even fresh garden refuse, will also be useful.

Canine Mange.

Will Dr. Buzard please give me a good remedy for mange in the dog?—V. B., *S. F.*

Sulphur sub., 8 ozs.; whale oil, 8 ozs.; oil of tar, ½ oz.; ung. hydrarg ½ oz.; to be well mixed and applied. Before any application is used, it is necessary that the animal should be well washed with warm water and soap. Repeat in three days if required.

Horse's Leg Injured by a Kick.

Editors Press:—Some weeks ago one of my mares got a kick on her leg bone below the knee. It swelled and I poulticed it, opened it once or twice, applied iodine, but there remains a hard lump. It seems as though a callous had formed on the periosteum. Can any reader tell of a remedy?—Edw'd Berwick, *Monterey.*

It is a case of exostosis—*bony growth from bone*—as a result of periostitis. In the first place it is simply lymphy material thrown out, but later on earthy matter is deposited, and this in time becomes converted into bone. When once exostoses have assumed true bony character, unless surgically removed, they will remain as part of the body, whatever treatment may be adopted. The application of blisters will promote absorption of any surrounding deposit.

A. E. Buzard, M. R. C. V. S. L.
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The Improvement of the Rivers.

We alluded recently to the cruise of the River Commissioners C. F. Reed, J. J. Crawford and C. E. Grunsky, appointed by the Governor under authority of an Act passed by the last Legislature, and instructed to examine the navigable rivers of California for the purpose of collecting information upon which can be based a plan for systematic protection and preservation of waterways and reclamation of low lands. This examination of the rivers and consultation with riverside residents has been completed and the Commissioners will endeavor in their report to show in a general way how different sections of the river should be treated, but will not have time to go into detail. The main difficulty, and the one that they will endeavor to meet, is the division of the work and expense between the United States, the State and the land-owners. They will quote figures showing the value of the river shipping and the great commercial importance of the Sacramento and San Joaquin rivers. The law under which they are acting requires them to complete their report by the 1st of October. The work of inspection is now finished, with the exception of some special examinations at certain points.

Heavy Rains at the South.

San Bernardino, August 5.—Four hours' rain fell to-day, preceded by an unusual amount of thunder and lightning. Fruitmen report some damage to the grape crop. If the weather continues cloudy, the raisin crop will be injured by rot. In Old San Bernardino, the rain was accompanied by a heavy wind, which blew down many trees and destroyed considerable fruit. The fall of rain was much heavier in the latter place.

Tucson, August 5.—Heavy rains have fallen during the last ten days. The rivers are all swollen, and there has been much destruction of property in the valleys. The Santa Cruz is 1½ miles wide opposite Tucson. Many thousand dollars' worth of garden-truck has been lost, and there have been several narrow escapes from drowning, though nobody has thus far been lost. The Santa Cruz river is again flooding this valley, and this evening is higher than at any time during the flood.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING JULY 29, 1890.

433,116.—Grading Scraper — L. E. Ashley, Stockton, Cal.

433,193.—Wheel—Daniel Best, San Leandro, Cal.

433,072.—Valve and Faucet—A. H. Dauchy, San Diego, Cal.

433,198.—Valve and Faucet—A. H. Dauchy, San Diego, Cal.

433,165.—Water-Current Motor—Geo. R. Driggs, S. F.

433 201.—Die for Cutting Metal Screws—Geo. Gibbs, S. F.

433,172.—Bicycle—John Jett, S. F.

433,173.—Velocipede—John Jett, Glen Blair, Cal.

433,130. — Presser Foot for Sewing Machines—Crapo Leak, S. F.

433,131.—Aging Wine—Geo. H. Malter, S. F.

433,133.—Washing Machine—E. McDonald, Willow, Cal.

433,305 —Car Coupling—W. Portlock, San Diego, Cal.

433,216.—Electric Train Signal — A. W. Reppy, Oakland, Cal.

433,098.—Combination Tool—T. P. Schwartz, Stockton, Cal.

433,104.—Feed-Water Heater—A. R. Smith, S. F.

433,110.—Game—Dorner Walsh, S. F.

The following brief list by telegraph, for Aug. 5, will appear more complete on receipt of mail advices:

California—Alexander Johnson, Oakland, assignor to Marshall Improved Furniture Co., San Francisco, sash balance; Almon Ames, assignor to R. J. Davis, San Francisco, pile covering; Charles L. Burbeck, Fort Bragg, oil cup; Alvin T. Church, East Oakland, sash holder; Gertie D. Cluff, Lodi, garment supporter; Gilbert A. Cunningham, San Francisco, safety guard for railways; Samuel H. and C. L. Miller, Stockton, hay press; George W. Parker, San Francisco, street pavement; Assaria Rewrick, San Francisco, traveling block; Charles Silberstein and J. Amos, Los Angeles, smoothing iron: Clara Turney, Sausalito, horse-controlling device; William A. Zumwalt, Farmington, gang plow and harrow.

Oregon—Frank Batter, assignor of one-half to L. Clemensen, Marshfield, device for drawing beer; Richmond P. Smith, assignor of one-half to T. G. Owen, Marshfield, tool for manipulating insertible saw teeth.

Washington — Emma C. Hudson, Seattle, slate sponge.

Arizona—Thomas J. Thorp, Chicago, Ill., assignor of three-fourths to D. J. Brannen, Flagstaff, and G. M. Lockwood, Washington, D. C., wheel.

Note.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

California Fruits in British Columbia.

Mr. Thomas Cunningham, President of the British Columbia Agricultural Association, writes as follows concerning our recently published book: "I have California Fruits by Wickson. It is a truly valuable work; the best I ever read."

Dederick's Hay Presses.—P. K. Dederick & Co. send us a copy of their special circular with illustrations and full descriptions of their various styles of hay presses and other implements and machines. It is a very creditable publication and can be had by addressing the firm at Albany, N. Y.

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The book contains 480 pages, and in form is what is known as a royal octavo, that is (to give a better idea of its size), it is eight and one-half inches long, six inches wide, and two inches thick. It is printed on extra heavy paper and is handsomely bound in cloth, with embossed covers and gilt-lettered back.

Another Thing (and this is why we think the book worthy of our use in this way), it is different from all other works of the kind ever published, and the difference is such that it makes it more valuable than any or all of them!

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FIRST—It teaches those who have it how to tell what the matter is when a person gets sick!

All similar books tell what to do if you know what the disease is. This book tells you how to detect the disease, and then what to do for it.

No other book published is up to this.

SECOND—When a person is really attacked by a *dangerous disease*, it enables you to know the fact, and in such cases its advice is: "Send for a competent physician at once." But in all ordinary cases, such as can be easily cured (and most of the ailments in a family are of this kind, if only you could recognize them) it gives full directions for treatment. The point is, that it teaches you to distinguish between a *dangerous* and a *trifling* disease, and tells you when it is necessary, and when *not* necessary, to call a physician.

No other book equals this.

THIRD—In its directions for treatment it is not confined to the practice used by any *one* class of physicians; but it gives, *separately*, and for each disease, the methods used by each of the different "schools" of medicine; and in all cases the prescriptions are most eminent men in their respective modes of practice. This makes the work especially suited to the needs of every family, no matter what "school" of medicine they prefer.

No other book published does this.

Besides this, there are three chapters in the work which are worthy of special mention, namely, those on "Diseases of Women," "Diseases of Infants," and "Care of the Sick."

The first of these is a model of its kind. It is chaste in language, contains no disgusting pictures for children to happen on and be over curious about, and taken altogether is the most practical, sensible and straight-forward treatise upon this delicate subject that has ever been printed.

This chapter alone is worth many times the cost of the book to every mother, even if it had to be purchased at its regular price.

The other chapters referred to are equally well written and valuable.

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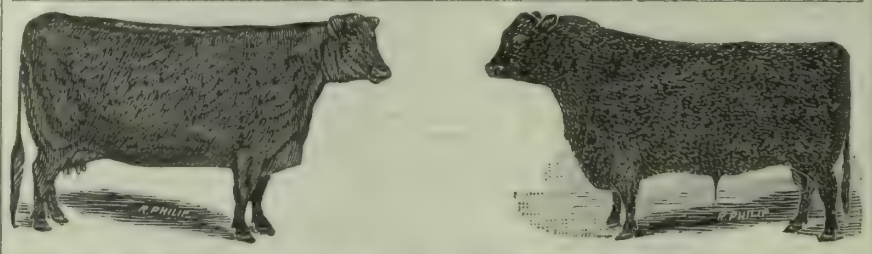
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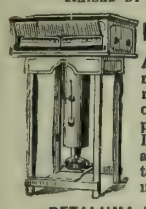
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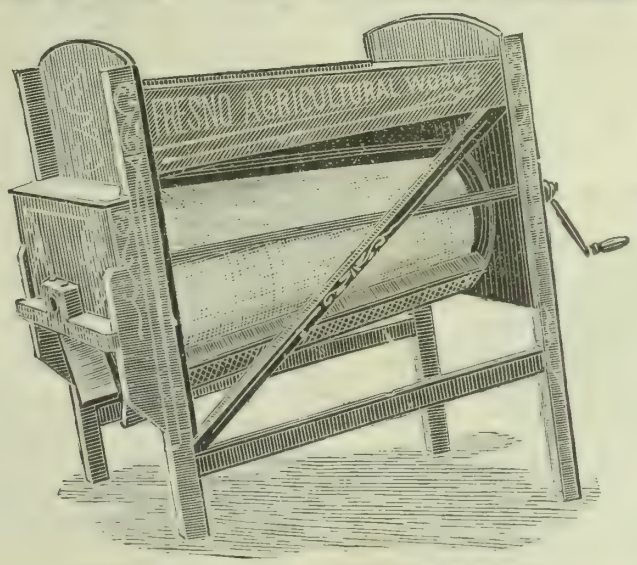
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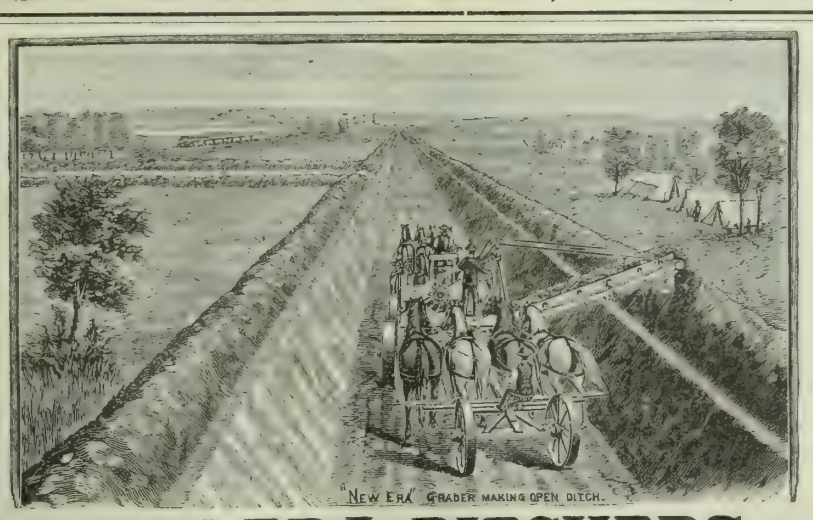
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Aug. 6, 1890.

General trade in farm products has been quite active, with still higher prices for fruits, beans and barley. The good prices being realized will have a beneficial influence on all industries and cause an easier feeling in the money market. Wheat has been strong at full prices. Abroad, the markets have fluctuated, as they have at the East. The following is to-day's cablegram:

LIVERPOOL, Aug. 6.—Wheat—Firmer. California spot lots, 7s 1¾d to 7s 4½d; cargoes off coast, 37s 9d; just shipped, 37s 3d; nearly due, 37s 9d; cargoes off coast, quiet but steady; on passage, quiet; wheat on passage to Continent, 563,000 qrs; wheat and flour on passage to U. K., 2,206,000 qrs; French country markets, quiet.

Foreign Grain Review.

LONDON, Aug. 4.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: English wheats are dull; prices related exclusively to old wheats, the scarcity of which caused an advance of 2s. There is no speculation in new. Foreign wheats are weak. Flour is in limited inquiry. Grinding barleys advanced 6d. The demand for corn is strong.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday	7s4½d	7s5½d	7s5½d	7s 6d	7s6d
Friday	7s4d	7s4½d	7s5½d	7s5½d	7s6d
Saturday	....	....	....	....	....
Monday	....	....	....	....	....
Tuesday	7s3½d	7s5d	7s5½d	7s5½d	7s8d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	38s3d	37s9d	38s2½	Easier.
Friday	38s3d	37s9d	38s3d	Offish.
Saturday	37s6d	37s3d	37s9d	Easy.
Monday	....	....	....	....
Tuesday	37s9d	37s3d	37s9d	Dull.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York for the past week:

Day.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Thursday	95½	95¼	96	96⅞	97⅛	..
Friday	95½	96⅛	96⅜	96½	9 ⅞	..
Saturday	96⅜	97	97½	98	99	..
Monday	97⅛	98⅛	99½	100	100½	..
Tuesday	98⅛	99⅛	100½	101½	102	..

The closing prices for wheat have been as follows at Chicago for the past week:

Day.	Aug.	Sept	Dec.	May.
Thursday	90⅞	92⅛	94⅛	98¼
Friday	89½	91⅛	94	97⅛
Saturday	91⅛	93⅛	96⅛	100⅛
Monday	93⅜	95⅜	98⅜	102
Tuesday	94⅛	96	98⅞	102⅞

NEW YORK, Aug. 6.—Wheat—$1.02 for cash, 99⅝c for August, $1.00¾ for September, $1.01 for October, $1.02¾ for December, and $1.06⅜ for May.

CHICAGO, Aug. 6.—Wheat—95¼c for August, 97c for September, $1 for December, and $1.04 for May.

Eastern Wool Markets.

NEW YORK, Aug. 1.—Wool is easy; domestic fleece, 33@38c.

PHILADELPHIA, Aug. 1.—Wool is nominal.

NEW YORK, Aug. 1.—*Bradstreet's* says: Business is less active in the wool markets than a week ago. There was then a spurt of interest for a few days, only to be followed by the dullness to which the trade has become so well accustomed. Prices as a rule are in favor of buyers. Few manufacturers are carrying large stocks of wool, and at the same time few are buying beyond their immediate wants. A great deal of machinery is idle, and large imports of foreign fabrics constitute another element of depression. In Boston there is a fair inquiry for Ohio and Michigan fleeces. Combing and delaine wools are likewise wanted, and are comparatively firm. Inquiry for Texas, California and Territory selections amounts to almost nothing, and carpet wools are also neglected.

BOSTON, Aug. 1.—Territory wools have been sold freely, and prices obtained have been about 58@59c clean for fine, 56@57c for fine medium, and 53@55c for medium. In sorting wool there is more doing, with sales at 17@24c as to quality.

The Fig Crop of Asia.

NEW YORK, July 30.—A circular issued by Alfred H. Keun of Smyrna, under date July 12th, estimates the crop of Sultana raisins at 30 per cent less than that of last year, a falling off of 11 per cent in Eleme raisins, an increase of 10 per cent in Black raisins, and a falling off of 30 per cent in figs. The crop of the latter is estimated at 12 900 tons, against 19,250 tons last year, and an average of about 15,000 during the preceding three years. The 1890 crop of Sultana raisins is placed at 15,000 tons. Last year's yield was 21,200. The average for 1886 and 1887 was 27,000 tons.

Short Wheat Supply.

LONDON, Aug. 1.—At the Millers' Convention a report was read estimating the production of wheat in all countries at 10,000,000 quarters short of the season's requirements.

Hops.

NEW YORK, Aug. 3.—Choice new hops will meet a bare market; 25c is paid for large lots of future State. Spot, firm; common to best State, 18@23c; Washington, 19@22c; California, 18@21c. Brewers pay 18 to 19c for the quality obtainable a month ago at 15c. Prime '88's move well at 10 to 15c.

Local Markets.

BARLEY—The sample market has ruled firm, with slightly higher prices toward the close. In futures, trading has been fair at fluctuating prices.

	BARLEY					
	Buyer Season.		Seller 1890.		Buyer 1890.	
	H.	L.	H.	L.	H.	L.
Thursday	134½	134½	123¾	123¾	129⅝	128
Friday	131⅝	130½	120⅞	120⅝	127⅛	126
Saturday	132	132	...	...	127¼	126½
Monday	136	135	...	...	130	129½
Tuesday	132½	131⅛	121⅜	121¼	126⅝	125⅜

The following are the reported sales made on to-day's Call:

Morning Session: Buyer 1890 — 300 tons, $1.28¾. Seller 1890, new—200 tons, $1.22½ ₩ ctl. Afternoon Session: Buyer 1890—200 tons, $1.29¼; 200, $1.29⅛ ₩ ctl.

BAGS—The higher prices ruling for silver, together with wheat exporters discriminating against second-hand bags, have caused a combination to advance the prices for standard-sized hand-sewed bags. The range now quoted is 7¼@7⅝c.

BUTTER — Under competitive buying and stronger holding the market has been advanced. At the advance the demand from up North is light, but from the South it is good. Humboldt butter is coming in more freely. Eastern butter is putting in an appearance. Pickled is being inquired for.

CHEESE—The market is very strong at full prices under a good demand.

EGGS—The market has held strong throughout the week. Choice selected fresh laid are wanted at full figures.

FLOUR—The market is steady, with a good shipping and home demand ruling.

WHEAT—In the sample market trading has been quite active both here and in the country. In futures, trading on Call has been active at slight fluctuations. The following are the reported sales made on to-day's Call:

Morning Session: Buyer 1890 — 100 tons, $1.44⅞; 500, $1.44¾. Buyer season—200 tons, $1.54½; 200, $1.54¾; 800, $1.54¼ ₩ ctl. Afternoon Session: Buyer 1890—400 tons, $1.44¾; 400, $1.44⅝. Buyer season—100 tons, $1.54½; 200, $1.54 ₩ ctl.

	WHEAT.				
	S. S.	Nov.	B. '90.	B S.	S. '90.
Thursday	h.	....	144⅝	153½	....
	l.	....	143	152½	....
Friday	h.	....	142⅝	152½	....
	l.	....	142⅜	152½	....
Saturday	h.	....	143½	15 ⅞	....
	l.	....	142⅝	15 ⅞	....
Monday	h.	....	144½	154	140
	l.	....	143½	153	140
Tuesday	h.	....	144½	154	141½
	l.	....	144½	153½	141

[COMMUNICATED.]

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Aug. 5th, were as follows:

Flour, qr. sks	171,114	Middlings, sks	4,355
Wheat, ctls	280,918	Alfalfa, "	....
Barley, "	61,344	Chicory, bbls	110
Rye, "	1,849	Broomcorn, bdls	....
Oats, "	6 540	Hops, bls	....
Corn, "	3 653	Wool, "	902
*Butter, "	1,052	Hay, tons	4,692
do bxs	322	Straw, "	210
do bbls	4	Wine, gals	223,730
do kegs	30	Brandy, "	3.440
†Cheese, ctls	981	Raisins, bxs	....
do bxs	46	Honey, cs	202
Eggs, doz	71,720	Walnuts, sks	....
do " Eastern.	26,700	Flaxseed, sks	....
Beans, ctls	2,867	Mustard, sks	....
Potatoes, sks	25,569	Almonds, sks	12
Onions, "	2,440	Peanuts, sks	....
Bran, sks	11,922	Popcorn sks	....
Buckwheat, sks	....		

*Overland 450 ctls. †Overland 88 ctls.

Cereals.

The local wheat market has held strong under fairly free buying in the country. An attempt was made to bear the market, but without success, for at the close the market is reported strong. The short crop in this State is a heavy factor in giving a strong tone to the market. The crop this year will not go much, if any, over 1,100,000 tons, against about 1,500,000 tons last year. Deducting 400,000 tons for consumption and seeding, we will have about 700,000 tons surplus. The Oregon and Washington crop this year will be all of from 50 to 75 per cent more than it was in 1889, while the grade will be good.

Barley, after shading off slightly, recovered again. The receipts continue free, but stocks do not accumulate to any extent, which goes to show that the demand for feeding and brewing is larger than at this time in 1889. Eastern and English mail advices are in favor of better markets later on, which will have its influence on ours. The crop in this State is short, but it is said that in Eastern Oregon and Washington the yield is above an average and of good quality.

Oats do not show any material change. Favorable crop advices from Oregon have their influence against sellers by keeping buyers backward. In this State the crop will not be an average one.

Corn continues to hold strong. Choice, desirable samples can be placed at full outside quotations, with at times a slight advance obtainable. Bad crop advices from the Central States, combined with higher prices for wheat, are favorable influences on the market. The stock is light.

Rye is strong under light offerings. A sale is reported to have been made the past week at $1.25 per cental.

Feedstuff.

The demand for ground feed continues free, with higher quotations ruling for both bran and middlings. The reported rains in the southern part of the State will destroy the nutriment in dry feed, which will cause a still better inquiry for feedstuff.

The receipts of hay continue free, yet prices do not shade off, owing to the free demand. Large dealers and feeders are naturally, bearish but holders are not pressing the market, and probably will not unless the weather prospects favor early natural feed.

Fruits.

Strawberries show but few changes. Blackberries are slightly weaker, yet with canners' free buying the market retains a healthy tone. Raspberries are scarce. Huckleberries are coming in fairly free, yet prices do not show any material decline.

Apples are coming in quite liberally, which with liberal supplies of other fruits causes a weak tone. It takes the best to command $1.50 a box. More are being dried. Nectarines are scarcer. The high prices ruling for peaches and apricots bring this fruit into more favorable notice. It is claimed that it will continue to grow in favor. Plums are in free receipt. Canners are buying more freely, taking the white varieties in preference to the others. Green gages are meeting with more favor, chiefly for canning. Choice canning varieties of pears are wanted, and find a quick market at full prices. Peaches are wanted by both canners and dealers. Canners paid on yesterday the unusually high price of $90 a ton for very choice mountain peaches. Although $90 was paid, the usual sales were from $60 to $80 a ton. Apricots made another upward move. For consignments of choice $75@80 a ton is paid.

Grapes are coming in quite freely, causing a low range of values to rule. Growers will not sell their grapes at as low prices as obtained last year. They will, unless getting a higher range, dry the bulk. In the country they are paying better prices. For particulars see "Agricultural Notes."

Dried fruits are hard to quote correctly, owing to a continued excitement brought about by competitive buying. Prices paid in the interior for future delivery are, as a rule, higher than quoted to us in this city. Apricots, bleached, fair to choice, are quoted at 15@18c in sacks. Peaches are virtually out of reach; sales are reported at over 20c for choice bleached in carload parcels. Nectarines are in better demand, with whites going at 14c to 16½c in sacks. Reds range from 1c to 2c lower. Figs, when properly cured and packed in small boxes, sell at from 14c to 15c for white. Evaporated apples are quoted at 10@12½c. For quartered and sliced no quotations are given. Dried grapes are being bid for, and if rains should injure the prospects, better prices may follow. We hear $70 to $90 a ton quoted. Prunes are hard to quote correctly. As near as we can learn the following is a fair basis, with fancy going slightly higher: 60s to 40s the range is 10@11¾c, with ungraded going at 8½@9¾c.

Raisins, September-October delivery are wanted, and for which delivery well-established brands can be placed at $2.12½@2.50. London layers and other grades proportionately less. Outside packs will not command so much, unless well cured, selected and packed. In the sweat the price ranges from 4c to 6c, according to kind and locality.

Hops.

From the London *Agriculture Gazette*, July 21st, we obtain the following: W. H. and H. LeMay report: From all districts we get reports of increase of vermin in the hop gardens; it is following up the young shoots. It is evident now that what hops are grown this year will be of very poor quality. If the temperature is higher, hops will go black faster; if we get a continuance of rain with a low temperature, the vermin will hang about and get into the hops as soon as they are out of the brush stage. Altogether, the prospect points to a crop, under the most favorable circumstances, of less than half our consumption, while it may finish up with only a quarter of what we require. The market continues to rise. An advance of 10s. per cwt. has been made to-day on all hops.

The local market is essentially unchanged. The crop in this State is reported to be a full average and of good quality. In Washington and Oregon the yield to the acre is said to be above an average. The quality shows an improvement. Growers are reported to be generally holding for 20 cents a pound.

Live-stock.

Both bullocks and mutton sheep are weak at slightly lower prices. The consumption is light. Hogs are steady. The stockyard at Baden will, it is said, begin operations in September, when a steadier market for bullocks, sheep and hogs can be looked for. Some expect to see better prices obtain. In milch cows there is nothing new to report. Horses are essentially unchanged.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4¼@4½c ₩ lb dressed, 7@8c ₩ lb.; heavy, 3¾@4½c ₩ lb.; dressed, 5¾@6¼c ₩ lb. Stock hogs, 4¼@4⅝c ₩ lb

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5½@—c ₩ lb.; second quality 5@5½c ₩ lb.; third quality, 4½c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6@8c ₩ lb.; large, 4@6c.

MUTTON—Wethers, 6½@7c ₩ lb.; ewes, 6@6¼c ₩ lb.; lamb, spring, 7@8c.

Vegetables.

Garden truck does not show any material change, outside of lower prices for tomatoes and beans. Canners will soon start up on the former.

Onions have fluctuated slightly, prices varying according to receipts.

Under free receipts and accumulating stocks, potatoes have weakened off, closing lower. At the lower prices there is a slightly better demand. The quality is excellent and should induce free shipping orders.

Miscellaneous.

From the *Commercial News* of Aug. 6th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	268,064	232,681
On the way to neighboring ports	21,877	24,602
In port, disengaged	2,110	20,609
In port, engaged for wheat	41,277	58,948
Totals	333,328	336,840

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to July 31, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	754,097	853,087
Flour, bbls	86,981	106,415
Barley	24,989	41,622

Poultry is weaker for hens and roosters, but higher for turkeys.

Nuts, new crop, are being contracted for at prices claimed to be higher than obtained at this time in 1889.

Beans are stiff. It now looks as if the market for all kinds will hold up. Crop prospects in the Central and Eastern States are only fair.

Wool is essentially unchanged.

Hides are advancing.

Honey is coming in freely, causing a weaker tone to rule, but no lower quotations are reported.

Exports by sea the past week aggregate as follows: Flour, bbls, China, 14,188; Japan, 2405; Central America, 56; Tahiti, 1278; Hilo, 611. Wheat, ctls, Fleetwood, 47,162; Liverpool, 77,755; Cork, 62,742. Bran, sks, Honolulu, 607; Hilo, 2874. Barley, ctls, Honolulu, 849; Hilo, 1786. Hay, bls, Honolulu, 630; Hilo, 715. Wine, gals, Honolulu, 375; China, 385; Tahiti, 2978. Beans, lbs, China, 7792; Tahiti, 2796; Hilo, 7217.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, Aug. 6, 1890.

BEANS AND PEAS.				**HOPS.**		
Bayo, ctl	4 00	@ 4 25		Oregon, 1889	14	@ 20
Butter	1 90	@ 2 00		Cal 1889 Choice	18	@ 20
Pea	2 40	@ 2 60		do Fair to G'd	13	@ 16
Red	4 00	@ 4 25		1889 hops future	18	@ 20
Pink	2 65	@ 2 90		**ONIONS.**		
Large White	—	@ —		Silver Skin	1 67	@ 2 25
Small White	2 40	@ 2 60		Pickling	1 25	@ 1 50
Lima	3 50	@ 4 25		Red	1 50	@ —
Fld Peas, blk eye	—	@ —		**NUTS JOBBING.**		
do green	—	@ —		Walnuts, Cal. lb		@ 10
do Nlcs	2 00	@ 2 25		do Ch'ce	11	@ 12
Split	6¼	@ —		Almonds, hd shl.	5	@ 6½
BROOM CORN.				Softshell	12	@ 14
Choice to Extra	90 00	@ 95 00		Paper shell	15	@ —
Fair to Good	70 00	@ 75 00		Brazil	11½	@ 13
Poor	50 00	@ 60 00		Pecans	9	@ 14
CHICORY.				Peanuts	6	@ 8
California	6	@ 6½		Filberts	11½	@ 12½
German	6¾	@ 7		Hickory	6	@ 9
DAIRY PRODUCE, ETC.				Chestnuts	14	@ —
BUTTER				Pine nuts	7	@ 8
Cal. Poor to fair, lb	17½	@ 22		**POTATOES.**		
do good to choice	25	@ 27		Early Rose, sks	50	@ 75
do Gilt edged	28	@ 30		Chile	75	@ 1 10
do pickled	17	@ 20		Peerless	75	@ 90
do in kegs	14	@ 16		River Reds	—	@ —
do Creamery in rolls	25	@ 26		Humboldt	—	@ —
CHEESE				Petaluma	—	@ —
Cal. choice mild	10	@ 11		Burbanks	75	@ 1 25
do fair to good	8	@ 9		Sweet	2½	@ 3½
Young America	10	@ 11		**POULTRY AND GAME.**		
N. York Cream	13	@ 14		Hens, doz	5 00	@ 7 00
Western	8	@ 11		Roosters, old	5 50	@ 6 50
EGGS.				do young	6 50	@ 7 50
Cal. ranch, doz	22	@ 24		Broilers, small	2 00	@ 3 00
do do selected	25	@ 26		do large	3 50	@ 4 00
do. store	19	@ 20		Fryers	4 00	@ 5 50
Eastern, cold storage		@ —		Ducks, tame	3 50	@ 4 50
do fresh	16	@ 18		do young	4 50	@ 5 50
do selected	21	@ 22		Geese, pair	1 25	@ 1 50
do to arrive	—	@ —		Goslings	1 50	@ 1 75
FEED				Turkeys, Gob'r	12	@ 22
Bran, ton	15 00	@16 50		Turkeys, Hens	17	@ 19
Feedmeal	27 00	@28 00		Pigeons	2 50	@ 3 00
Gr'd Barley	27 50	@29 00		Rabbits, doz	1 00	@ 1 25
Middlings	23 00	@25 50		Hare	1 50	@ 1 75
Oil Cake Meal	25 00	@ —		Venison	12½	@ 14
Manhattan Food Per 100 lbs	7 50	@ —		Dove	75	@ 1 00
HAY.				**EGG FOOD**		
Compressed	16 00	@14 00		Manhattan, ₩ lb	12	@ —
Wheat, per ton	8 00	@10 00		**PROVISIONS.**		
do choice	12 00	@14 00		Cal. Bacon		
Wheat and Oat	10 00	@14 00		Heavy, lb	10½	@ 11
Wild Oats	8 00	@11 00		Medium	12	@ —
Tame do	8 00	@10 00		Light	13	@ —
Clover	8 00	@10 00		Extra Light	—	@ —
do ch'ce red top	—	@ —		Lard	9	@ 12
Barley	7 00	@10 00		Cal. Sm'k'd Beef	11	@ 12
Barley and Oats	—	@ —		Hams, Cal	12	@ 13
Alfalfa	—	@ —		do Eastern	12½	@ 13½
Stock Hay	—	@ —		**SEEDS.**		
Alfalfa Compr'ed	—	@ —		Alfalfa	9½	@ 10
Straw bale	45	@ 55		Canary	4	@ 4½
FLOUR				Clover, Red	12	@ 13
Extra, City Mills	4 25	@ 4 50		White	20	@ 22
do Co'try Mills	4 25	@ 4 50		Cotton	30	@ —
Superfine	3 25	@ 4 00		Flaxseed	2	@ 2½
GRAIN, ETC				Hemp	8	@ 8½
Barley, feed, ctl	1 21½	@ 1 25		Italian Rye Grass	10	@ 11
do Choice	1 26¼	@ 1 27½		Perennial	7	@ 9
do Brewing	1 27½	@ —		Millet, German	5	@ 6½
do do Choice	1 32½	@ —		do Common	5	@ 6
do do gilt edg'd	1 35	@ —		Mustard, yellow	1½	@ 2
Chevalier once	—	@ —		do Brown	2½	@ 3
do com to good	—	@ —		Rape	1½	@ 2
Buckwheat	—	@ —		Ky. Blue Grass	14	@ 18
Corn, White	1 15	@ 1 22½		2d quality	13	@ 14
Yellow	1 22½	@ 1 30		Sweet V. Grass	75	@ —
Oats, milling	1 65	@ 1 75		Orchard	12	@ 14
Surprise	1 70	@ 1 75		Hungarian	7½	@ 8
Choice feed	1 60	@ 1 65		Lawn	37½	@ 40
do good	1 55	@ —		Mesquit	6	@ —
do fair	1 50	@ —		Timothy	6	@ 6½
do Gray	1 45	@ —		**TALLOW.**		
do Black	1 30	@ 1 40		Crude, lb	3	@ 5
Rye	1 10	@ 1 05		Refined	6	@ —
Wheat, milling. Gilt edged	1 45	@ —		**WOOL, ETC.** SPRING—1890		
do Choice	1 42½	@ —		Humboldt and Mendocino	19	@ 21
do fair to good	1 40	@ —		Sac'to valley	15	@ 22
Shipping, ch'ce	1 38½	@ —		Free Mountain	18	@ 24
do good	1 35	@ —		S Joaquin valley	12½	@ 17
do fair	1 32½	@ —		do mountain	17	@ 22
Sonora	1 32½	@ 1 37		Cala'v & F'th'll	15	@ 21
HIDES.				Oregon Eastern	13	@ 22
Dry light to h'vy	8	@ 9		do valley	20	@ 25
Salted	5	@ 8		So'n Coast, def	10	@ 14
				So'n Coast, free	12½	@ 19

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, Aug 6, 1890

Bananas, bunch	1 00	@ 2 50		Watermel'ns	10 00	@12 00
Cranberries	—	@ —		Cantaloupes crt	1 00	@ 2 25
Limes, Mex	3 50	@ 4 50		Nutmeg melons	75	@ —
do Cal sml cases	75	@ 1 50		Crabapples, box	50	@ 75
Lemons, Cal., bx	1 00	@ 1 50		**VEGETABLES.**		
do Sicily, bx	5 00	@ 6 00		Okra, dry, lb	6	@ 10
do Malaga	4 00	@ 6 00		do green	8	@ 10
do do Seedling	1 50	@ 2 50		Parsnips, ctl	1 25	@ 1 50
Pineapples, doz	3 00	@ 5 00		Peppers, dry, lb	12	@ —
Strawberries				do green, bx	35	@ 50
fair, chest	5 00	@ 7 00		do Bell	60	@ 75
Apricots, lb	3	@ 4		Turnips, ctl	75	@ 1 00
Raspberries do.	7 00	@ 10 00		Beets, sk	75	@ 1 00
Bl'kberries, do	4 00	@ 5 00		Cabbage, 100 lbs	40	@ 50
Huckleberries lb	7	@ 10		Carrots, sk	50	@ 60
Figs, box, black	75	@ 1 00		Mushrooms, Cultivated, lb	—	@ —
do white	75	@ —		Wild, lb	—	@ —
do Smyrna	—	@ —		Cucumbers box	40	@ 65
Plums, lb	1½	@ 2		Tomatoes, bx	15	@ 60
Egg plums	1½	@ 2		Garden peas, lb	2	@ 3
Pears, bx	75	@ —		Sweet do	1	@ 2
do Bartlett lb	2½	@ 4		String Beans	1	@ 1½
Peaches box	75	@ —		Lima do	4	@ 5
do choice	1 25	@ —		Wax, do	1	@ 2
do canning, lb	3½	@ 4½		Fountain do	1	@ 2
Apples com box	50	@ —		Squash, summer, bx	40	@ 60
do choice	1 00	@ 1 50		Marrowfat, ton	20 00	@25 00
Nectarines, Red	75	@ 1 00		Garlic, lb	5	@ 7
do White	75	@ —		Green corn doz	12½	@ 20
Grapes, box	40	@ 60		do do com sk	1 00	@ 1 10
do Muscats	65	@ 1 50		Egg Plant, bx	75	@ 1 00
do Rose of Peru	50	@ 75				
do Malvoise	40	@ 60				
Green Gages lb	1½	@ 2				

Rope.

Baling, Duplex, lb	12
" Manilla, lb	15
Twine, for hops, balls, tarred, lb, Manilla	16
" " grape vine, balls, lb "	16
" " " coils, lb "	16
" spring, lb "	18
" binder (600 ft. to lb), lb	16

Duplex twine 3c per lb less

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, *or beyond the time he intends to pay for it*, let him not fail to write us *direct* to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

California Fruits East.

CHICAGO, Aug.1. — The Montgomery Auction Co. sold to-day for account of the Earl Fruit Co. and W. R. Strong & Co. six cars. Tokay grapes brought $3.45; Fontainebleau grapes, $1.65@1.15; Bartlett pears, $2.75@1.95; Howell pears, $2.10; Beurre Hardy pears, $1.80; Gros prunes, $2.20; Yellow Egg plums, $1.25@1.20; Red nectarines, $1.70; Crawford peaches, $2; German prunes, $1.20@1.25.

CHICAGO, Aug. 1.—Porter Bros. sold seven carloads of California fruit to-day as follows: Bartlett pears, a great many overripe, $1.35@2.45; Columbia plums, $1.25; peaches, 50c@$1.70; Beurre Hardy pears, $1.95; grapes, 50c@$1.35; Red nectarines, $1.05@1.75; Gros prunes, $1.50@2.45; Tragedy prunes, $2; German prunes, $1.20@1.95.

CHICAGO, Aug. 1.—California dried fruits are quotable as firm, and ready buyers appeared on the market. So far trade has been in apricots, they being the only line on sale; they are quotable at 17½@18½c per lb for fair to choice. No peaches on sale yet; the supply will be small; this is not due to short crop, but to the fact that growers have obtained good prices for fresh goods and large contracts for canned peaches have been made. It is said prunes have advanced about 100 per cent on the Pacific Coast and a good part of the crop has been sold for future delivery. The unprecedented demand for California dried fruits is attributed to short crops throughout the country east of the Rocky mountains, and with the entire country drawing on California it has made the demand sufficiently large to readily absorb the product of that State.

CHICAGO, Aug. 2.—The Montgomery Auction Co. sold two carloads of California fruit to-day at the following prices: Early Crawford peaches, $1.45@1.10; Muir, $1.45; Bartlett pears, $2.50@2.20; Columbia plums, $1.40@1.25; Egg plums, $1.20; German prunes, $1.65.

Porter Bros. Co. sold eight carloads of Bartlett pears at from $2.80@2.90; one car in bad order, $1.80@2.25; Crawford peaches, 70c@$1.65; all stock in good order, $1.25@1.65; Columbia plums, 85c@$1.50; French prunes, $1.10; Gros prunes, $1.80@2 25; Fontainebleau grapes, 90c@$1.35; German prunes, $1.40@1.60; Foster peaches $1.10@1.50.

NEW YORK, Aug. 3.—California fruits are quoted at $1.50 to $2.50 per crate for peaches, $1.50 to $2.50 for plums, $2.50 to $3.50 per crate for pears. Sales continue large and the demand is undiminished. There is no chance of California getting enough sound fruit here during the summer to glut the market. Raisins, two-crown, $1.85@1.90; three-crown, $2@2.20; London, $2.20@2 45.

NEW YORK, Aug. 3.—Canned and dried fruits hold a strong position, but not strictly up to some of the wild reports that are being disseminated. Outside orders come in freely. Several cars of prunes sold at 11½@12½c, four sizes. Raisins were fairly firm, but there are buyers who prefer to await possibilities of later prices. Sunbeam, loose, sold at $2.05; clusters at $2.30.

CHICAGO, Aug. 4. — The Montgomery Auction Co. sold two carloads of California fruit to-day at the following prices: Bartlett pears, $2.25@2.85; Early Crawford, $1.50@1.75; Foster, $1.70; apricots, $1.25; Gros prunes, $1.90; Damson plums, $1.25; Quackenboss, $1.05@1.20; Jefferson, $1.50; Yellow Egg, $1.20@1.25; Washington, 90c; Columbia, $1.35@1.65; Bradshaw, $1.25; Purple Duane, $1.20@1.25. For the past week the weather has been extremely hot. Besides a heavy glut, the fruit is in bad order. The market is just recovering.

CHICAGO, Aug. 4.—Porter Bros. Co. sold eight carloads of California fruit to-day as follows: Grapes, hf crt, 90c@$2.90; Cling peaches, $1.50@$1.80; Crawford, $1.50@1.80; Mon de Duoy, $1.75; Egg plums, $1.15@1.45; Gros prunes, $1.95@2.05; Hungarian, $1.75@1.85; Bartlett pears, $2.80@2.90; two cars of Bartlett pears, over-ripe, $1.65@2.40.

NEW YORK, Aug. 4.—Sgobel & Day, agents of the California Fruit Union, sold at auction to-day two cars of fruit as follows: Bartlett pears, $3 30@3.60; Tucson Cling peaches, $1.35@2.05; Orange, $1.20@1.40; Lemon Cling, $1.40; Gros prunes, $2.40; Japan plums, $2.50@3 05.

CHICAGO, Aug. 5.—The Montgomery Auction Co. sold to-day for the account of the Earl Fruit Co. one car of California fruit. Bartlett pears, $2.85@3.15; Howell pears, $2.85; peaches, $1.95@1.55; Columbia plums, $1.65; Hungarian prunes, $1.65; Nectarines, $2.

CHICAGO, Aug. 6.—For California green fruits the market is firm with demand good and offerings readily taken, quotable as follows: Peaches, Crawfords, boxes, 20 lbs, $2@2.50; pears, boxes, 45-lbs, $3@3.25; Gros prunes, 20-lb boxes, $2.50@3; purple Duane plums, 20-lb boxes, $1.50@2; Egg plums, $1.50@2; Columbia plums, $2.50@3; German prunes, 20-lb boxes, $2@2.50; grapes, cases, four baskets, Fontainebleau, $1.50@3. Of California dried fruits, arrivals as yet are limited to apricots. They are coming forward a little more freely. There have been no accumulations yet, and the feeling continues firm with a fair demand, quoted at 18@18½c. Peaches are en route, and some sales to arrive have been made at 22½@23c for choice halves, unpeeled.

CHICAGO, Aug. 6.—The Montgomery Auction Co. sold two carloads of California fruit to-day for account of the Earl Fruit Co. at the following prices: Grapes—Fontainebleau, half-crates, $1.65@1.85; Blue Malvoisie, $1.80; Rose de Peru, $1.75; Plums—Yellow Egg, $1.35; Washington, $1.25; Purple Duane, $1.65; Early Crawford peaches, $1.85@1.95; peaches, $1.90@2.05; French prunes, $1.85; nectarines, $2.10.

CHICAGO, Aug. 6.—Porter Bros. sold six carloads of California fruit to-day as follows: Peaches — Early Crawford, $1.50@2.10, mostly at $1.85; Foster, $1.70@2.10; Decker, $1.90; Orange Cling, $2 25; Columbia plums, $1.60@1.80; Golden Drop, $1.60; Egg, $1.60; Fontainebleau grapes, half-crates, $1.25@1.90; French prunes, $2.30; Hungarian prunes, $2.05. Fruit was in good order.

NEW YORK, Aug. 6.—Sgobel & Day, agents of the California Fruit Union, sold at auction to-day six cars of fruit, as follows: Bartlett pears, Anderson brand, $3 25@4 62½; other brands of the same fruit, $3.25; Early Crawford peaches, $1.25@1.95; Gros prunes, $1.90@1.95, half-crate; Columbia plums, $1.95; assorted plums and prunes, 80c@$1.65; most of the latter were in poor order. Most of the pears were of handsome quality and sold at $4 and above. The market was strong for all sound fruit.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE. July 30-Aug. 5.	Olympia.				Portland.				Eureka.				Red Bluff.				Sacramento.				S. Francisco.				Fresno.				Keeler.				Los Angeles.				San Diego.			
	Rain.....	Temp.....	Wind.....	Weather..	Rain.....	Temp.....	Wind.....	Weather..	Rain.....	Temp.....	Wind.....	Weather..	Rain.....	Temp.....	Wind.....	Weather..	Rain.....	Temp.....	Wind.....	Weather..	Rain.....	Temp.....	Wind.....	Weather..	Rain.....	Temp.....	Wind.....	Weather..	Rain.....	Temp.....	Wind.....	Weather..	Rain.....	Temp.....	Wind.....	Weather..	Rain.....	Temp.....	Wind.....	Weather..
W.	.00	72	N	Cl.	.00	78	Nw	Cl.	.00	58	Nw	Cl.	.00	96	SE	Cl.	.00	88	SW	Cl	00	58	SW	Cl.	.00	98	Nw	Cl.	.00	94	S	Cl.	.00	76	W	Cl.	00	72	SW	Cl.
T...	.00	70	W	Cl.	.00	72	Nw	Fr.	.00	52	Nw	Cl.	.00	94	SE	Cl.	00	84	SW	Cl	.00	60	SW	Cl.	00	98	W	Cl.	.00	96	S	Cl.	.00	74	SE	Cl.	.00	70	SW	Cy
F...	.00	66	Nw	Cy.	.00	74	N	Cl	.00	56	Nw	Fr.	.00	92	S	Cl.	.00	89	SW	Cy.	00	56	SW	Cy.	.00	94	Nw	Cl.	.00	90	S	Cl.	00	72	W	Cl.	.00	70	W	Cl.
S...	.00	72	Nw	Cl.	.00	74	Nw	Cl.	.00	58	Nw	Cl.	.00	92	SE	Cl.	.00	82	SW	Cl	00	54	SW	Cy.	.00	94	W	Cl.	.00	90	SW	Cl.	.00	72	W	Cl.	.00	70	W	Cy.
S...	.00	72	Nw	Cl.	.00	76	Nw	Cl.	.00	58	Nw	Cl.	.00	98	SE	Cl.	.00	82	S	Cl	00	56	SW	Cy.	.00	96	W	Cl.	.00	92	SW	Cl.	.00	68	SW	Fr	.00	70	W	Cy.
M...	....	....	....	....	....	....	....	....	.00	58	N	Cl.	.00	98	SE	Cl.	.00	92	SW	Cl.	00	62	W	Cl.	.00	100	Nw	Cl.	.00	92	SW	Cl.	.00	72	W	Cl.	.00	68	Nw	Cy.
T...	.00	68	Nw	Cl.	.00	76	Nw	Cl.	.00	58	Nw	Cl.	.00	102	SE	Cl.	.00	90	S	Fr.	00	58	SW	Fr	.00	104	S	Fr.	.00	90	SE	Cy.	T	72	W	Fr.	.00	70	W	Cy.
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EXPLANATION.- Cl. for clear; Cy., cloudy; Fr., fair; Cm., calm; — indicates too small to measure. Temperature, wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Hops and Beans.

CHICAGO, Aug. 6.—The hop market is ruling quiet. The supply is small, with New York hops about sold out. From advices at hand the crop will be favorable, both as to quality and quantity. This covers both New York State and Pacific Coast. There has been considerable contracting of new hops of Pacific Coast with recent prices ranging at 15@17c ℔ lb. In New York State no hops of consequence have been sold for forward delivery. The crop in this quarter usually turns out so irregular that dealers do not care to take hold until it is further advanced and the quality can be more nearly determined. Cable advices from England report continued favorable weather and condition of crop unchanged, which in previous advices was said to be fairly favorable. A few lines of hops remaining on the market are quotable as follows: Washington and Oregon, choice, 23@24c; do prime, 20@22c; do low grades, 18@20c; California choice, 21@23c; do prime, 19@21c. Beans remain salable and firm with higher prices prevailing. Offerings are small, making it somewhat difficult to purchase. Receipts are light. At prices which follow, sales can be made: California Lima beans, choice, 5½c ℔ lb; do common, 2@4c.

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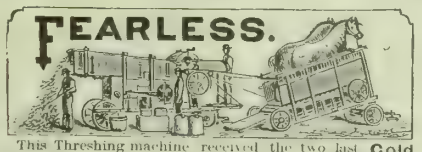
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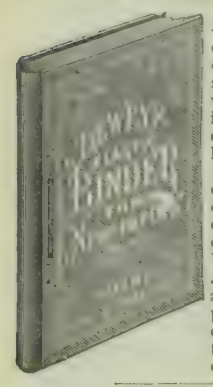
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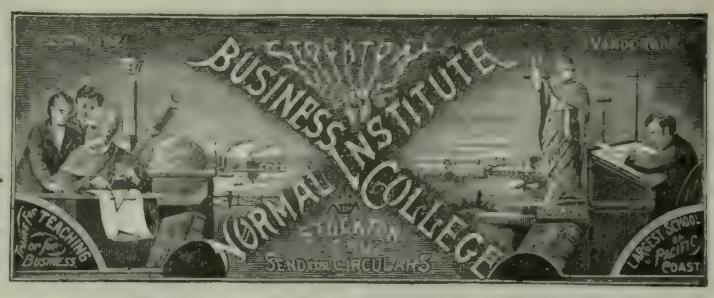
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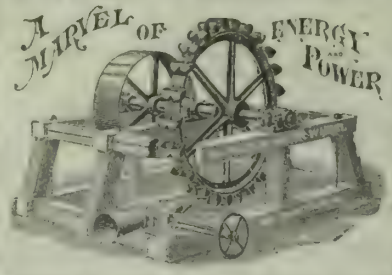
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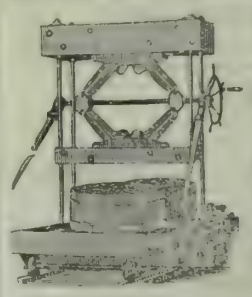
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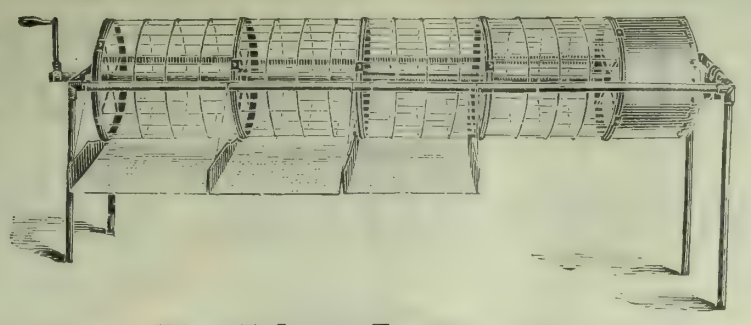
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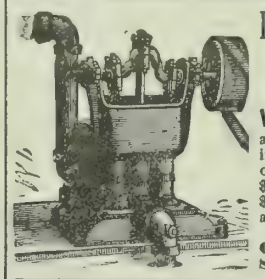
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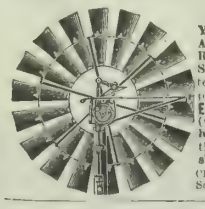


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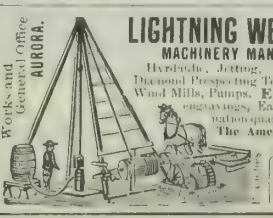
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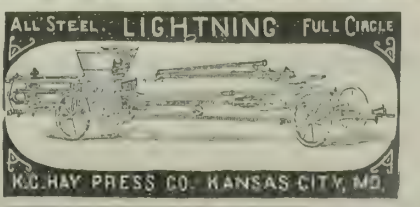
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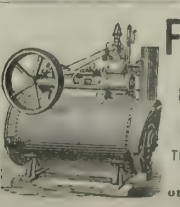
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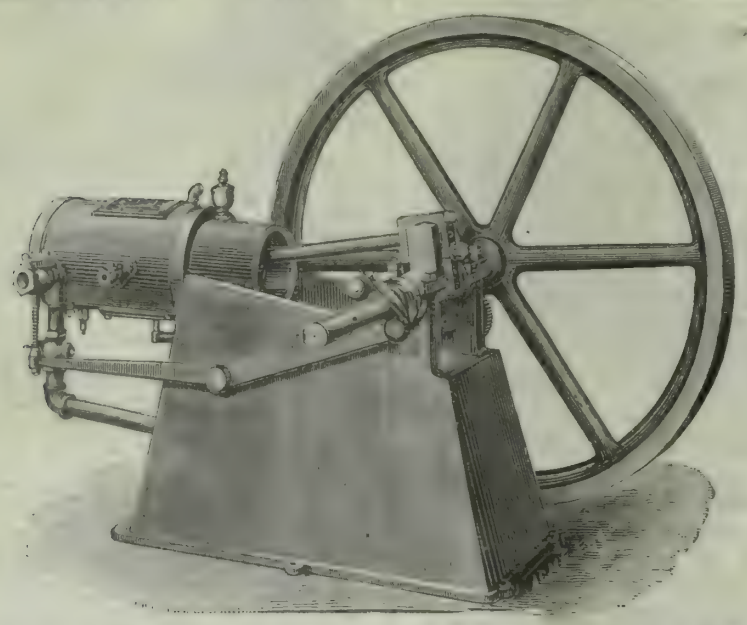
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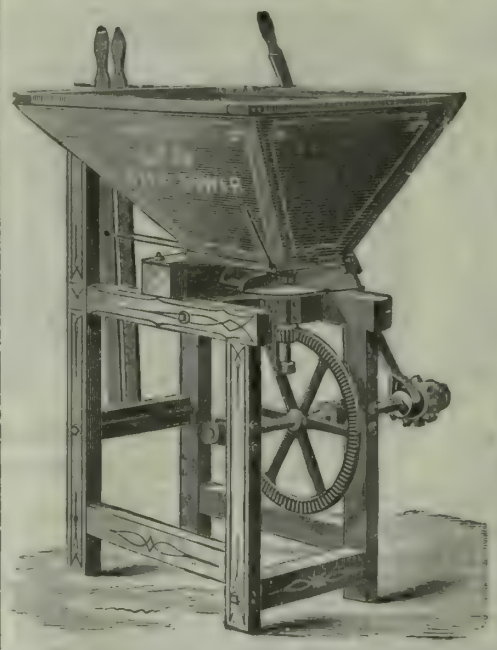
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PACIFIC RURAL PRESS

TWENTY-FOUR PAGE EDITION.

Vol. XL.—No. 8. SAN FRANCISCO, SATURDAY, AUGUST 16, 1890. DEWEY & CO., Publishers, Office, 220 Market St.

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HEADGATE AND WASTEGATE OF KERN ISLAND CANAL, TAKING WATER FROM KERN RIVER.

The Head Works of a Kern County Canal.

Our engraving shows important parts of one of the leading irrigating canals of Kern county, and gives the distant reader a little idea of the work undertaken to make the waters of our streams available for pushing the large crops usually secured from irrigated lands. In Kern valley, and mainly on Kern island, there are upward of 30 canals, some of them with branches and all with distributing ditches, the main canals aggregating more than 300 miles in length and covering about 500,000 acres of land, of which perhaps one-third is now producing irrigated crops. Kern Island canal, of which our illustration shows the head, is one of the most important of the system of waterways alluded to. It is taken from the south side of Kern river, about 2½ miles northeast of Bakersfield, through which town it passes and furnishes the local water supply, besides the water-power for a flouring-mill, as the canal makes a vertical fall of 20 feet at Bakersfield. The canal is 18 miles long, with a width at the headgate of 48½ feet and a depth of 4 feet. It has two main branches, the longest ten miles in length, with a width on the bottom of 20 feet, a depth of three feet, with slopes of three to one. This canal appropriates 20,000 inches of water, equivalent to 400 cubic feet per second. Its location dates back to 1870.

The headgate and wastegate of this canal are the main features in the engraving. The former was built in 1878, and its construction required 75,000 feet of lumber. It is shown on the left of the engraving, and the wastegate is on the right; both are 50 feet in width. The wastegate is made to open from the bottom with chains, in order to flush the sand away from the headgate, which admits the water to the canal. The water through the wastegate goes back into the river. The water is brought to the headgate by means of a wingdam, shown in the foreground of the picture, and the amount taken into the canal is regulated, of course, by the raising or lowering of the wastegate. The water goes into the canal over the gate boards, thus preventing the sand from entering the canal.

In the construction of these gates, the piling is Oregon pine, but most of the lumber is redwood. The timbers of the headgate are 6x6 inches; those of the wastegate, 6x8 inches. The posts are 4x6 inches. Two-inch planks are used. There are 410 running feet of sheet piling, set 12 feet deep. The headgate and wastegate each has 12 bays. There are 100 anchor piles for staying the flow, the piling being 4x12-inch Oregon pine. The sills are 3x12 redwood set edgewise. These details of construction, with the view of the structure in operation, will give the reader a good idea of the arrangement which has done long and good service in diverting water from a river.

THE ARID LAND PROBLEM.—It is telegraphed from Washington that Representative Morrow expressed the opinion that the outcome of the present controversy between the two houses of Congress on the subject of arid lands will be a compromise. It is not improbable, though Mr. Morrow does not make such a prediction, that the compromise will embrace the provisions of a bill by General Vandever to reserve the lands in question from settlement except under the operations of the homestead laws.

THE Payne break in the Sacramento, a few miles below Boruck, is about 20 feet deep, and the cost of repairing it will be about $20,000.

Correspondence

Correspondents are alone responsible for their opinions.

Lower Lake Notes.

Editors Press: Below the lake are some thousands of acres of tule land. There are two creeks coming in from the mountains that throw their currents across the outlet of the lake. When it is raining these streams carry such a volume of water as to make a dam that holds back the water of the lake and often creates a current from the outlet to the lake. In the suit, years ago, brought by the Water Co. against those who tore out the dam at the outlet of the lake, it appeared in evidence that a man once rode a saw-log up stream over the dam. The testimony was held up to ridicule by opposing counsel as paradoxical and absurd, but old citizens maintain that it was a fact and that many things have been found in the lake that have floated in from the outlet where Anderson and Herndon creeks were so high as to form a dam and hold back the outer water. Mr. J. Bower informs us that the proceeds from sales of swamp lands were designed by law to be used in their reclamation, and that the fund so created has been called the Swamp Land Fund and that county officials have long been in the habit of drawing on this fund for various expenses not otherwise provided for. Last winter's experience emphasized the importance of its use for the purpose designed, and now the county is likely to be called on to make good the amounts taken from this fund. Improvements are needed to prevent flooding of what is usually dry land around borders of the lake. If, besides this protection, any portion of the tule land can be reclaimed, it will be the most productive land in the county. To accomplish this, work must be done on the channel of Cache creek, beginning some little distance below the Lower Lake ridge. Higher up it will be necessary to straighten the winding channel and provide against the back-water caused by currents coming from Anderson and Herndon creeks. This should require careful survey and well-made plans by good engineers. Old settlers, who are careful men, estimate that the value of the waters of Clear lake, when they shall some day be used for irrigating lands in Sacramento valley, will be far more than that of all the land in the county. It seems very hard to devise a plan by which this end can be accomplished and protect the rights of all interested.

Railroad Plans.

The people of Lake regard their future prosperity as closely linked with transportation facilities, and rumors of new railroads coming in have been so many and so disappointing that they cause far less excitement than at first. Still it is hard to see how the Southern Pacific built from Madison to Ramsey unless they expected to run up Cache Creek canyon to Clear lake. It is easy to see that if the company should put a fine hotel somewhere near the foot of the lake, and advertise as they have done for the Hotel del Monte, they could draw several times the travel that now comes to the county. Even at present those who have watched the stages coming from Brooks, Sites, Ukiah, Hopland and Calistoga would regard 100 passengers each way as a low daily average. The more this Switzerland is known, and the easier of access, the greater the travel. The route from San Francisco would be a very attractive one, passing the orchards of Suisun, Vacaville and Winters, the wheatfields of Yolo, the beautiful valley of Capay, and through the wild scenery of the canyon to this beautiful lake nestling among the grand old mountains.

Traffic Manager Gray of the Southern Pacific was up here for a week lately, and held out every encouragement for the early completion of the road. In case of its building, it is predicted that the principal town of Lake will be at the terminus of the railroad, near the outlet of the lake. It is thought that better means of transportation will cause many mines to start up that cannot now be worked at a profit, and, in general, that it will open up the channels of trade so that the life-blood of commerce will flow more freely. The present system of barter, by which one thing is traded for another and the dollar a stranger, is doleful.

A Promising Orchard.

Five miles north from Lower Lake, in Burns valley, S. Graham has an orchard that shows unusual thrift, which we think is due more to the extra care apparent than to special advantages in other directions. Indeed some of his neighbors wondered that a sensible man should plant an orchard in such a forbidding place.

His neighbor, Mrs. J. A. Tennisor, has a fine vineyard of which she is justly proud, as most of the labor has been done by her own hands. Planting a vineyard where land requires clearing of chemisal and stone demands plenty of hard labor.

In Burns valley they have built a new schoolhouse that would be a credit to any country. We noticed a beautiful flag flying while the school was in session, but it was lowered as soon as it closed. The school building is located upon a common of several acres, and upon another side is a fine hall used for social meetings. Mr. Beakbane, who has been largely instrumental in building up this section, is now on a visit to his old home in England, and it is hoped that his visit may result in a large accession to the colony here. F. S. C.

A Lake in the Redwoods.

Editors Press:—Leonards lake is situated in the Mendocino county redwoods at the farthest head of Russian river, about 20 miles northwest of Ukiah, and is the property of Henry Boyle of San Rafael. It is a beautiful little gem of water in an emerald setting of redwoods. On three sides the great evergreen forest environs it, leaning over to shut it in, but on the other side the soft curves of a chaparral-covered mountain offer a charming variety, and by contrast intensifies the grandeur of the forest.

Long and winding in its outline, the lake is not at its greatest breadth over 400 yards across, and except at either end the banks are for the most part precipitous. While to the east the view is only ended by the blue top of the chemisal-covered mountains, to the west the trees come down to the brink of the lake and dip their branches as if to drink of the clear waters, while the eye wearies in going to their tops, which obstruct all view on that side and after noon shading all of that side of the lake. On rowing down the lake, a succession of charming views and surprises await the lover of Nature. Here a precipitous rock now clothed in mosses and ferns, brightened with a few gay flowers which find a home in its crevices, there a little cove filled with rich soil by the winter's rain is a tiny vale, dampened by the lake and a congenial home for the wild flowers and a thicket of hazel where in season the gray squirrel holds high carnival, chuckling to himself over the harvest of nuts. In this nook a giant of the woods, felled by winter's storms, is moored, and in the light sheltered by it a mass of water lilies have ensconced themselves, covering the water with their rounded leaves, while their snake-like stems are lost below in a profusion of water grasses and mosses which cover the bottom of the lake wherever the water is shallow, while of the great trunk Nature's hand, ever ready, has transformed into a floating garden, occupied by a dozen species of plants, reveling in the mold which time has gathered there, and helping themselves to water from the lake. Tiny water plants and mosses are there, too, and lichens on the drier parts of the giant who once lifted his head so proudly above them. All combined make a picture of quiet beauty on a miniature scale. The wind soughing in the tops of the redwoods scarcely ripples the surface of the lake, and deep down in its sheltered home even winter's storms disturb its peace but little. On this spring day the sun shines down brightly, and the shaded side is the more desirable. There one can lay in contentment and watch the fish swimming among the moss. The speckled trout is there, and now and then the eager pike, tyrant of these waters. Lazy turtles, basking in the sun, go down with a splash as we near them, raising tiny waves in an ever-widening circle till they are lost in the placid bosom of the lake. Out toward the center there is a large snag. One of those big redwoods took a header into the lake some time past. Its top stuck fast in the bottom of the lake, 40 or 50 feet down, and is securely anchored there yet, while the body broke off at the surface of the water. Floating along or paddling aimlessly, we reach a narrow bay which invites exploration. So narrow that the trees fairly overshadow it, the long moss streamers grow from the bottom and cover the surface on both sides, leaving a narrow water-way winding through the center. At the end a path leads into the woods, well beaten. Many a foot has preceded us as we wind around trees and logs and blackened stumps through ferns and underbrush, till it ends where a tiny spring bubbles up in a basin formed by the roots of the trees.

They may talk as they please, but there is no water like this of the redwoods. If you would taste water in its greatest excellence, go to the redwoods, and from where it flows among the ferns seemingly flavored by the aromatic roots, drink it pure and cold and realize what you have missed. Here in the cool shade we will stop to guess at the monograms cut in the bark of the trees, and guess who they all were, and here we will say to the reader: "Good day."

Ukiah. Carl Purdy.

The Apiary.

Bee Culture.

Editors Press:—Few people can form any idea of the magnitude of the bee business in this country. There are at the present time about 300,000 bee-keepers in this country who consume millions upon millions of square feet of lumber in honey-boxes and bee-hives. Tons and tons of honey and wax are produced every year. The annual income in honey and wax alone amounts to over $75,000 000. Of so much importance has this industry become that the Government has arranged for statistical reports of its production, and the number of hives in the United States will be included in the census this year.

Since the advent of movable combs in wooden frames by Rev. L. L. Langstroth, great improvements have been made in the appliances of the apiary. Improved methods of management to secure greater yields of honey and the importation of foreign races of bees have put this industry on to a firm foundation. The common black bees generally found in farmers' hives are fast being superseded by the Italian or Carniolan races, noted for their superior and extraordinary powers in every direction.

The honey extractor has caused a wonderful revolution in this business. It is now about 23 years since Mr. A. I. Root of Medina, Ohio, took the first 1000 pounds of honey ever taken with an extractor from 20 colonies of bees. There are now over 10,000 of these original extractors in use, and considering the fact that honey extractors are manufactured by several other firms, and that these machines are in use not only in every State and province of the United States and Canada, but in nearly every civilized nation on the globe, we can justly conclude that this business is of no mean proportions, and its development has been wonderful indeed.

The annual yield of honey in the United States has been estimated at 200,000,000 pounds or more, and it is believed that two-thirds of this was taken with the extractor.

Comb foundation is another great discovery in connection with this business, the manufacture of which has assumed immense proportions. One firm alone manufactures several tons annually. The breeding of queens has become a separate branch of this industry, and thousands of queens are sent through the mails annually, not only in this country but to and from foreign countries.

Notwithstanding the fact that there are hundreds of thousands of bee-keepers in the United States, and millions of pounds of honey are produced annually, yet no one is robbed of a cent's worth of his earthly possessions and the soil is not impoverished.

How Beeswax is Made.

One of the most interesting productions of a colony of bees, and perhaps one of the most curious, is that of making the wax which forms the receptacles for the nectar that the bees gather from every opening flower, and which, when melted, forms the beeswax of commerce.

If you examine the under surface of a cell-building worker-bee, you will find beneath the abdomen four pairs of white plates projecting from as many pockets in the rings of this part of the body. These are the wax-plates and are made from the life-blood of the worker.

If you now examine with a lens one of the hind legs you will find that the stoutest joints are "square-shouldered" at the hinge, and that the hinge is well over to one side, so that the shoulders form a pair of jaws which open when the limb is bent and closed when it is straightened. The upper jaw has a row of spines which bite on a plate on the upper jaw. With this apparatus, piercing it with these spines, the worker withdraws a wax-plate from its pocket, transfers it to the front legs and then to the mouth, where it is laboriously masticated with a salivary secretion. Unless it undergoes this process it lacks the quality requisite for cell-building. Few people would imagine that the tons upon tons of this article which is produced in the United States every year originates from such a minute and wonderful laboratory of Nature. Wm. Styan.

San Mateo.

Fruit Preservation.

French Prunes in Southern California.

The trees must be grafted or budded on plum stock, and be one or two years old—I prefer one-year-old trees. They must be planted about 21 feet apart, so it will take 100 trees per acre. Good trees ought to be had for 20 cents apiece, or by the thousand for 15 cents. The holes must be dug from two to three feet square, according to quality of the soil.

The fourth season after planting, and even the third if your trees have been well taken care of, you will obtain about ten pounds of prunes to each tree—enough to initiate yourself to the drying business. The fifth year you will get about 60 pounds to each tree; the sixth year, 120 pounds or more to the tree. After that your trees are in full bearing, producing, according to location and care, from 150 to 300 pounds to the tree.

The only trouble now is the drying of the prunes in a satisfactory manner, without spending thousands of dollars in building driers. In California we can dry the French prunes to perfection without driers, sometimes in one week and more generally in two weeks, by following the subjoined instructions:

Do not pick the prunes by hand, as they do not ripen all at the same time, but in about three weeks. Begin to shake your trees toward the last of July, then every week after, and on the fourth time pick them clean.

Now for drying. The only apparatus needed is an iron kettle holding from 25 to 50 gallons of water. To each 20 gallons of water add one pound of the best American concentrated lye; have the water boiling; then take a wire basket of some kind—the home-made one will do best—put 20 pounds of green prunes in your basket, dip them in the boiling kettle, let them remain in there about one minute, till you perceive that the skins of your prunes are cracked all over, then take them out and lay them on a tray, and in one week or ten days, according to the heat of the sun, your prunes will be dried enough to put them loose in any kind of boxes holding 50 or 75 pounds. The trays can be made very cheaply (about ten cents each) with four sawed redwood shakes three feet long, nailed on a very primitive frame, by anybody who ever used a saw and hammer.

Now, when your prunes are all dried and you want to give them the finishing gloss for the market, do as follows: Fill your kettle again with water, but this time no lye is wanted, and when the water is boiling, steep your prunes in it with your wire basket for about a minute, till every prune is made quite hot; then expose them to the sun for that day, and the next morning you can pack them in boxes or sacks, as you prefer. This last steeping will make your prunes very clear and glossy, and will kill every insect and destroy their eggs effectually.

If you follow the above directions you will turn out an article equal to the best in the market, and will obtain the best price.—*M. in Pomona Progress.*

The Fig Business in Smyrna.

The oldest and most influential fig importer of this city, says the New York *Star*, is Mr. Nicholas Catrevas, who, though a native of Smyrna, is an American citizen of many years' standing. In discussing his singular business, he said:

"There is a large amount of ignorance lying around loose among the American public respecting the chief import of my native land. In the first place, figs as seen in the market are not grown in Smyrna, but at Aidin, Tshailies and Erbeili, far in the interior of Asia Minor. These districts lie from 250 to 600 miles away from the Mediterranean coast. They are wonderfully rich and fertile, and produce, if not the finest fruits of all kinds, at least the finest figs in the world. Horticulturists have repeatedly taken up trees from the territory and transplanted them in various parts of Greece, Italy, France, England, Spain, Portugal, Morocco, Algiers and Tunis; but in every case the resultant fruit was no better than the native article. Some of the results were very odd. In Italy the figs ran to an aromatic woody fiber and were roasted and used as an imitation coffee. In Morocco they grew into pulpy masses and were used chiefly to make jellies and marmalades.

"The fig tree is not cultivated like ordinary fruit trees. Fertilizing increases the size of the fruit but deteriorates the quality and its flavor. Unlike most fruits, the fig is not picked. Around the trunk of every tree a circle is built of stones and gravel on which the fruit falls when it is perfectly ripe. It is allowed to stay there until it is dried, when it is gathered and sent to the factories to be packed. The trees are grafted and regrafted, sometimes annually. The young trees bear better than the old, and young grafts bear far better than the branches of old trees. In most of the fig orchards they graft the trees every year.

"When the fallen fruit is comparatively dry, it is assorted and packed in bags weighing from 200 to 400 pounds each. These are loaded in couples upon camels, each couple being termed a load. This was the universal practice up to a late date, when the iron horse invaded Syria. Now a good railroad runs from Smyrna to Ephesus and brings a large part of the fig crop to the former city. No prettier sight exists in the world, to a Greek eye, than a great line of camels laden with bags of figs coming into Smyrna from the towns of the far interior.

"Once arrived, the camels are unloaded and the figs displayed in the open market. It is singularly like Washington Market in the early morning, when the farmers come in with their produce from the country districts. The marketmen are Armenians, Turks, Jews and Greeks. Even in Smyrna, which is under the Turkish rule, through the shrewdness and commercial sense that has made the race conspicuous in the financial history of the world, the Israelite has become a leading member in all business circles. The marketmen make money easily, and too often questionably. They advance money upon consignments and act both as bankers and factors. They control the market both in buying and selling, and enjoy a practical trust of their own.

"The figs are bought by the merchants and shippers and sent to the factories. Here they are emptied in long rows and carefully assorted by men, women and children, who sit cross-legged with the fruit on one side and baskets and boxes on the other. They sort the different qualities and shape each fig in the oblong form so familiar to the New World. The boxes are cased in wooden forms, called skeletons, which weigh from 250 to 350 pounds net. Each skeleton contains from four to 350 boxes, according to the weight of the latter. The finest qualities are made into what are called layer figs; those next in excellence are molded into oblong shape and are known as 'macaroni.' The poorer sort are packed into boxes, crates and bags. Smyrna exports annually about 55,000 skeletons, of which England takes 35 per cent and the United States about 60. Boston formerly controlled the trade, but now New York has the lead, doing nine-tenths of the business."

The managers of the San Luis Obispo Fair announce that to any couple who get married during fair week, they will give a pipe organ worth $150.

Horestry.

Three Great Trees of Washington.

Anybody who travels in the western part of Washington, or visits the numerous islands in Puget Sound or farther up in the Gulf of Georgia, will remark a peculiar tree, occupying the rugged, barren domes, where there is scarcely a handful of soil. Like the great cardon cactus of Mexico, *Cereus giganteus*, this peculiar tree grows where no other plant would grow, though it has no similarity whatsoever with the cactus. It belongs to the coniferæ, and it is commonly called western red cedar or juniper. Among the scientists it is known under the name of *Juniperus occidentalis*—a marvelously easy name, if we take into consideration the nomenclature of some other plants.

This red cedar of ours is a very peculiar tree and differs in leaves, wood and fruit from a similar Eastern species. The trunk is frequently enormous, for it measures often eight feet in diameter, though the tree itsel is not tall, especially in higher altitudes. It has very strong and powerful limbs, mostly bare at the ends, though here and there densely covered, while the top in old trees is almost always dead. Sometimes the tree is as broad as it is high and is merely a weathered stump, though if by accident the soil is good the juniper of Washington attains quite a considerable hight.

The red cedar is more like a block of rock than a tree. Even its bright cinnamon-colored bark looks something like a deep hue of porphyry. The wind of the Olympic mountains has no power over it; the heavy and rigid trunks of this tree defy the power of the storm. It is always silent, no matter if the wind roars in canyons and uproots pines and firs; or if the day is calm and full of sunshine, the burly juniper is always immovable, always rigid, like a column of ice, and grand in its silence; and if it dies, it is only from old age, for the juniper can brave the storms of centuries.

If we will leave now the rocky shores and immense islands of Puget Sound and descend into some valleys of the interior of this State, one will remark another peculiar tree, in some respects similar to the juniper, yet in others very different. It is the Western mountain pine, sometimes called simply mountain pine. Its Latin name is *Pinus monticola*, or *Pinus prophyracarpa*, rather a long name, but of course the pine is not responsible for it.

The mountain pine is long-lived, strong, brave and hardy, like the juniper, but here the similarity ends. In every other respect it is different. It does not grow in the rocks, but requires a moist soil and an abundant rainfall, and its trunk is not to be compared with that of the juniper, for it attains sometimes the hight of 90 or even 100 feet, and two-thirds of this tall trunk is free of limbs, though close, fringy tufts of sprays occur all the way down. The bark is furrowed very deeply, the parallel furrows connected by conspicuous cross-furrows, and is of a deep reddish-brown color. With the exception, perhaps, of the sugar pine, which is over twice as tall, and to which it is closely allied, no other mountainous tree is so capable of individual expression as this mountain pine of Washington. With its extended arms, its tall, graceful form, this pine forms a vision of beauty in the forest not soon to be forgotten. The cones are clustered on the branches, and when ripe, they are from four to eight inches long. They are cylindrical and somewhat curved, becoming pendulous as they increase in weight. This Western white pine is like the juniper, very tough, and defies storms and frosts, and if left alone, the pine of Washington would die also of old age, for even a thousand-year-old is yet strong and robust.

If we go now toward the new cities on Bellingham bay, and perhaps a little farther to the eastward, we will meet with a singularly beautiful tree, so slender in its axis that it will bend like a stalk of wheat, while the branches divide into innumerable moving sprays, slender and delicate like twigs of the weeping willow. The cones are purple and do not hang in clusters, but are free and hang from all the sprays from top to bottom. This tree is the Williamson spruce or hemlock. Its first Latin name, *Tsuga pattoniana*, is rather difficult to remember, but its second name, *Abies Williamsoni*, will not be so easily forgotten. This glorious tree grows in this State to an elevation of over 3000 feet, though in California it is found on mountains 10 000 feet high. In British Columbia it scarcely reaches the elevation of 2500 feet. It likes snow, and sometimes entire groves of young trees are buried in snow every winter. In the autumn the white flakes lodge in the leaves, weighing down the branches; then the axis begins to bend, forming an arch, and finally the whole young tree is buried in its winter sleep, not exposed to the biting storms and warmly wrapped until the snow becomes soft in the sunshine of spring and sets it free—fresh and featherly like a young fern.

The spruce is about as tall as the mountain pine, but its diameter is only two to four feet, while the diameter of the *Pinus monticola* is from five to six feet.

Though this tree looks very elegant and rather delicate, yet it surpasses other coniferæ in storm-enduring strength. It is powerful enough to meet the wildest onset of the hurricane, it bows gracefully to the ground and recovers immediately its elasticity.

At the age of 25 the tree becomes fruitful; its cones are then of a lovely purple color and hang at the ends of the slender sprays, contrasting strangely with the dark-green foliage. As soon as they are ripe they open their shell-like scales and swing free in the breeze until the coming of a fresh crop. No one who ever saw the spruce in a forest will ever forget it, for even if compelled to crouch in dense thickets it still manages to throw its delicate branches and sprays trying to feel the light and bathe its green foliage in it. Even when old and covered from head to foot with green branches, it never looks heavy, but always graceful and always fresh.

Here I have given a short sketch of three coniferæ found in this State. Only three, yet how many cone trees are in Washington, and what are the coniferæ if compared with the immensely rich flora of this new State! The field is rich and room for investigation more than sufficient.—*M. Lopatecki in Seattle Post-Intelligencer.*

Mr. Vandever's Bill.

WASHINGTON, July 28. — Representative Vandever of California to-day introduced a bill to set apart from the public domain the tract of country in which are located the famous mammoth trees of California, and make of it a public park. The following is the full text of the bill:

WHEREAS, The rapid destruction of timber and ornamental trees in various parts of the United States, some of which trees are the wonders of the world on account of their size and limited number growing, makes it a matter of importance that at least some of said forests should be preserved; therefore,

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that the tract of land in the State of California known and described as Township 18 south, range 30 east, Mount Diablo meridian, is hereby reserved and withdrawn from settlement, occupancy or sale under the laws of the United States, and dedicated and set apart as a public park or a pleasure ground for the benefit and enjoyment of the people; and all persons who shall locate or settle upon or occupy the same, or any part thereof, except as hereinafter provided, shall be considered trespassers and removed therefrom.

SEC. 2. That said public park shall be under the exclusive control of the Secretary of the Interior, whose duty it shall be, as soon as practicable, to make and publish rules and regulations as he may deem necessary or proper for the care and management of the same. Such regulations shall provide for the preservation from injury of all timber, mineral deposits, natural curiosities or wonders within said park and their retention in their natural condition. The Secretary may, in his discretion, grant leases for building purposes for terms not exceeding ten years, of small parcels of ground not exceeding — acres at such places in said park as shall require the erection of buildings for the accommodation of visitors; all of the proceeds of said leases and other revenues that may be derived from sources connected with said park to be expended under his direction in the management of the same and the construction of roads and paths therein.

He shall provide against the wanton destruction of fish and game found within said park, and against their capture or destruction for purposes of merchandise or profit. He shall also cause all persons trespassing upon the same after the passage of this Act to be removed therefrom, and generally shall be authorized to take all such measures as shall be necessary or proper to fully carry out the objects and purposes of this Act.

The Sequoia Land Will Be Reserved.

In our last issue we noted the protest of Governor Waterman telegraphed to Secretary Noble against the reported opening of the Sequoia lands to entry. The following show that such opening is not contemplated:

WASHINGTON, D. C., Aug. 5, 1890.

To Hon. W. R. Waterman, Governor, Sacramento, Cal.:—Your telegram received. It is not true that the lands you mention are about to be open to survey. The *Sequoia gigantea* have been protected by a very recent decision of this Department and orders to reserve all of the ground upon which they are growing, both in Tulare county and the Yosemite, for the latter of which, as you state, a bill is pending in Congress. I have written you this day, showing the full correspondence on this subject, which is most positive and energetic in defense of the *Sequoia gigantea.*

JOHN W. NOBLE, Secretary.

The Letter.

The following is the letter mentioned above:

Dear Sir:—I herewith inclose you the copy of a letter addressed to me by the Commissioner of the General Land Office, to whom I handed your telegram this morning concerning the *Sequoia gigantea* in Tulare county, also my response thereto of the same date. I also inclose you a previous direction made by me for an investigation and report as to those trees. You will be interested in the decision recently rendered by me on the same subject, a copy of which I send you. You are no doubt familiar with the efforts being made by Representative Vandever to have the trees of the Yosemite valley brought into the national park. In a word, I am aiding, by all the means in my power, to prevent the appropriation of these wonders of nature to private speculation, and will be glad to receive from you at any time suggestions that may assist me in this direction.

Following is the Secretary's letter to Commissioner Groff, noted in the above letter:

Yours of this date has been received in which you say the order of suspension issued by Commissioner Sparks, dated December 24, 1885, is still in force as to all the townships enumerated, except 15 and 16, Range 26 and Township 17, Range 30. The two former were relieved from suspension by the letter of Mr. Sparks, March 11, 1886, and the latter by my letter of May 23, 1890. You will please renew the suspension order in each of these cases until there is a complete report upon the fact whether there are existing thereon any of the trees called *Sequoia gigantea.* It is my purpose, by the order as directed to be made, to preserve these wonders of nature until such time as opportunity may be had to place them in parks by the National Government, as such I believe is the intention of the Legislature, and it is demanded by the public opinion of our people. Your report as to where these trees exist, with an accompanying map, as heretofore requested, I hope you will be able to present in a short time.

The Dairy.

A Large Butter Dairy in San Diego.

The following article from the San Diego *Union*, describing with minuteness some dairy methods which are commonly known in California, although perhaps seeming trite to some of our readers, yet may contain information even in these regards to distant subscribers. Many dairies, it should be remarked, are substituting improved machinery for cream separation and other improved appliances for the arrangements described. We quote as follows:

An industry which disburses annually $10,000 to its workmen, which pays the Julian Stage Co. between $1200 and $1500 in freight charges, and which probably puts into circulation over $10,000 during that time, is what the Pioneer Dairy Co. of this county is doing without any one of the members of the firm of Martin, Bloom & Brackett seeming to care whether it is appreciated or not. Mr. Martin, whose home is at San Francisco, is well known to old residents also as the pioneer dairyman of the State. He owns several thousand acres in Marin county, where he and his partners have long had in operation the most successful dairies of California. Notwithstanding his already important interests—being at the head of a large firm, engaged in wine-making, and in the salmon-canning industry—Mr. Martin found time to investigate the dairy possibilities of San Diego county in 1885. He concluded that a dairy was needed, that the conditions would warrant it, and was of the opinion that better butter could be furnished than the county was then importing from anywhere in the East. Mr. Bloom, one of his partners in former dairy properties, and who also is a large real estate owner at Petaluma, Sonoma county, was of the same opinion. J. S. Brackett, since deceased, also a holder of realty in Petaluma, and owner of a large dairy in Marin county, joined with them in the purchase of a stock range in San Diego county. They chose the highest of the large mountain valleys, the Santa Ysabel grant, which is 54 miles northward of San Diego, purchasing the 17,711 acres from Mrs. A. H. Wilcox for $75,000.

Durhams.

The range was stocked with Durham cattle from Sonoma and Marin. A dairy-house was erected on the southwest portion in the lee of a knoll separating it from that portion of the tract occupied by an Indian rancherie. All improved appliances for butter-making were shipped down to the ranch, and then came a company of Swiss experts who monopolize the work of the dairies in the northern counties. This was four years ago, and it took some time to convince San Diego commission merchants that the much-abused "back country" could really beat the world in butter-making.

The firm erected a store at the other end of the valley beside the Julian stage-road, and the traveler who may have occasion to wait there an hour or two any day in the week will discover that J. B. Brackett, a son of J. S. Brackett, is doing what would be termed here a "rushing" business. F. O. Brackett of Sonoma and Miss Brackett of Salinas are the other heirs to their father's portion of the Santa Ysabel property.

The success of the first dairy caused the firm to erect a second about three years ago, but farther up the valley on the south side, and that was followed by the establishment of a third dairy about a mile and a half back of the first. Several different superintendents had been employed up to a year ago, when Samuel A. Rotanzi was induced to leave a similar business in Sonoma and take charge of the three dairies and the range. He is an enthusiast in the work and believes there is no place superior to this county for making butter. Mr. Rotanzi personally looks after every department of the industry, and exercises much judgment in the management of his employes. He has won the good-will of the Mexicans, while the Indian population on the ranch have the highest regard for his wishes. They understand they must behave well if they want to be employed by him in the busy seasons, and those whom he selects as herders know that slack work will lose them any further business with the superintendent. Mrs. Rotanzi exercises a like gentle but firm influence over the Indians with whom she comes in contact, and many of them would suffer at times but for her thoughtful generosity.

Butter-Making.

The Santa Ysabel has a line fence some 30 miles in length; and with the cross fences dividing it into ten fields, from a few acres up to 400 or 500, has about 60 miles of barbed-wire fence. The wild oats, burr clover and bunch grass which mat the fields with green in winter and which when ripe in summer are equally good food, are generally sufficient for the nearly 2000 head of stock now on the ranch, of which 700 head are milking cows. It has happened only three or four times in a season that extra food was necessary. The grant has springs all over it, in addition to the always running Santa Ysabel creek, and the fields all inclose watering spots. The calf crop averages from 300 to 500 head a year. Some of the stock is sold for beef, possibly 100 to 200 head annually, and Julian usually gets some of it. Hogs as well as calves are fattened on the waste milk, and 100 head or more find their way to market yearly.

This season Mr. Rotanzi has had small fruit orchards set out at the dairies as an experiment to find what will grow best in that region, and it is expected that extensive orchards will be planted as soon as the matter is decided. The dairies are raising vegetables, and each makes enough cheese for its own consumption.

The average number of men employed in the dairy industry is 25, exclusive of herders and other help. Mr. Rotanzi now has 12 at Dairy No. 1. The business compels them to be early risers. At 4 A. M. two go out to one of the small fields and drive the herd up to the corral to be milked, which the other ten set about so as to get through before 8 o'clock breakfast. A pipe from a big tank in the dairy-house extends to the corral, ending in a strainer. Into this each man pours his bucket of milk. Within the dairy another employe handles a large bucket combined with a funnel strainer. He turns a faucet in the bottom of the tank and strains the milk a second time in filling his bucket. Ranged around the room are revolving racks capable of holding 50 or more pans each. The rack is a square post fitted each way alternately with two cross-pieces at the proper distance, so that each pair holds one of the broad, shallow pans. Nearly 1000 pans could be accommodated in the room. The milk is allowed to stand from 30 to 40 hours before the cream is skimmed off for butter-making. A stand on castors is wheeled to each rack. The skimmer uses a little wooden knife to loosen the cream from the pan, and gives the latter a quick tilt which slides the cream off into a big tin can. The milk is poured into a basin, from which a pipe runs it to a trough in the hog-pen.

The Cream

Is left to set awhile and is then poured into a funnel, which carries it below to a churn in the cellar. This is a 3x10 box of wood, revolving on a frame and worked by a band running over a wheel. The shaft passes to the outside of the building, where it is turned by horse-power, the average 100-pound churning taking an hour and a half. The full capacity of the churn is 300 pounds. No one knows better than the horse, treading his round outside, when the butter has come. He is sure to stop of his own accord when he knows the work is accomplished. The band is then slipped from the wheel and the butter-maker bares his arms for vigorous exercise. There is a hole in the center of the churn which admits his head and shoulders, so that he can reach all around in it with a short-handled wooden paddle to gather every particle after the buttermilk has been drained off through a hole in the bottom of the churn, and then through a funnel to the hog-pen. The estimate of milk to a pound of butter is three gallons.

He lifts the yellow mass out on the paddle and heaps it up on a round table having a double top, the upper part revolving on a pivot. This is the "Allen butter brake," and has a long paddle working lever-fashion from a hinge on the farther side of the table. The handle is grasped by the workman and the nearly flat blade is brought across the butter, kneading it thoroughly as the table is whirled by the man's other hand. A shower-bath overhead is turned on and the mass washed thoroughly free from milk before table salt is sprinkled on and kneaded in. Then the butter is patted flat and cut up into chunks with wooden paddles. A wooden mold, worked with a pincher handle, is used to snap up these chunks, which are squeezed into a two-pound cylinder form. The ends are lopped off, butter cloth dipped in brine is wrapped around it, the Santa Ysabel stamp is firmly pressed into one end, and the product is ready for market. Each shipping-box holds from 55 to 60 rolls. A square two-pound mold is also used. The year's supply of this butter-cloth for the three dairies is about $500 worth, and comes from San Francisco. Some 100,000 pounds of butter are now shipped to the San Diego commission-men annually, and 10,000 pounds are disposed of at Julian and in that neighborhood. In midwinter the San Diego shipment is from 500 to 600 pounds daily, but in the warm season it is necessarily less, because there is no ice in that section for preserving the butter. Over 400 pounds a day is now being shipped by Foster & Frary's stage-line.

Increased Values.

The water system of these dairies is very perfect, a cistern being made at a spring, and a pipe conveying the water to a cement tank in the cellar, where it is almost ice cold. Hot water for the pans and buckets is got in the washroom of the dairy, where a covered brick tank with an oven in the lower part is always full of water. In the winter it is sometimes necessary to put a stove to maintain the right temperature for the milkroom. Mr. Rotanzi reports semi-annually to his company, paying off the men from the income and placing the surplus in the bank.

The assessed value of the Santa Ysabel land has quadrupled in value in the past year because of the dairy industry alone.

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

The Grange.

At the suggestion of Bro. John Trimble, Worthy Secretary of the National Grange, we reproduce the following article, which, he informs us, was the result of an interview by a special reporter for the N. Y. *Sun*, and appeared in that journal Sunday, July 27, 1890. The italics are our own:

The oldest and most thoroughly organized combination of agriculturists in the country is the National Grange of the Patrons of Husbandry. Its primary objects are essentially non-political, and most of its work has been in other fields—social, educational and commercial—but the tendency toward political activity which has rapidly developed among farmers within a few months is making itself felt in the Grange. It enjoys the distinction of being the first secret organization in the country which admitted women to full membership.

The history of the Grange is a demonstration of the difficulties which arise in attempting to make any practical combination of farmers. Nominally it has been in existence since November, 1867, when seven men met in Washington and organized what they ambitiously termed "The National Grange of the Patrons of Husbandry." For four years their work in organization throughout the country brought little or no result. But they met regularly under their original title, yielding to no discouragement, although at the third annual session Worthy Master Saunders delivered his inaugural in the presence of Secretary Kelley as his only auditor. The address was printed next day, however, in one or two morning papers, and was distributed throughout the country. Before the fifth annual session was held there had been organized about 200 Granges. In 1872, the Order began to boom, and before the close of the year, 1074 Granges scattered over more than half the States had been organized. During the next two years the Grange had a

Marvelous Growth.

In 1873, 8668 subordinate Granges were organized, and the next year the number was 11,941, but the growth was too rapid for stability. With more than 20,000 subordinate Granges averaging a membership of 40, the Order had become perhaps the largest in the country, but it was weak through lack of organization and discipline. Its membership had not been properly restricted. Everybody wanted to join the Grange then—lawyers to get clients, doctors to get patients, merchants to get customers. A Grange was organized on Broadway, New York, with a membership of 45, and representing, perhaps, as many millions, composed of bank presidents, merchants, sewing-machine makers, and Wall street speculators. The only member who could lay claim to having an interest in agriculture was a merchant who owned a house and lot in the White mountains, where he usually spent his summers. A similar Grange was organized in Boston, and in New Jersey a Grange was formed with a general of the army as its Master, a stone-mason as its Secretary, and the owner of a grain elevator as its Chaplain.

The rapid growth of the financial resources of the Order led to a foolish demand that the surplus cash in its National treasury be distributed among the subordinate Granges. More than $50,000 was thus distributed, and the treasury of the Grange was thus depleted.

Practical Achievements.

Nevertheless the Grange did excellent work for its members in two or three great emergencies. The grasshopper plague of the Northwest brought a generous relief movement from members of the Grange in all other parts of the country. The educational work of the Grange was promptly felt everywhere. Postmasters in all the States testified that the Order had greatly increased the bulk of the mails, and one said that there were 30 newspapers taken at his office where but *one* was taken before the establishment of the Grange. The Executive Committee of the Order found themselves able to make liberal arrangements with manufacturers for the supply of all manner of things to members of the Order at substantial cash discounts. Reapers that were selling at $275 were reduced to $175; threshers at $300 were bought for $200; sewing machines that commanded $75 and $100 tumbled to $40 and $50 These reduced prices were secured under the seal of the Grange, and were issued to members of the Order in confidential price-lists. These reductions and the aggregate purchases of the Patrons startled the middlemen; trade with farmers became disorganized, and it was impossible to permanently maintain such a system of liberal discounts. One point was gained, however, for the reduction in price once secured was never lost. A more permanent advantage was gained by the establishment of co-operative stores all over the country, most of which are still conducted according to the original plan.

Since the great boom which the Grange had in 1872 and 1873, it has suffered a serious reaction. It still numbers more than 26,000 subordinate Granges, but the membership constantly fluctuates and no figures are made public by the officers. The leaders of the Alliance naturally claim that their Order is making heavy drafts upon the membership of the Grange. *It still remains true, however, that the Grange is doing the most valuable and systematic work for the yeomanry of the country, and that its influence, political and otherwise, has scarcely deteriorated.*

In politics the Grange has always been strictly non-partisan, and, indeed, until recently, it has figured almost as a non-political organization.

The Legislative Committee.

Latterly, however, the Grange is doing active work in seeking to protect agricultural interests both at Washington and in State capitals. Its Legislative Committee now consists of J. H. Brigham of Delta, Ohio, Master of the National Grange; John Trimble, Secretary of the National Grange, and Leonard Rhone of Pennsylvania, Chairman of the Executive Committee. These gentlemen have been at Washington during the present session of Congress urging upon the Congressmen the adoption of such measures as were advocated at the session of the National Grange held at Sacramento last November. The Grange has taken a distinct stand upon most of the practical issues now before Congress. Its members demand the passage of pending bills to prohibit the adulteration of food and other commodities. They ask for the suppression of gambling in farm produce; they have declared uncompromising war against trusts, and they favor free coinage and complete remonetization of silver. The representatives of the Grange at Washington have taken an active part in the hearings upon the pending Tariff bill. The Grange is neither a free trade nor a tariff organization. It demands in substance that if there is to be a tariff, the farmer shall get his full share of protection.

While the Grange has taken no official action regarding the sub-treasury plan urged by the Alliance, it may be said that the older organization does not support it. Fully three-fourths of the members of the Grange are, however, in sympathy with the declaration of the Alliance in favor of free coinage of silver.

There is a larger proportion of women in the membership of the Grange, Sec'y Trimble estimating their numbers at 40 per cent of the whole. The Grange is still growing. Last year 204 new Granges were chartered, while this year the number up to date is 363 There are fully 45,000 members in New England, where the Alliance has not yet gone, and there are organizations in every State and Territory in the Union. The next annual convention of the Grange will be at Atlanta in November.

That the Grange has reached a point in politics where it is in a mood to make demands instead of offer prayers, is evinced by the tone of an address which it issued to the members of Congress three months ago.

The article closes with liberal quotations from the Legislative Committee's address, most of which was published in the RURAL PRESS for May 3, 1890.

Hollister Grange.

EDITORS PRESS:—According to announcement, Hollister Grange held its meeting on Saturday, the 9th inst. To the great disappointment of all, Bro. Cressey was not there. W. M., Nash met me at the train on the evening of the 8th and I was entertained at his home with a truly generous hospitality during my stay at Hollister. It is a lovely home in a beautiful country. Sister Nash and their two bright children gave me a hearty welcome, and I shall remember my visit with pleasure.

The Grange was called to order by W. M., Nash, and with the assistance of the officers and members he conferred the third and fourth degrees on a class of twelve.

Hollister Grange has 115 members and 16 applications for membership. There is good material there for a Grange of 200. With the fostering care of the State Grange it will acquire that number by the time the State Grange meets at Watsonville. W. Sec'y Dunlap's books are well kept and in good order. Working tools all right.

After the degree work, an elegant repast, prepared by the sisters, added much to the pleasure of the occasion.

The repast finished, the Grange and invited guests returned to the hall for the literary program, which embraced songs by the Grange, the Misses Smith and Minnie Brown; a solo by Miss Lacque; recitations by Vons, Carrie and Erastus Nash, and Alpha Gray; and an address by Bro. I. C. Steele. These exercises, in which the young people received much applause, completed a pleasant, and, I trust, profitable meeting.

In company with the W. M., I visited his brother, ——— Nash, and family, and sampled their delicious peaches. They have a lovely home, and I greatly enjoyed the visit.

The W. M. also took me to call on Bro. Brown and family. Bro. B. is W. A. S. of Hollister Grange, and a model farmer besides. The immense vegetables, thrifty corn and beautiful fruit that loads the young trees in his well-kept orchard abundantly attest the fertility of the soil and the skill of the husbandman who tills it.

The family horse that Sister Nash drives is a beauty, and can go in 2:20. What do you think of that, Bro. Flint? Don't you want to visit that Grange?

The crops about Hollister are good, the hospitality of the people unbounded. The Grangers and farmers there have formed a union and started the largest general merchandise establishment in the place. They keep everything which a farmer needs. They can furnish goods at greatly reduced prices, and the farmers get the benefit. They are able to regulate prices, and, with good management, the enterprise bids fair to be a success. If they adhere to Grange principles, they will not fail. Every failure in co-operative effort, so far as I know, has been caused by a departure from the teachings of the Grange. I. C. STEELE.

From the State Lecturer.

EDITORS PRESS:—Everybody is busy thrashing (who is fortunate enough to have anything to thrash), fruit-picking, drying, etc. Have just returned from a trip over the Santa Lucia mountains.

Growing Orchards.

Orchards in that section are nearly all young—recently planted—but looking thrifty and promising. The country about Templeton, Paso Robles and San Miguel, in fact all the eastern portion of San Luis Obispo county, will become a great fruit-producing district in the near future.

Rumor says that a large tract of land on the Carissa plains has recently been purchased by a wealthy fruit-grower of this State with a view to planting in fruit trees of various kinds. Remember that this region a few years ago was considered good for nothing but to graze sheep and cattle. Who knows but this long neglected and apparently God-forsaken region may vie with Kern, Tulare and Fresno in the production of choice fruits? When the much-talked-of railroad from Tulare to Port Harford is built (as it surely will be before many years) this region will settle up with a thriving and industrious population, who will root out the old sheep and cattle herders and rapidly develop its latent resources.

Crops

In the vicinity of Templeton, saw thrashing machines at work. Some fields of wheat are yielding well and the quality is excellent. Mr. John Gibson had a field of wheat which would compare favorably, both in yield and quality, with the production of any previous year.

The completion of the S. P. R. R from Santa Margarita to Ellwood is the all-absorbing topic in this neighborhood. We all want something, and we think it is the railroad just now.

Read "Wanderer's Return from the North" with much interest. Hope Sister McConnell will favor us again and often from the quiet retreat of her happy home.

Thanks to Bro. Hilleary for copy of Oregon State Grange Proceedings. Hope he and other good Patrons from Oregon will favor us with their presence at the coming session of our State Grange.

Grange matters are very quiet in this section just now; farmers all too busy to give any special attention to Grange work. Next month we hope to take hold with renewed interest and vigor.

Arroyo Grande Grange

Has held regular meetings right along, with fair attendance at each meeting. The Arroyo Grande Patrons are very determined to make their votes tell at the coming State election, so far as possible, in favor of the farmers' interests; intend to support good, competent and trustworthy men only for State and county offices.

At the last meeting of our Grange, on the 2d inst., we discussed the question of co-operation in the purchase of supplies. The members present, without a dissenting voice, favored the Pennsylvania or some similar co-operative method of making purchases.

Co-operation.

What is the matter with the Patrons, the subordinate Granges of the State, that they do not respond to the proposition of our State Executive Committee, issued some time ago? Unquestionably the Grange is doing much toward educating its members intellectually, socially, politically and morally; but there can be no doubt that successful co-operation among them on some financial line—say in the purchase of *all* the supplies needed by the farmer—would greatly promote and strengthen the growth of the Order. Why this hesitancy on the part of subordinate Granges to take hold of this matter and push it to a successful issue? I hope this subject will be largely considered at the approaching session of the State Grange.

Our Grange has determined to confer the third and fourth degree, have a Harvest Feast and open meeting on the third Saturday in September. All Patrons are invited to attend

GEO. STEELE.

THE INTERSTATE COMMERCE COMMISSION has issued an order, to take effect on Sept. 1st, for a reduction of rates in food-products, based on a report sent to the Senate on June 7th. The order is accompanied by a copy of that report, also an opinion of the Commissioner overruling the protests and motions of roads to dismiss for want of jurisdiction. This opinion reviews the powers and duties of the Commission in the matter of beginning and conducting the investigation, and the Commission holds that its proceedings are legally sufficient and the reductions are necessary to make rates reasonable.

Notes of Preparation.

EDITORS PRESS:—The people of Watsonville and vicinity are beginning to realize that a great State conclave is soon to claim their hospitality and enjoy the beauty of their valley and its environments for at least a week. The energetic City Trustees, fully alive to the golden opportunity presented for benefiting the prosperous commonwealth which they have the honor to represent, declare that they will push to completion all city improvements now under process of construction, have the streets sprinkled and the city put in its Sunday clothes generally.

One enthusiastic Trustee even went so far as to offer to give up his room and bed, if necessary, to accommodate visitors. Said he: "We must treat these Patrons in such a manner that they will always remember their meeting here as the pleasantest one of their lives," an expression which will be ably seconded by our people, and with a little of the fire borrowed from our wide-awake "City Dads," not only will the Grangers be well received and entertained, but Watsonville will become noted as the rising star for public favor, which cities of denser population but no better facilities have lacked the energy to secure.

In verification of this it may be in order to state that Watsonville has already received the additional honor of being selected by another great State body as the place of holding its annual convention next year.

The Board of Fair Directors will doubtless be heard from later in an unexpected way, as they will not be caught napping. The most amicable relations have always existed between the W. C. T. U, the Native Sons and Daughters, and the Grange, fraternal greetings often being exchanged.

The Native Daughters, especially those of Sacramento, conferred lasting honors on every Grange in the Union by their splendid treatment of the National Grange. Their womanly sentiments and kindly acts not only made Californians proud of them, but gained them volumes of praise in the annual reports of State Masters before their Granges. It is needless to add that those of our valley are composed of like pure metal, with the same true ring. All classes of citizens will vie with each other in making the stay of the distinguished visitors (the delegates of the foundation of all wealth) interesting and agreeable.

A pleasing feature will be the meeting of the southern Granges with their northern neighbors—an event which has not occurred for years, owing to their great distance from the center or Grange home. This time they are met midway and, of course, will respond with heavy delegations. In the event of large numbers taking the higher degrees (which is confidently expected), Worthy Master Davis is contemplating an unlooked-for pleasure for them.

Following are hotel rates for Grangers at Watsonville:

Mansion house, first-class board and lodging, $1 50 per day.

Lewis house, first-class board and lodging, $1 50 per day.

Watsonville house, first-class board and lodging, $1 25 per day.

Washington house, first-class board and lodging, $1.50 per day.

Morning Star hotel and restaurant, first-class board and lodging, $5 per week.

Germania hotel, first-class board and lodging, $1 per day, $4 per week.

Other hotels and restaurants will be reported later. Patrons wishing to engage rooms in advance can do so by addressing Box 263 Watsonville, Santa Cruz Co., Cal A. P. R

A Kindly Protest from the Alliance.

EDITORS PRESS:—In the PRESS of June 28th, in the column headed "The Master's Desk," W. M., Davis of the S. G. says: "If it be true, as is stated, that the managers of the Farmers' Alliance in Texas have squandered or stolen $1,000,000, then it is time for farmers who are thinking of joining the Alliance to inquire into the new organization and its management."

I doubt not Bro. Davis (for we are brother Grangers) was sincere in his words of caution to farmers; yet he himself seems to have omitted "to inquire into the new organization and its management" before giving currency to a statement which would, if true, reflect such discredit on the local officers or managers of the Alliance in Texas, and I am ready to believe that he will be only too glad if it is shown that so far as squandering or theft is concerned, the statement is wholly false.

The appended slip is from a letter to J. S. Barbee, State Organizer of California, by J. H. Turner, Sec'y National Farmers' Alliance, Washington, D. C:

The report from Texas, to which you refer, is the same old story, and is circulated by our enemies, the subsidized press, for the purpose of injuring the Order. . . . The Order in Texas is in a better condition than it has been for two or three years. Doubtless the exchange has made some blunders, but that can never stop the people from their demands for justice.

The following letter from S. O. Daws, Sec'y Farmers' Alliance of Texas, was received by me a few days ago:

SPRINGTOWN, TEXAS, July 26, 1890.

Mr. L. Jared—DEAR SIR AND BRO:—Yours o

5th inst. at hand, and will say that the statement published, that the officers or managers of the Farmers' Alliance of Texas have at any time in the history of the Order swindled the members out of vast sums of money, is false. . . . There is not now, nor has there ever been, a complaint or charge of fraud by the outside or the inside world that can be substantiated.

S. O. DAWS,
Sec. F. A. & I. U.

(In the above letter I have omitted what does not bear directly upon the published charge of fraud.)

Mr. E. Morris, a gentleman from Texas, and a member of the Order, while there, says he knows exactly where the report was coined and in what paper it was first published; that there was a clique of politicians in Texas who, when they found they could not make use of the Order for party purposes, incubated the lie and set it afloat in a paper controlled by themselves.

That the officers or managers of local organizations may have made mistakes in the conduct of a business which is new to them, and withal somewhat complicated, may be frankly admitted. The Farmers' Alliance would be a marvel of human perfection indeed, if, with a membership of 3 000,000 and conducting the vast business of its National, State, county and subordinate organizations, together with its exchanges for the sale of farmers' products and its business with wholesale houses and manufacturing establishments in most of the large cities—it would indeed be a living wonder, a veritable miracle, if, in the conduct of all this business, it made no mistakes. I think that even its warmest friends make for it no such extravagant claims of superhuman perfection.

L. JARED.

War on the Lottery.

Dispatches from Baton Rouge (La.) state that the Anti-Lottery League, which held its convention there on the 7th and 8th inst., with 400 or 500 delegates in attendance, has issued an address to the people of the United States, denouncing the Louisiana lottery and averring that it uses its immense revenues to corrupt the Legislature and the moral sense of the people. It also declares that the lottery is fraudulent, which is shown by the fact that the lottery company can sell 75 per cent of its tickets, pay 10 per cent for selling them, lose all the prizes provided for in the scheme, pay $1,000,000 for expenses, and still make $3,000,000 profit per annum. The address recommends to Congress the immediate adoption of an amendment to the Federal Constitution, prohibiting any State from chartering or licensing any lottery or gift enterprise, abolishing those already established, and giving Congress power to enforce prohibition by appropriate legislation. Pending the adoption of such an amendment, it urges that all lottery matters be excluded from the mails and express companies.

Among the resolutions adopted was one to boycott the *Times Democrat* and the *Daily States* of New Orleans, on account of their pro-lottery sentiments.

The Newspaper Committee reported that $30,000 had been guaranteed for a newspaper to be published in New Orleans in opposition to rechartering the lottery.

At a meeting of the Farmers' Alliance at Baton Rouge on the 9th, resolutions were adopted denouncing the Alliance men in the General Assembly who voted in favor of rechartering the Louisiana Lottery as traitors to the cause and principles of the Union, refusing to affiliate with them as members of the Order, and recommending subordinate Unions to expel them; also reiterating pledges relative to the lottery, denouncing it as a vile curse and enormous iniquity, which they feel more determined to-day than ever to combat, and resolving not to let their energies relax until this enemy is driven from the State.

An Interstate Commerce Decision.

On the 7th instant the Interstate Commerce Commission announced its decision in the case of the San Bernardino Board of Trade against the Atchison, Topeka & Santa Fe Railroad Co. and others. The decision is in favor of complainant.

The complaint alleged that the railroad companies charged more on certain specified commodities from Missouri-river points, St. Louis, Chicago, Cincinnati, Detroit and New York to San Bernardino, Cal., than for a longer distance over the same line, to Los Angeles.

The points decided are briefly stated as follows: "Where the complaint alleges that a greater charge in the aggregate for the transportation of a like kind of property is made for a shorter than for a longer distance over the same line in the same direction, the shorter being included in the longer, and that unlawful preference is thereby given one locality over another, it is held that the complaint is sufficient to put the carriers on proof that the services were performed under such dissimilar circumstances as to justify the greater charge. Water competition which will justify a greater charge for a shorter distance by railroads must be actual. Possible competition will not justify such greater charge under the provisions of the fourth section of the Act to regulate commerce.

"The filing of schedules of rates with the commission, as required by the statute, raises no presumption as to the legality of such rates, and no omission or failure to challenge or disapprove the schedules of rates so filed can have the effect of making rates lawful which are unreasonable."

Magnolia Grange.

EDITORS PRESS:—By kind invitation of Bro. and Sister HORN, I appeared at Clipper Gap Friday afternoon to accompany them to Magnolia's anniversary on Saturday. The day being a little warm and no wind stirring, the brothers invited me to take a seat in the family rocking-chair under the wide-spreading boughs of (probably) the largest English walnut tree upon this coast.

A Giant Juglans.

The limbs cover a space of about 90 feet in diameter, and the trunk of the tree, one foot from the ground, is nearly three feet in diameter. It stands 16 feet from their two-story house and three of the limbs cover almost the entire roof. It seems to be well loaded with nuts, which sell readily at 20 cents per pound for planting purposes. It grows in red soil in a ravine but has not been irrigated. I think the RURAL PRESS once had a description of this tree, which is about 30 years old and the largest but one I ever saw. While at Interlaken, Switzerland, last year, I saw one that took one clasp of my arms and two of my companion's to span it.

There is something about this red soil that is famous for tree and vine growth. Bro. Horn has

The Kittatinny Blackberry

With stocks 16 feet high and canes as large as the largest-size walking sticks.

Saturday morning, with a strong and willing pair of horses and easy-riding wagon, the brother and sister, with myself and three young Grangers, started over the hills and through the valleys for Magnolia Grange, a distance of nine miles.

We Forded Bear River.

Looking up and down the stream for the animals from which, I suppose, it took its name, I saw nothing but immense beds of gravel, which to own would make a Sacramento contractor chuckle in his boots. This celebrated river is the dumping ground for Dutch Flat and Gold Run hydraulic mines. The river is very low, but the muddy water shows that mining is still going on.

Approaching the hall, we saw Bro. Huffman from Lodi, with his broad-brimmed hat, and about 20 others sitting around in the shade of the great oaks and pines. The hall and one farmhouse are situated in an opening or clearing, and no other buildings are to be seen, which slightly discouraged the brother from Lodi, as he could not see where any more Grangers could come from. Soon he peeked down under the trees and chaparral and saw them come pouring out, with double teams, saddle-horses and on foot—to his astonishment. Owing to a fatal accident to one of their prominent members, the attendance was not so large as expected, and the evening party was omitted. Every one seemed in the best of spirits, and all did their best to contribute to the enjoyment of

The Anniversary.

It was more of a picnic than a Grange feast, for instead of setting a table in the hall, they spread their lunch under the trees, where several families joined.

Lunch being over and the footrace finished, all were called around the speakers' stand, where an excellent program was rendered.

The writer being a little off on account of malarial fever, Bro. Huffman came to his rescue manfully and made a fine speech, which was well received.

The program included dialogues, recitations, songs and pieces in character, some of which greatly amused the audience.

This exhibition demonstrated the fact that Magnolia Grange is not second in talent to any other in the State. She may lack a little in practice, but nothing in confidence and will-power. The active part the young people took to-day goes far to compensate their parents for the hours of anxiety devoted to their welfare. What a gratification it must have been to their fathers and mothers to see them in their nice clean holiday suits, acquitting themselves so well!

The Grange

Is the very training school for old and young, to prepare them for the active public duties of life.

Sister Still had charge of a booth where were dispensed cool temperance drinks, ice-cream, watermelons, nuts and candies. She may be growing older in years and losing some of the sparkle of the eye and bloom of the cheek possessed by the numerous young ladies present, but for activity of motion and being in the right place at the right time, no 16 year-old girl has the best of her; and as to her making a cup of tea to quench the thirst of a tired Granger, consult Bro. Overhiser.

When all the young people and youngsters present join the Grange, they will have to put on an addition or build a new hall. It is seldom that so many children are seen at a Grange entertainment.

I think Bro. Huffman is prospecting for a new location, for he remarked to me with a great deal of satisfaction that he never saw such fertile soil or so prolific a section.

Brother Grangers of Lodi, see that he is made contented, or the attractive foothills will be in possession of your chief wrangler!

Bro. Still acted as Master of Ceremonies with the coolness and good judgment for which he is noted.

May Magnolia Grange be as conspicuous in our Order as the fragrant flower from which she takes her name.

D. F.

TRACK AND FARM.

How Salvator Won.

The gate was thrown open, I rode out alone,
More proud than a monarch who sits on a throne.
I am but a jockey, but shout upon shout
Went up from the people who watched me ride out,
And the cheers that rang forth from that warm-hearted crowd
Were as earnest as those to which monarch e'er bowed.

My heart thrilled with pleasure so keen it was pain
As I patted my Salvator's soft silken mane;
And a sweet shiver shot from his hide to my hand
As we passed by the multitude down to the stand.
The great waves of cheering came billowing back,
As the hoofs of brave Tenny ran swift down the track;
And he stood there beside us, all bone and all muscle,
Our noble opponent, well trained for the tussle
That waited us there on the smooth, shining course.
My Salvator, fair to the lovers of horse
As a beautiful woman is fair to man's sight—
Pure type of the thoroughbred, clean-limbed and bright—
Stood taking the plaudits as only his due
And nothing at all unexpected or new.

And then, there before us the bright flag is spread,
There's a roar from the grand stand and Tenny's ahead;
At the sound of the voices that shouted "a go!"
He sprang like an arrow shot straight from the bow.
I tighten the reins on Prince Charlie's great son,
He is off like a rocket, the race is begun.
Half way down the furlong their heads are together,
Scarce room 'twixt their noses to wedge in a feather;
Past grand stand and judges, in neck-to-neck strife,
Ah, Salvator, boy! 'tis the race of your life.

I press my knees closer, I coax him, I urge—
I feel him go out with a leap and a surge;
I see him creep on, inch by inch, stride by stride,
While backward, still backward, falls Tenny beside.
We are nearing the turn, the first quarter is passed,
'Twixt leader and chaser the daylight is cast;
The distance elongates, still Tenny sweeps on,
As graceful and free-limbed and swift as a fawn.
His awkwardness vanished, his muscles all strained,
A noble opponent, well born and well trained.
I glanced o'er my shoulder, Ha! Tenny, the cost
Of that one second's flagging will be—the race lost.
One second's weak yielding of courage and strength
And the daylight between us has doubled its length.
The first mile is covered, the race is mine—no!
For the blue blood of Tenny responds to a blow.
He shoots through the air like a ball from a gun,
And the two lengths between us are shortened to one.

My heart is contracted, my throat feels a lump,
For Tenny's long neck is at Salvator's rump.
And now, with new courage, grown bolder and bolder,
I see him once more running shoulder to shoulder;
With knees, hands and body I press my grand steed;
I urge him, I coax him, I pray him to heed!
O Salvator! Salvator! list to my calls,
For the blow of my whip will hurt both if it falls.
There's a roar from the crowd like the ocean in storm,
As close to my saddle leaps Tenny's great form;
One more mighty plunge, and with knee, limb and hand
I lift my horse first by a nose past the stand.
We are under the string now—the great race is done—
And Salvator, Salvator, Salvator won!

Cheer, hoar-headed patriarchs; cheer loud, I say;
'Tis the race of a century witnessed to-day!
Though ye live twice the space that's allotted to men,
Ye never will see such a grand race again.
Let the shouts of the populace roar like the surf
For Salvator, Salvator, king of the turf!
He has rivaled the record of thirteen long years;
He has won the first place in the vast line of peers;
'Twas a neck to neck contest, a grand, honest race,
And even his enemies grant him his place.
Down into the dust let old records be hurled,
And hang out 2:05 in the gaze of the world.

—E. W. Wilcox in Spirit of the Times.

Another California Horse Ahead.

MONMOUTH PARK, August 7.—And again a California horse gets there! It happens every day now, so the New Yorker gets used to it, but still he doesn't like it. No, not a little bit. This time New York's pride, Tenny, beaten twice by Salvator, ran against Firenzi, from Salvator's own stable, but as usual, he was just a little in the rear at the close.

Isaac Murphy rode Firenzi and made no waiting race. He forced the pace the moment the flag fell, and a rattling pace it was, too. Like the sulky, surly brute he is, Tenny lagged in the rear and refused to extend himself. A length and a half behind Firenzi he ran for a mile and a furlong, in spite of Garrison's efforts to send him up with his antagonist. It was a breathless, expectant crowd that watched and waited for him to make his move, and that tremendous spurt at the finish that has made Tenny famous above all other racers. It came, but as usual, a little too late. The "Snapper" got at him with whip and spur as they neared the last furlong pole, and under this by no means gentle persuasion Tenny closed upon the mare.

Inch by inch Tenny's nose moved up to Firenzi's flank, and Murphy drew his whip. He had to use it, too, for Tenny was dangerously close now, and gaining still. Fifty yards from the judge's stand Tenny's hooded head was at Firenzi's saddle girths. He fought a good fight clear to the finish and gained an inch at every jump; but the end was too near at hand, and when they dashed past the winning-post, Firenzi was a neck in front. That it was a killing time the pace shows, the mile and a half being run in 2:33¼, within a quarter of a second of the best record for the distance.

Salvator's Final Triumph.

MONMOUTH PARK, Aug. 12.—California owns the greatest race horse of this country, if not of the world, and New York at last acknowledges it. The final contest between Salvator and Tenny has ended, and Salvator to-day proved beyond all question his superiority. Not less than 25,000 people gathered at Monmouth Park to see what was conceded to be the race which should determine who is king of the turf. Twice Salvator has defeated Tenny, but winning each time by a head, and leaving a doubt in the New Yorkers' minds, naturally biased against the outsider, as to the real merits of the winner. When the second race occurred, thousands stood on the seats and hissed out their angry feeling against Salvator and cheered Tenny.

There was no such scene on the third trial to-day. The crowd's sympathy was with the home horse, but it treated the stranger fairly, receiving him with hearty cheers. Tenny, of course, was still the favorite with the grand stand, though experience had taught that grand stand favorites should not always be the favorites in the betting ring.

At last the horses were to start. Both seemed in prime condition, and Murphy and Garrison looked determined to ride for the honor of their masters and their own good names. They started with the first trial neck and neck. They rode over half a mile, neither having the advantage of the smallest nose. As they came opposite the grand stand on the opposite side of the circle they seemed to step in unison, and the great mob broke into a wild cheer.

At the three-quarter post it looked as though Tenny was a neck ahead, and when the mile was passed Tenny certainly was in the lead. The crowd was intensely excited. "Tenny will win!" "Wait for Tenny's homestretch spurt and Salvator will be lengths behind!" These and a thousand other cries came from the delighted Tennyites, while Salvator's friends looked doubtful. "There is still a half mile and Salvator may make a home spurt, too," was all that could be said.

They were within the last quarter when Salvator was seen to fairly jump out of his skin. It seemed as if with one bound he had gained a neck and thrown Tenny to the rear. From that time on the game was his. Tenny neither sulked nor lagged. Every muscle was in full play and at the highest tension, but away Salvator flew, and brave little Tenny doing his best could not keep near him. They passed the judge's eye with Tenny two full lengths behind. This time there was no mistake which horse had done his best. Salvator was the king.

The time of the race was as follows: Quarter, 0:26¼; half, 0:50¼; three-quarters, 1:17; mile, 1:43; mile and a quarter, 2:09; mile and a half, 2:35½. This settles decisively the question of the relative merits of Salvator and Tenny, and while the latter is a great horse, he will have to occupy a secondary position whenever Salvator is mentioned.

Sunol Beats a Record at Buffalo.

On August 8th at Buffalo 15,000 people went out to the driving park, attracted by the announcement that Sunol and Belle Hamlin would attempt to lower the records of 2:10½ and 2:12¼ made by them respectively. After some preliminary warming up the judges announced that the horses would be sent to beat 2:15. This was for the purpose of giving Sunol a record as a four-year-old, the best record up to date being 2:16. Belle Hamlin was sent first, her time being 2:14¼.

The California wonder, Sunol, was then called up. She passed the quarter in 0:33¾, the half in 1:05½, the three-quarters in 1:38½, and the mile in 2:11¼, just three quarters of a second slower than her California record. Considering the track, which was seemingly in good condition, and the fact that the wind on the stretch made a difference of a full second, Sunol's performance more than equals that which ranked her next to the queen of trotters, Maud S.

ELECTRICITY.—The San Jose *Times* says: The stallion Electricity is considered one of the best horses on the Palo Alto farm. It was Marvin's intention to take him on the circuit this season and give him a record, but as Electioneer is sick and his recovery doubtful, it was deemed best to take no chances in having him go wrong, as he will take the place of Electioneer. While he has no record, he has been known to step a mile faster than the average. Mr. Stanford has refused $80,000 for him.

A JACKASS CENSUS.—Jacks and jennets, or what is more commonly called "jack stock," have been taken separately from horses and mules, and for the first time, in the new census. Kentucky and Tennessee are the centers where this kind of live-stock is a specialty, large farms and millions of dollars being devoted to this interest.

THE people of Ventura have voted unanimously in favor of issuing bonds for building a new high school.



August.

Now Nature sits with folded hands,
As resting from the busy year,
While o'er the wide and teeming lands
She contemplates the goodly cheer
She gives; all energizing powers
Lie mute and still, and drowsy hours
Move noiselessly, their jocund moods
And songs foregoing; in deep woods
And fields a slumb'rous silence broods
Unbroken, save by beetle's drone
And o'erfed bees' dull monotone.
Or leaves' low rustle as they make
A pathway for the gliding snake.
The patient cows seek shadows cool,
That stretch themselves like giants prone
Along the edges of the pool—
And midst the waters stand knee-deep,
In dreamy, semi-conscious sleep.
Birds sing no more, but on the hill
The tender plaint of whip-poor-will,
Who, telling oft her woful tale,
Lingers full late after her time,
While at slow intervals the chime
Of sheep bells in the distant vale
Falls on the ear like tuneful rhyme,
Lulling the senses, till in idle dreams,
We half forget the real in the thought of that which seems. —*American Magazine.*

To the Spelling Class.

Stand up, ye spellers, now, and spell;
Spell phenakistoscope and knell;
Or take some simple word, as chilly,
Or gauger, or the garden lily.
To spell such words as syllogism,
And lachrymose and synchronism,
And pentateuch and saccharine,
Apocrypha and celadine,
Lactiferous and cactify,
Jejune and homeopathy,
Paralysis and chloroform,
Rhinoceros and pachyderm,
Metempsychosis, gherkins, basque,
Is certainly no easy task.
Kaleidoscope and Tennessee,
Kamschatka and dispensary,
Diphthong and erysipelas,
And etiquette and sassafras,
Infallible and ptyalism,
Allopathy and rheumatism,
And cataclysm and beleaguer,
Twelfth, eighteenth, rendezvous, intriguer,
And hosts of other words are found,
On English and on classic ground.
Thus Behring straits and Michaelmas,
Thermopylæ, Cordilleras,
Suite, hemorrhage, Jalap and Havana,
Cinquefoil and ipecacuanha,
And Rappahannock, Shenandoah,
And Schuylkill, and a thousand more,
Are words some prime good spellers miss
In dictionary land like this.
Nor need one think himself a scroyle
If some of these his efforts foil,
Nor deem himself undone forever
To miss the name of either river,
The Dnieper, Seine or Guadalquiver.
—*Hartford Post.*

Hugging Chains.

Written for the RURAL PRESS by MARGARET B. HARVEY.]

Some years ago I wrote an article the gist of which was this: Any woman can improve her mind if she really wishes. No matter what her circumstances, she can find a way, provided she is in earnest.

As the article was intended for a journal which circulated extensively in rural communities, I spoke particularly of the long-suffering farmer's wife. I said that farmer's wives could study languages, no matter how many children or hired men they had to look after.

Never shall I forget the storm which I brought down upon my poor devoted head. I heard from at least a dozen farmers' wives, who declared that they had quite enough to do already without bothering with languages, and that I was cruel to expect any more of them "than looking after children and hired-men." Not one of those who answered me in print had sense or imagination sufficient to perceive that I was trying to encourage them to live a little above the "trivial round, the common task." They were cruel to themselves—they were literally "hugging their chains."

I could not help being reminded of the story told by Madame Jane Dieulafoy during her explorations in Persia. She undertook to photograph a group of Oriental ladies in their harem. While Madame Dieulafoy's head was behind the camera, her models imagined that she could not hear, and indulged in a series of remarks calculated to surprise a Western mind. Among these were the following: This woman had a bad husband; he compelled her to work. What would any woman want to take pictures for if some man didn't make her do it? European men were very cruel to their wives, anyhow; some women in Europe were even compelled to be writers and scholars. There was one woman in England who was obliged to be queen!

Now, American women have long been in the habit of commiserating the degradation of their Asiatic sisters. But, according to Madame Dieulafoy, American women only waste their pity—Asiatic women would probably pity *them*, provided Asiatic women were sufficiently enlightened to know where America was.

Far be it from me to insinuate that there is any real comparison between American women and Asiatic; but knowing, as I have been forced to know, that some American women actually glory in their humiliation and resent any idea of its removal, I cannot help asking, How much better are many Western women than the majority of Eastern? It is just as easy to hug chains of gold as chains of iron.

Yes, and a chain binds us all the more effectively when we do not know that there is a chain about us; a degradation is all the more complete when we do not know that it *is* a degradation. It is when our fingers are so benumbed that they cannot feel that we are likely to have them burned off or cut off altogether.

I do not suppose that the women from whom I heard on the subject of "Languages *vs.* Hired Men," etc., were the only ones who thought me cruel when I tried to point out the way to a higher plane of existence. I have no doubt that I might find a dozen just like them in every community. But just because such women exist, exists also the need for more such articles. Plenty are written every day, but their work is not yet done.

It is only fair to add, however, that women themselves are not always to blame, even if they passively accept degradation. Perhaps, in certain senses, European (or American) men *are* cruel—the Oriental women were not far wrong in thinking that Occidental men "compelled women to work." Oh, yes! we all know that "American husbands are the best in the world," etc.; yet take a case in point.

A gentleman of means married the leading soprano in a church choir. Such a voice as hers 'twere a sin to hide—it would be nothing more nor less than burying the one talent. But this gentleman insists that his wife shall never sing in public. Why? "Because," he says, I did not marry her to keep *me!*" He thinks he is acting a generous, chivalrous part—but is he? He is depriving the world of one of its sweetest solaces and dragging his wife down to the ordinary level. This is more of an injury to her than if she actually did "keep him." But this is not all—she is "keeping him" far more by performing the duties of a housekeeper without wages than if she "let her light shine." And this brings us to still another consideration: Why does a man so often think that he "keeps" his wife, no matter what difficult, distasteful or unpaid service she may render him? Does he consider her labor of no account, or at least of no money value? Yet, strange to say, he never thinks he is keeping his seamstress or his chambermaid, even though neither of these, to use a common expression, is "worth her keep."

Would *you*, sir, consider it very generous in your wife if, because she loved you and wanted to show her pride in you, she insisted on your giving up your chosen art or profession and coming down to the level of a bound boy who worked for his "victuals and clothes"? I tell you some men's pride is a queer article. Do you know how it works? It works so that no woman, except a very rich one, can marry, even with the best and purest motives, without giving rise to the suspicion that she is marrying to "get kept."

Marrying to be kept may do for the lazy, the incapable or the unprincipled. But the idea hurts the conscientious, the gifted and the energetic. And if only rich women can marry without risking their dignity, what about the men concerned? They must either be rich themselves or else also be accused of wanting to be "kept."

This brings us around a circle. A man doesn't want his wife to sing for fear somebody will think she keeps him. But would he hesitate to marry a woman whose wealth was material, instead of artistic or intellectual, for the same reason? Scarcely. What, then, has become of masculine pride? It seems that it cannot always be counted upon as an invariable factor.

I think we are drawing near a solution of the problem. The world still worships the golden calf. If women would have their best gifts appreciated, they must set up these gifts in opposition to the golden calf. The Muses must battle with Mammon—there is no other way. That means education and culture; that means throwing off mental and moral chains.

Do I see any real signs of progress? Decidly. Only a short while ago I heard from that same article again, which revived the whole matter. A lady told me that she had found a five-year-old number of a certain journal, which contained some of the most encouraging words that she had ever read, etc. If they were encouraging to any one when they first appeared, no one thought it worth while to tell me so. I am scarce afraid to add, however, that some of the original readers and critics would understand better now.

For the last few years we have been reading (and writing) articles telling how to manage housework, etc., so as to have time for intellectual development. But now the question is going up all over the land: "Why waste so much time and strength over housework, etc., when intellectual development is the real business of life?" We have been unraveling the skein by the wrong end.

Intellectual development is the real business of life—of every woman, married or single, as well as of every man. Housework and every other kind of work are but means to this end—if you choose to take a homely figure, they are but the axle-grease to keep the wheel in motion. Of course the wheel can't go without the grease—but the wheel, after all, is many times bigger than the axle. But we have been purblind as to the revolutions of the wheel, and have occupied ourselves mostly in smearing our fingers with grease.

It is safe to say that we are nearing a period when the world at large will recognize the great truth imperfectly embodied above. New conditions or improved machinery will relieve mankind and womankind of the wearing grind of labor, converting what is left thereof into an art or a pleasure. Studying languages then will be a recreation and a duty, not a mere accomplishment or task—and so with similar pursuits. The next generation will wonder, pityingly, why the women of this era washed and cooked, just as we wonder why our grandmothers spun and wove. Why, this is all in the line of regular progress. The carpenters and blacksmiths of to-day have outgrown the tools of twenty-five or fifty years ago. If men don't continue to hug their old chains, why should women? Why, indeed?

Edenic Living.

EDITORS PRESS:—A little treatise entitled "The Edenic Diet" has fallen into my hands. The book bears the date of 1889. The doctrine in this particular shape may be much older. It is new to me, probably owing to my not being fairly astride the Pegasus of the world's progress.

I have long been acquainted with the doctrine of the plain Vegetarians, but the "Edenic Diet" goes farther. His idea is to eat only uncooked grains and fruits. The first advantages that he claims for this diet are: That you will have no doctor's bills, no cooks nor cooking utensils, and will lose no time in looking after the cook.

Now I would be glad to enjoy all these advantages, except, perhaps, the last. I never regret the time lost in looking after the cook. Indeed some of the pleasantest memories of my life are connected with the time that I have lost in looking after the cook.

The author says that a woman friend prayed for a pair of shoes, and the answer came: "Live on Edenic food." She did so, and in a week had saved enough to buy a pair. I endeavored to impress the value of this suggestion on the cook. She acknowledged its wisdom but seemed inclined to doubt its practicability. I advised her to come to it gradually; to eat cooked oatmeal, rice, etc., and by degrees taper up to whole grains of wheat, and finally to white-oak acorns, as the latter abound hereabout and would be very cheap. She might thus be able to get a pair of cheap stockings, too. The plan—like all the great schemes for sudden riches which I have from time to time evolved—ended in failure. The cook started in at breakfast the next morning on oatmeal and milk, but after the next course, consisting of buttered toast and sweet pickles, even while the chilblains on her toes were impelling her on to the higher life, the lashes of her eyelids drooped and she expressed her sentiments by saying: "My dear, please pass the sausage."

The author also says that many persons have yet to learn that the hunger which they feel is not always their own, but that it is communicated to them from other persons near by or at a distance, especially when the latter, while hungry, are thinking of them. He says, also, that invisible beings can and do communicate the sensation of hunger. This, I presume, is also an argument in favor of the Edenic diet; for a person living on that sort of food would not probably be bothered to any great extent by his hungry friends, which would also be a saving. But on the other hand, if any of my friends at a distance should be thinking of me, I should feel very bad to refuse to eat a good dinner if it would be of any benefit to them.

I do not know, however, if it is exactly the polite thing to be making sport of what a man has written in all earnestness. He says many things which are full of truth; but it seems to me that he is visionary, and to a man full of beef and warm coffee he looks like a crank. He mixes up astrology with his raw grains and chestnuts, and expects you to swallow that, too. He talks about publishing some charts by which he proposes to show how those who follow his teachings can get to heaven—or, in the author's own words, "to oneness with the Divine itself."

It is evident to all inquiring minds that we are approaching a great social revolution. When Mr. Edward Bellamy's scheme of governmental control of all departments of industry is realized, and all the people have learned to live the Edenic Life, surely the millennium will have come! ANTONY RILEY.

UNANSWERABLE.—Anxious sister (to brother just returned from a sparring lesson): Oh, Jack, don't learn to fight in that brutal way. If you want to perfect yourself, take lessons in fencing. Jack: Yes, but if I was attacked I probably wouldn't have a foil with me. She (triumphantly): But you might not have your boxing gloves, either!—*Jester.*

CENSUS ENUMERATOR—Is your husband an American by birth? Mrs. Roney: Yis, sorr, he is that same. He has a berth in the police department.—*Munsey's Weekly.*

"In a Minute."

[Written for the RURAL PRESS by S. P. SNOW.]

A minute is but a short space of time, and yet often much is accomplished therein—much of happiness, much of misery. It is often the turning-point of life. The results of all future time, nay eternity itself, are sometimes determined by the cast of a single minute. Principalities are founded, kingdoms established, empires crumbled to dust; but all this is foreign to my story.

She was a winsome child as one would see in a long June morning ramble. She was loved by all. No one saw her but to admire and praise. She was eminently beautiful. None could help loving her. Her bright, sunny, golden hair glinted like the sun's rays through the maples in the autumn breeze, and it curled in her neck and about her ears like the split stalks of the dandelion. Her plump lips were as the cherries, red. Her cheeks displayed the faint tinge of the early morning, Aurora, for which she was named. Her forehead—no alabaster could be whiter or fairer. Her bright, sparkling, azure eyes were ever laughing, ever merry and gay. But the beauties of person were utterly eclipsed by the transcendent charms of her mind and temper. She was all patience, all submission, all sweetness and love. She was not strong or robust; on the contrary, she was weakly, nervous, often ill and suffering severe pain. But all this she bore with so gentle resignation and quiet fortitude as to draw praise from all who witnessed her distress. It touched the hearts of the most stoic and indifferent and made all most anxious to relieve her misery, if it were possible. As time rolled round it finally became evident that she must be deprived of her mother's milk; it did not agree with her; it added to her nervousness and weakness. But this was a serious consideration. It was her chief, her almost only solace. She had never even gone to sleep but upon her mother's breast, and to deprive her of all this seemed to the fond mother like depriving her of all joy and comfort, and it was long and with many anxious communings with her own heart before she could make up her mind to attempt the unwelcome task; but it must be done; the baby's, as well as her own welfare, demanded it.

The first twenty-four hours, baby bore it like a martyr. She moaned a little, but evidently thought that time would soon bring her the so anxiously coveted food. But she was still doomed to disappointment. "In a minute, in a minute." The mother had often made use of this expression in answer to baby's wants. This would always be answered with charming resignation, and baby would wait, although the minute would sometimes, in the various routine of household duties, be protracted to a most unconscionable length. "In a minute, in a minute." Thus would baby say, and show every sign of intense hunger. "In a minute, in a minute," wailed baby, and exhibited utter loathing for every other kind of food but its mother's milk.

Talk of the evanescent character of the sufferings of childhood. Grown people can suffer the extent of human agony, and do it with fortitude. They can lose fortune, friends, reputation, and do it with equanimity, for they have resources of mind and heart unknown to the child. They know that a fortune can be regained, new friends made, even a lost reputation patched up if the character is still intact; but a child has none of these resources. Its sorrows are keen and unassuagable, its misery and distress incapable of relief. "In a minute, in a minute," and the tears fairly rained down the pale cheeks of the mother, for she knew it was never more, never more. "In a minute, in a minute," and the tone was now one of utter despair. Even hope had perished. It seemed as if the child would wail itself to death, that the extent of human agony was reached, and that death must surely intervene unless the mother would sacrifice, temporarily, right and duty; and even then, the final catastrophe would but be postponed, not averted. But the faithful mother held firmly to her integrity, and beheld, with silent agony, the despairing struggles of her infant. Had the child displayed perverseness of temper, instead of such angelic sweetness and resignation, it would have been easier borne, but it was all unmitigated suffering. "In a minute, in a minute." It seemed impossible for the child to sleep. When almost completely tired out, she would fall into a half-doze, lisping inarticulately, "In a minute," to start up again, with every sense keenly on the alert, to repeat again and again, "In a minute, in a minute."

And thus it was for an entire week, "In a minute, in a minute." But time, the great healer of all human ills, eventually brought relief; misery was assuaged, grief covered up, and happiness returned. Baby is now a bright, strong, healthy child, but we will never, never forget, so long as the breath of life remains, the concentrated agony of the look, the wail "In a minute, in a minute." And the "minute" to that child was an eternity.

Santa Barbara.

CONVERSING UPON THE SUPERNATURAL.—Dumley (impressively): 'Pon my word, d'ye know if I—aw—should see a ghost I believe I should become a—aw—chattering idiot. Miss Quicker (softly): Do tell us about the ghost you did see, Mr. Dumley.

Young Folks' Column.

Henrietta's Tramps.

[Written for the Rural Press by Katherina Bryant Nolan.]

Leigh Chalmers came out of the back door of the family residence and walked down the veranda steps with firm strides and a dogged, sullen look on his little square face. His brown eyes that always looked so clear with a certain pride and strength portrayed in their depths, were hidden by two deeply fringed lids.

Leigh never sat still when things were not going as they should go to please a boy. He went off and planned up something entertaining.

His mother was away, and he had only been allowed to have two doughnuts and he felt the need of three. No wonder he was cross; it was most certainly a trial, and, moreover, it was cold comfort to be reminded of the sufferers in the great siege of Paris and the deprivations they endured. Leigh liked history very well indeed, but he liked doughnuts better.

However, there was no help for it, so he wended his way calmly and philosophically across the street and went up the driveway, between the lawn decked with bright and nodding blossoms, and the garden, where samples of vegetables of every kind grew and flourished. Variety rather than quantity was the object of the owner of that vegetable garden, and certainly he produced some prodigious examples of what could be done in the gardening line, even in Massachusetts. Leigh lived almost under the shadow of the State-house, for you could see its gilded dome plainly from the roof of the Chalmers homestead, and Boston was really only just across the Charles river.

"Come in, Art," Leigh called out, as he neared the barn back of the house and caught sight of his friend and companion; "let's go over to Hogs-back." Art laughed as he looked at Leigh's stern face, but he joined him and they went through a side gate into Capt. Slocum's beautiful grounds. They raced along down the driveway, until they reached a back gate which let them out into a swamp, where tangled blackberry bushes, minus the blackberries, and various brilliant tantalizing flowers grew just out of reach. Leigh waded in after some of them one day, but a pair of black, scratched, poisoned legs had rewarded the effort, so he very readily agreed to keep out of that swamp for all future time.

If there was one thing above another that made up for Leigh Chalmers' deficiencies of manner, it was this fact: he could be depended on to keep his word, so "his word was as good as his bond."

The day before this eventful one they had stood on the edge of the swamp and dexterously shied stones in among the Captain's choice hens and pullets. The yard was small, the cackling was great and the feathers flew wildly. It was cruel sport, as the poor things were helpless, so they hurried through the yard, as they did not wish to meet the Captain, and ran along the path that skirted the swamp and up on the steep, long hill called Hogs-back because it resembled nothing so much as the sides of a fat hog, especially when one raced along the broad, flat back and looked down on either hand. All of a sudden their footsteps made a hollow sound.

"Leigh, hear that," said Art, stopping to stamp his heel.

"Yes, I hear. There is a hollow place underneath, I suppose. Henrietta says the Indians built this. It is a mound," Leigh answered.

Henrietta was a walking encyclopedia, and so Leigh was an authority upon all subjects. Anything that a boy wanted to investigate received attention from Henrietta, whether it concerned relics of Indians or birds and gaudy butterflies of the living, moving present hour. Many a boy envied Leigh on account of that wise sister of his.

They had now reached the end, which shelved down straight into a hollow that was sparsely filled with trees and rustling dry leaves and dry branches.

"Come on, Art, let's build a fire. I've some matches," said Leigh.

Both boys fell to gathering sticks and leaves until they had a goodly little pile, and then it was but the work of a moment to set it ablaze. They piled on the brush and scraped up the leaves, running hither and thither until it seemed as if there were half a dozen boys instead of two. That fire, how it crackled, how it roared!

All of a sudden it appeared to Leigh's excited fancy as if there was a regular Western cyclone blowing, and the grass began to catch fire, sending out little creeping tongues of flame in the direction of the Captain's picket fence and fine lawn.

He took off his jacket in a flash and fell to beating those mischievous, curling, dancing imps with an energy which swelled his little heart almost to bursting. The heat was nearly suffocating, the roar in his ears quite maddening, but he kept at it. Art seemed paralyzed for a few moments, but at length he fell to work with his cap and sticks and stones. It seemed an aimless effort to Leigh, but he had to work, he could not stop to talk.

The fire was making very good progress indeed, when two men ran up with shovels and beat it all out in much less time than it would take to tell it.

The boys' faces were black and streaked finely where the perspiration had streamed down and cleared their skin; their hands were blistered and a sight to look upon; Leigh's jacket was ruined, and Art's white flannel cap, a black, disreputable affair.

The men went off to their work in a neighboring market garden, chuckling over the punishment those youngsters were sure to receive when the tell-tale garments met the eyes of their natural guardians.

Art looked at Leigh, and Leigh looked at Art. It was plainly no case for delay, so Leigh started up Hogs-back hill and Art followed somewhat reluctantly.

"Merciful heavens! what have you two boys been doing?" asked Henrietta, when they opened the gate in the boundary fence between Captain Slocum's grounds and Art's home.

To say that the boys considered Henrietta a guardian angel stationed to lead them into a path of safety at a desperate crisis, is expressing their feelings mildly. She stood there with compassion upon her face and listened to their story just under a big maple close to the gate.

Leigh related their adventure with great vividness and neglected to mention the fact that he had started the fire himself. Art twirled his blackened cap on one of his fingers and looked sympathetic as he ventured a remark occasionally that tended to make the narrative strong. The narrow escape of two brave boys from a tragic death filled her mind and the trifling detail of the cause of the bonfire never entered her head.

The news spread, and relatives and neighbors filled up all needful gaps with their own versions of the harrowing tale. The boys were washed, their burns dressed, and strict commands were laid on them to keep out of that swamp, as there were tramps who not only set fires but killed boys or carried them off for a ransom.

Captain Slocum was moved to forgive them for stoning his hens, as he realized they had done him an inestimable service when he surveyed the blackened and smoking circle by the hill. He owned that he had kept "a fine rod in pickle for them," but declared he should not use it.

Art and Leigh never stoned his hens again, and were very, very careful where they built bonfires after that time, and were proud of Henrietta and lauded her more than ever, as her tramps saved them from two merited punishments they were thankful to have escaped.

Good Health

How to Drink Milk.

Don't swallow milk fast and in such big gulps. Sip it slowly. Take four minutes at least to finish that glassful, and don't take more than a good teaspoonful at one sip.

When milk goes into your stomach it is instantly curdled. If you drink a large quantity at once, it is curdled into one big mass, on the outside of which only the juices of the stomach can work. If you drink it in

Little Sips,

Each little sip is curdled up by itself, and the whole glassful finally finds itself in a loose lump made up of little lumps, through, around and among which the stomach's juices may percolate and dissolve the whole speedily and simultaneously.

Many people who like milk and know its value as a strength-giver think they cannot use it because it gives them indigestion. Most of them could use it freely if they would only drink it the way I have described, or if they would, better still,

Drink It Hot

Hot milk seems to lose a good deal of its density, you would almost think it had been watered; and it also seems to lose much of its sweetness, which is cloying to some appetites.

Milk vs Beer.

If the poor only knew and appreciated the value of milk taken in this way, I am sure there would not be so much beer-drinking among them. There are thousands of hard-working scrub-women, wash-women, factory girls and even shop girls, in this city, who drink beer with their meals because it gives a little stimulant to their tired bodies, and don't understand that it is only like applying a whip to a weary horse, instead of giving him oats. If they only knew, they would find in this simple draught as much strength as in a barrel of beer.—*New York Tribune.*

A Remedy for Burns.—"A celebrated German remedy for burns," according to the Detroit *Free Press*, "consists of 15 ounces of the best white glue broken into small pieces into two pints of water and allowed to become soft; then dissolve it by means of a water bath and add two ounces of glycerine and six drachms of carbolic acid; continue to heat until thoroughly dissolved. On cooling, this hardens to an elastic mass, covered with a shining, parchment-like skin, and may be kept for any length of time. When required for use, it is placed for a few minutes in a water bath until sufficiently liquid, and applied by means of a broad brush. It forms, it is said, in about two minutes a shining, smooth, flexible and nearly transparent skin."

Influenza and Faith Cure.

The impression seems to be gaining ground that faith cure and mind cure and all the cognate cures are much more effective when there is nothing the matter with one than when the body is really ill or diseased. An illustration of this recently occurred in Jersey City, where a well-known citizen had been an ardent believer in and advocate of the faith cure. He had gone so far as to build a chapel and dedicate it to the cause, and had impressed the wonders of faith cure upon his family; but one day the influenza came along, and as it entered the door the faith cure flew out of the window. The "grippe" was too much for faith, and the doctors had to be summoned.

No one will attempt to deny the influence of the mind over the body in many cases, nor the reflex influence of faith or prayer or any other outward demonstration. There are certain maladies of the body which may be reached more readily and effectually through the mind than in any other way, but from this it does not follow that all diseases are curable in this way. The cardinal mistake of the Christian Scientists and of the believers in faith cure and mind cure is in denying the existence of things which are palpable to the senses; of confounding the phenomena of consciousness with those of volition, and of insisting that all afflictions of every kind are subject to the control of the mind or will.

Modern science is sufficiently eclectic to recognize the great value of mind cure or faith cure in its proper sphere, but the pseudo-science which asserts the power of performing miracles is so narrow and bigoted as to deny the therapeutic qualities of any and every kind of medicine, though demonstrated by years and even centuries of experience. When the time comes for the crucial test, however, those who are not fanatic on the subject will yield their opinion to the skill of others, and if they do not they show themselves devoid of reason and common sense.—*Ex.*

The Gila Monster.

One of these dangerous, lizard-like reptiles was exhibited alive at a meeting of the Academy of Sciences a few weeks since and attracted considerable attention. This reptile is no doubt of a very dangerous character, especially when angered. An Arizona ranchman, by the name of Vail, was recently riding in the neighborhood of his home, when he espied one of these reptiles in the road, and alighting from his horse, killed it as he supposed. He tied the carcass to the back of his saddle and resumed his journey, but soon had occasion to place his hand in the vicinity of the animal, which instantly seized one of his fingers with such a vise-like grip that it could only be removed by having its head literally cut to pieces, which was done by an Indian who accompanied him. The gentleman himself immediately cut the flesh of the finger to the bone, just above the wound, and tied a string tightly around above the cut. He then rode for life to the nearest railroad station, 25 miles distant, where he procured a locomotive and rode 40 miles farther before he was able to secure medical aid. By that time nearly the whole of his body had turned black, and the physician gave him no hope of being able to restore him, although he did congratulate him upon his good sense in refusing to drink whisky at the start as the Indian advised him to do—for that, he said, would have ended his life very speedily. Hard work and the application of the best remedies, at last brought the patient around, however, and he is probably the only man living who is able to relate his own experiences in being saved from the usually fatal bite of a Gila monster.

Their Weakness.—The superstition about woman's relative weakness begins to show itself in the training of children. Girls are ludicrously guarded against exercise that they need as greatly as boys, and at every critical period of their life thereafter they pay in suffering for the misguided consideration of those who had their training in hand. The so-called "lady-like" demeanor of girls is a thing to excite impatience. Girls brought up in strait jackets of physical propriety—physical freedom will hurt nobody's "manners"—can never have the grace of deportment, the variety of poise, the readiness in emergency that will belong to girls of liberal physical training.—*Checkley's Method of Physical Training.*

The Electric Light as an Insecticide.—But few are aware of the enormous destruction of insects effected by the electric light. A German entomologist has been investigating and reports that he has found as many as 33,000 are destroyed in one night by a single globe light. Insects must be more plentiful in Germany than here to furnish such an item. But there is no question but that the electric light might be made of great use in destroying many noxious insects which infest our gardens and fields. Mosquitoes, however, and grapevine pests and the pestiferous potato-bug seem to be too wise to be thus ensnared. The chief species which succumb to the wiles of the electric light are gnats and midges.

Domestic Economy

Unexpected Company.

My husband had gone to town to be gone all day, the children were at school with their lunch-baskets, and I had decided to put in a good day sewing and take a lunch at noon myself. As I sat stitching away, with no thought of misfortune or calamity, the clock struck twelve and simultaneously I heard the "crunch" of carriage wheels on the gravel drive at the side door. I looked out the window and to my consternation saw five persons alighting at my door. They had driven twelve miles and must have some dinner.

I welcomed them, explained the situation, and after a brief chat excused myself to prepare a meal for them. In the pantry I took account of stock. There was one slice of cold bacon left from breakfast and the drumstick and wing of yesterday's chicken; there was also one cold boiled potato, a hard-boiled egg, two slices of bread in the bread jar and one cookie and half of another in the steamer. Fortified by these resources, I cheerfully built a fire, and in fifteen minutes I had made a lovely chicken pie, scalloped the potato, adding one cracker to make more of it, and had toasted the two slices of bread and cut them in strips so as to make them go round. I quartered the cookie and a half, and laid on each quarter a slice of the hard-boiled egg, making a novel and attractive relish. At the last moment I found a sauce-plate full of jam which had been set away from tea the night before; this I turned into my cut-glass preserve dish, feeling as if it were quite a treasure. Then, just fifteen minutes from the time I left the parlor, I summoned my guests to dinner, first running out into the garden for a cabbage plant and a few graceful onion tops for a bouquet, for our roses were all gone and the annuals were not yet in bloom. I was quite proud of my menu and the quickness with which I had prepared it, but though fifteen minutes seems a short time in which to build a fire and bake a chicken pie, yet when one plans her work carefully she can accomplish a good deal in a short time. My guests ate heartily, saying the long drive had given them great appetites, and congratulated me on my delightful dinner.

The above is all a lie, every word of it, but it is exactly as true as the nonsense of the same kind one reads in housekeeping treatises and domestic columns of some newspapers. It makes me downright mad to have such stuff written for practical housekeepers by women who I know never cooked a meal in their lives, and who aspire to teach those who have practiced all their lives how to live economically. You cannot make something out of nothing in the culinary line any more than you can in any other way; and the idea of getting up a meal for three or four out of scraps an able-bodied tramp could not fill up on makes me sick. If people must write fiction I wish they would choose something else than cooking—something they know a little about, something not quite so hopelessly prosy and commonplace—as a theme for their romance.

Nine-tenths of the stuff one sees in papers, household magazines, etc., professing to teach women how to keep house and dress well on nothing a year, how to furnish a room with blue denim carpet and cheese-cloth ceiling, how to make a chicken pie out of a slice of cold ham, is written by women who never put their fingers into dough, drove a tack or hung a picture in their lives. A canary bird with a good appetite could not live on the tin soups and dainty "croquettes" they seem to consider so "fillin'," and their economies make me think of the story of the man who was always nagging his wife because she could not cook as economically and at the same time as palatably as his neighbor's wife. "Why," said he, "we had boiled carrots with some sort of sauce the other day, and they were delicious. When have we had a carrot, I'd like to know! And so cheap! Mrs. ——— said enough for dinner only cost her two cents." Madam had boiled carrots at two cents for next day's dinner and her lord and master would not touch them. Why couldn't she have made a sauce for them like Mrs. ———? So next day she got the recipe for the sauce, and they had carrots again, this time meeting the full approval of the man of the house. Then she showed him the bill: Carrots, two cents; ingredients for sauce, including tarragon, curry, and half a bottle of French dressing, 78 cents. Then he shut up.—*Brunfille, in Michigan Farmer.*

Corn Pudding.—Cut from the cob three pints of tender young corn, add three fresh eggs, beaten very light, two heaping tablespoonfuls of butter, salt and pepper to taste, and one teacupful of sweet cream. Bake for one hour.

Custard Pie Without Milk.—Wet a heaping tablespoonful of cornstarch with cold water, add boiling water till it is as thick as thin cream, beat two eggs, add three tablespoonfuls of sugar, put in the cooked starch, beat well, flavor to taste, and bake as usual.

Deviled Chicken.—Cut the remains of cold cooked chicken into neat pieces, dust each piece lightly with cayenne and salt. Put a tablespoonful of butter in a chafing-dish, when hot add two tablespoonfuls of stock or milk, put in the pieces of chicken, and when thoroughly heated, serve.

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SAN FRANCISCO:

Saturday, August 16, 1890.

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[NEW THIS ISSUE.]

Stump Puller—Geo. Harvey.
Musical Instruments—C. H. Hammond.
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Irrigation Machinery, Etc.—Pacific Manufacturing Co.
Cattle Auction Sale—Killip & Co.
School—The Oaks, Oakland.
Almond Huller—A. O. Rix, Irvington.
Oregon State Fair.
Dry Goods, Etc.—Ha'e Bros. Sacramento.

See Advertising Columns.

The Week.

Admonitions of coming rains continue. The heavy downpour last week at San Bernardino is followed this week by light showers at several valley points and by thunder and hail-storms in the Sierra. There is therefore all the more reason to heed our previous advice and get everything to cover which can be hauled and to get covers to everything which must stay afield. Let the play this year be for safety as far as possible; dried fruit is too valuable to be spoiled.

The fairs progress, the San Jose display being on view as we write, and Napa and Red Bluff to come next week. Preparations for the State Fairs of California and Oregon continue, and interest increases as the chosen days of September draw nigh. The Mechanics' Fair, which comes late this year, promises to be unusually good, and will be aided in its work by the State Floral Society and the State Pigeon Society, each of which will occupy a week in displaying its cherished favorites of leaf and feather.

Political affairs are still warmer. As we go to press it is announced that Col. H. H. Markham has been chosen Republican candidate for Governor.

Choice Dates Coming.

We have frequently shown by word and engraving the successful fruiting of the date palm in several localities of California, and have urged that we should have in this State some of the improved varieties developed in the date countries around the Mediterranean, because all plants that have thus far fruited in California are seedlings of the dried date of commerce. The date has varieties of marked individual characteristics in size, form, quality and time of ripening just as other fruits have varieties, and to grow only seedlings is, of course, not a high state of horticultural practice. The difficulty in introducing these improved date varieties arises from the fact that choice kinds can only be multiplied by taking the offsets of the original trees, as the methods employed in multiplying exogenous trees do not apply to the palm. The securing then of rooted offsets and transporting them here in growing condition is rather more of an undertaking than an individual has cared to embark in. It is a proper field of effort for the Government, and we were pleased to announce recently that Secretary Rusk had approved the plans of Prof. Van Deman, the pomologist of his Department, to secure date plants of approved variety abroad. This undertaking has fortunately been successful, and the plants have arrived in this country, as the following extract from a letter from Prof. Van Deman, addressed to the University Agricultural Experiment Station, will show:

The first lot of dates was composed of nine trees (three trees of each kind) and came from Biskra, Algeria. They arrived at Philadelphia July 4th and in Washington July 9th. They are five or six years old and were taken from the ground where they were planted by the Arabs, the outer leaves having been cut off about three or four feet from the ground, and then planted in a box of earth. They are in excellent condition, but a new scale insect was found on them. We are keeping them here in order to destroy these insects by a treatment with kerosene emulsion.

The second lot arrived in Philadelphia a few days ago from Cairo, Egypt, and at Washington this morning (July 24th). There are 54 in this lot, all planted in tubs and in excellent condition. There are six trees of eight of the choicest varieties known in Egypt and six male trees. They have been gathered from different parts of the country, and were intended for the British colony of Mauritius, but that government decided not to take them and our Consul-General at Cairo bought them for the trifling sum of $200. These trees are infected with a scale insect and they will be kept here until the pests are killed. It will perhaps be early in September before we consider them safe to send West. There is in all about a carload and we will endeavor to have them watered en route so that they may reach their different destinations in as good condition as they are now. I think we can say that the choicest varieties of the date will be safely planted in the date-growing sections of this country this year.

I have also ordered plants from the region of the Euphrates and Tigris rivers through our Consul at Beyrout, and another collection of the choicest varieties of Persia through our Minister at Teheran. These perhaps will perhaps be received within a year.

Prof. Van Deman is certainly entitled to the thanks of our horticulturists for his intelligent and energetic movements in this matter. We understand that the importation of date plants is to be divided between California, Arizona and New Mexico. Those for this State will be sent to the University Department of Agriculture, and will be planted at the outlying stations which afford conditions most promising for the date—chiefly, probably, at Tulare and at Pomona. Here they will be fruited and will serve as centers for propagation, whence the new plants will ere long be distributed to other favoring localities. The incoming of these dates will be one of the most interesting events in our horticultural history, and may be in the future considered of great significance. Perhaps now that the practicability of securing these choice varieties is demonstrated by the Government effort, there will be a disposition among private growers to secure importations. We trust it may so prove, for trials should be made at many places which cannot be reached by the present acquisition.

John Bidwell gave an order recently for 30 000 boxes to pack his raisin crop of 1890.

Selling Butter in San Francisco.

The Santa Maria dairymen, whose intention of organization to protect their interests was recently mentioned in the Rural, held their preliminary meeting on August 2d and arranged for a permanent organization to be perfected at future meetings. The *Graphic*, commenting on the meeting, remarks: "The dairymen appear to be thoroughly aroused on the subject, and at the next meeting it is expected that a plan whereby their interests will be subserved will be presented and adopted.' We shall await with interest an account of what such action shall be.

The dairymen have succeeded thus far at least in drawing out a statement from a leading commission firm of this city concerning their methods of doing business and the reason why some butter is returned to the producer at a less price than is actually secured from the purchaser. As this subject will interest all producers who sell in this market, we quote from the letter read at the Santa Maria meeting as follows:

We think it is right for any commission merchant to return the full market price for all and any goods that are consigned to him, and the market price is whatever price he can obtain for a round lot sold as it arrives to the close trade; just the same as the price of wheat or barley is what round lots sell for from the wharf as they are shipped in, and not the price that they are jobbed for in small lots from the store.

Five per cent for selling butter to the close trade, which requires very little expense to reach, is a good margin and will pay well; but no commission-house in San Francisco could ever keep their shippers if they were compelled to sell only in large lots and to the closest trade, who really represent the market. We send our travelers all over the country, and their selling costs us from 2½ to 5 per cent. Add to that the discounts that we allow for cash from the country, always one per cent, sometimes two, and you see that we must ask this country trade from one to two cents per pound more for butter than the close city trade, and from one to two cents more than the market price.

The fact of the matter is, that this extra jobbing price that we get is on account of the close competition between the various butter-houses here, divided with the dairymen, and in some cases entirely given to them.

This statement seems to indicate that the practice of some commission men at least is to return to the producer what they consider a "round lot" price for his butter without regard to what is actually obtained for it as it is sold by the box to the purchaser. If this is what is meant and what is defended in the above letter, it indicates that the commission merchant really speculates in the butter, returning to the producer what the merchant conceives to be a "round lot" price and pocketing the difference between this figure and what he actually obtains for the produce. The writer says that this margin is "divided with the dairymen and in some cases entirely given to them," but that does not matter particularly so long as the practice is defended that the merchant shall credit the producer at one figure and sell at another. The difficulty seems to be due in part at least to the fact that so many commission merchants are dealers on their own account as well and in such a case the temptation to take both profit and commission from a lot of produce is almost irresistible. This whole subject is of deep importance to producers and we are glad they are beginning to look into it.

A General Discussion on Fruit Drying.—A very timely subject will be up for discussion at the August meeting of the State Horticultural Society, which will be held at the State Board of Trade, 605 Market street, on Friday, August 29th, at 12:30 P. M. The subject will be "Fruit-Drying" in any or all of its branches, and it is hoped that all who can will attend, whether members of the society or not. It will also be in order to exhibit especially specimens of prunes fresh and dried, that a better knowledge can be had of the varieties now being grown under different names. There are several varieties now grown under the name "Robe de Sargent," and if they can all be seen together, it may be possible to make out their differences and resemblances. Leaf and young wood should be shown as well as fruit. Mr. J. L. Mosher of San Jose is expected to exhibit samples of the japanned wire trays which he is finding very satisfactory, and others are invited to exhibit fruit-drying appliances. The meeting should be a large one.

The World's Fair Site.

There is more trouble for the World's Fair Directors. After quieting the Illinois agriculturists, whose opposition to a dual site was described recently in the Rural, the Directors have received an opinion from their expert that the Jackson Park site is suitable only for a temporary display of giant squashes and other things which will not shake or wiggle in their places. The expert was the celebrated Frederick Law Olmstead, who is known to California for his work at Golden Gate Park, the University at Berkeley and the Stanford University sites. He was instructed to ascertain to a nicety what space is available for the exposition buildings at Jackson Park without interfering with the park purposes. He reported the ground examined by him would be available only for such buildings as could be removed after the exposition. Furthermore, the park he declares to be unsuitable for a live-stock exhibit or for showing agricultural implements in operation. He explains that the Jackson Park site is swampy and that to utilize more than 112 acres of floor space for even temporary buildings would seriously interfere with the plans of the Park Commissioners for the permanent levee and bayou system with which to resist the encroachments of Lake Michigan. The park never would give satisfactory sites for halls for machinery or for railroad, electric and mining exhibits, and for such objects as are included in what is generally called the main exhibition building. They would be suitable for an agricultural hall.

It looks as though this decision would give the directors considerable trouble, and may result in the re-choice of a site, in which case it may be possible to find ground which will be more pleasing to all interested than selections hitherto made. This will be, on the whole, a satisfactory solution of the matter.

The Beet-Sugar Industry.

The interest in beets for sugar is well maintained. It is reported that the crop at Watsonville is a good one, and the probable aggregate larger than last year, which will give the factory a longer run. Improvements at the factory have been advanced, and a well yielding an almost incalculable amount of water has been secured. Operations are expected to begin about September 1st.

Various points at the South are making preliminary records with sample beet-growing from seed furnished by Mr. Spreckels and Richard Gird of Pomona. Analyses of these beets show in some cases a gratifying sugar percentage and purity co-efficient and lead naturally to much talk about the establishment of sugaries. The venture which just at present seems nearest realization is at Santa Monica, of which the Los Angeles *Express* gives the following rumors:

It has been learned from a thoroughly reliable source that Senator John P. Jones has instructed the foreman of his Santa Monica estate not to plant it to grain this year. In his letter of instruction, Senator Jones informs his foreman that he has consulted with Claus Spreckels, and that the latter is highly delighted with the sugar-beet production of Santa Monica. Mr. Spreckels has agreed, so the letter states, to join Senator Jones in the erection of a sugar factory at Santa Monica.

Reportorial Wisdom.—One of the city dailies, in what purports to be a report of the last meeting of the Floral Society in this city, indulges in this outburst of wisdom: "General discussion ensued on the use of water in gardens. There was very little difference of opinion regarding the application of water to growing plants in the evening or early morning, although the exact amount of water to be used for different plants was different in the opinion of several of the delegates." The fact is that the subject, though down on the program, was not taken up for discussion at all. The reporter drew simply upon his notion of what "might have been," and such, according to the poet, are the saddest words of the pen. It is especially sad in this case that the reporter did not proceed to develop from his inner consciousness whether each plant should have a teacupful or a gallon, instead of leaving the reader in such a harassing state of doubt as to what his practice should be.

A Suit Against Nurserymen.—It is announced from Oakland that Maurice Kahn of Winters has sued a firm of nurserymen for $25 000 damages for selling him some fruit trees that were not of the variety that he ordered. He says that he ordered 1000 Royal apricot trees and 500 Lovell peaches, and that the fruit is now bearing, after three years, and finds that all of the trees, save 73 apricots, are of an inferior kind of fruit.

Florist and Gardener.

Vines for Home Adornment.

[An essay by Mrs. M. M. Childs of Santa Barbara, read at the August meeting of the State Floral Society.]

I take it for granted that every one wants the plant, be it shrub or vine, which will give the most satisfaction with the least care. In an experience of 12 years, during which time I have led a very busy life, I have sought to gather about my home a little of everything; finding that some things would not thrive even in a favorable climate, I have submitted to their loss. But among those which, although neglected, will thrive and beautify their surroundings, I find *Tecoma jasminoides* may always be depended upon, and I believe there is not a spot in California where it would not grow, except where the ground freezes. It is a vine admirable in all its points; slender stems, yet self-supporting; a rampant grower, yet of good shape; glossy, firm foliage, but not too dense; has large, pure-white flowers with deep rose-color in the tubes, each flower about one and one-half inches long and two inches across. From three to six open in a cluster at once; by the time they have fallen, as many more take their place, making the plant seem a mass of bloom. The flowering season continues about nine months of the year, perhaps more, while the lovely foliage is perennial. The flowers are admirable for loose bouquets in vases, being so arranged on the stems as to give them an airy effect.

The next among my favorites is *Mandevillia suaveolens*. It is not so suitable for arbors or large trellises as is the Tecoma, or climbing rose, as it only reaches a hight of some 10 or 12 feet. The foliage is pretty while it lasts, but the vine is denuded of leaves during the three winter months, when it rests. The large, pure white, fragrant blossoms, several in a cluster, with long stems, are particularly nice for vases. If the flowers are left on the vine, each one forms a pod about 10 inches long, looking like an attenuated bean pod, which when ripe is filled with a cream-colored silky substance, in which are imbedded the numerous brown seeds. The self-sown seeds make strong plants the first year, bloom the second year and thereafter as long as the vine lives. Mine is now about 12 years old, but I do not know how much longer it may continue to thrive. It is a plant which is always admired and is willing to take care of itself.

Adlumia cirrhosa is a delicate vine from the wooded mountain copses of the Alleghany mountains. It is often called the "Alleghany vine;" it might more properly be called the lace or fringe vine. The rich, smooth, green, lively cut foliage resembles our *Cheilanthes Californica*, or Lace Fern. It rarely grows above six or eight feet, and flowers the second year from seed. Its delicate pink bells resemble in shape the Lily of the Valley, but are much smaller. My experience is that self-sown seeds make the best plants. It must be grown in a cool, shaded place; it seems most at home among ferns, and I should think the climate of San Francisco just suited for it, if protected from the heavy winds. It is to me an old friend, like Dielytras, Peonies, Lily of the Valley and Lilacs; these I must have about me, although they take a long time to adapt themselves to our soil and climate. I am obliged to keep Dielytra roots in boxes under the coolest shaded side of the fern-house (made of lath), because the slugs soon destroy them unless properly protected.

Ficus repens is a most friendly and useful vine for covering a high-division fence between city lots; it never looks untidy, never pleads for food nor pruning, clings to the wall without being fastened, and makes a solid mass of small green leaves tinted with bronze.

The Virginia creeper (*Ampelopsis quinquefolia*) ought not to be overlooked, its new growth is so pretty, the delicate tendrils dancing with every passing breeze, like a hummingbird on the wing. It is pretty in youth and charming in its old age, as its matured leaves turn to several shades of scarlet and wine-color on the approach of our rainy season (we in California can scarcely say "as winter comes on"). Edward Rowland Sill, in one of his beautiful descriptive poems, said of our winter-time: "Where hyacinth buds bloom white, for snow."

There are dozens more of beautiful vines for covering large spaces, among them the Passifloras (or passion vines) and the Tacsonias; they are very graceful and beautiful if used to cover a dead tree or an old building, and are largely used in the southern part of the State for division fences or a covering for such, and are easily pruned and kept within bounds.

Commercial Floriculture in California.

At the July meeting of the California State Floral Society, a committee was appointed to assist the National Census Bureau in securing an accurate report of the Ornamental Horticultural Industries of California. The following is the report as presented at the August meeting:

Your Committee on Census Report beg to submit the following estimates, as required by the Census Commissioners of the United States:

Acres devoted to floriculture in California	300
Square feet of glass	500,000
Value of implements	$15 000
Number of horses employed	100
Total value of establishment	$200,000
Number of men employed	1,000
Number of women employed	150
Average wages, men, per day	$1.50
Average wages, women, per day	$1.50
Annual cost of fuel	$2,000
Number hardy plants annually grown	3,000,000
Number other plants annually grown	1,000,000
Total amount plant sales in 1889	$1,500,000
Total amount cut-flower sales in 1889	$150,000
Per cent of stock sold at wholesale	50 per cent
Per cent of stock sold at retail	50 per cent
Wholesale catalogues annually issued	50
Retail catalogues annually issued	200
Average amount paid for postage	$500
Average annual amount of freight bills	$2,500
Average annual amount of express bills	$1,200
Freight and express bills on outgoing shipments	$1,000

Commercial manures are rarely used in California; a few florists use bonemeal to some advantage.

Plants most successfully cultivated are: Roses, carnations, geraniums, pelargoniums, chrysanthemums, violets, camellias, azaleas, fuchsias, begonias, tube roses, dahlias, amaryllis, jasmine, stephanotus, bulbs of all kinds, diosma, laurestinus, myrtle, pittosporums, magnolias, araucarias, eucalyptus, caprenus, lilacs, palms, snowballs, clematis, oranges, lemons, annuals, pansies, ferns, dracoenas, yuccas, heliotropes, tree peonies, etc.

Cut flowers most in demand and most profitable are: Roses, pinks, chrysanthemums, violets, sweet peas, orchids, camellias, azaleas, tube roses, lilacs, lilies, eucharis, hyacinths, asters, magnolias, to which should be added smilax, asparagus and maidenhair fern.

In regard to the question "if the business is on the increase or decrease" the committee is of the opinion that the business is increasing in volume, but decreasing in profits, which is due to the employment of cheap labor such as Chinese, Japanese, and Italians, by extensive growers.

Concerning diseases and insects most troublesome, we find mealy bug, red spider, scale, green fly and mildew the most disastrous; and the most approved remedies are sulphur, tobacco and whale-oil soap.

The above estimates and calculations cover the entire State.

F. A. Miller,
E. L. Reimer,
John Rock,
Committee.



ENTRANCE TO THE GARDEN OF THE GODS, COLORADO.

The Garden of the Gods.

The illustration on this page shows the entrance to the famous Garden of the Gods, located near Manitou Springs, Colorado. In the foreground, as shown in our view, are seen the massive walls of red sandstone rising on either side of the opening to the hight of 100 or 150 feet. The wall was originally continuous, but has been worn through by erosion. In the background, through the opening, may be seen the snow-capped summits of Pike's Peak, rising to a hight of 14,000 feet above the sea level. Of this locality, Prof Hayden writes as follows:

This interesting and peculiar place is a valley in the foothills of the range, and is inclosed by an almost vertical wall of massive sandstone of Cretaceous age. The rocks which we find inside have been subjected to an immense deal of erosion, and the many ridges and tower-like forms left standing throughout the garden are the remnants of the parallel strata which dip to the northeast at a very great angle. In some places they seem to dip a few degrees in the opposite direction. As we go toward the mountains, the dip decreases. These rocks are fine-grained sandstones of a deep brick-red color, with here and there layers and spots of a lighter red, and sometimes white. The ridges are exposed for some distance to the north, while to the south, after bending toward the East, they appear to be covered by the debris from the mountains. The entrance to the "garden" is through the "Beautiful Gate," an opening through one of the highest ridges of red sandstone.

Notes from the Fairs.

Ione—26th District.

A representative of the *Record-Union*, who went up on the 6th inst.—the second day of the 26th District Fair—on an excursion train from Sacramento, found the little town of Ione thronged with visitors.

At 11 o'clock there was a stock parade at the fair-grounds, a very creditable display of horses and cattle, showing that the people of Amador are taking a deep interest in the raising of fine stock.

The races in the afternoon embraced four running events, and visitors to the Park were treated to sport as fine as one could wish to see.

The track was in superb condition, owing largely to the energy and industry of Pres. U. S. Gregory and Sec'y Lagrave of the District Association, who were untiring in their efforts to make the fair a success.

The Exposition hall had been handsomely decorated by the ladies of Ione and was a marvel of neatness and attractiveness. It contained a splendid exhibit of the products of Amador miner, quarries, farms and orchards, and was embellished with the panoramic bird's-eye view of the county that graced its display at the State Fair.

San Jose—5th District.

The San Jose *Mercury* of Aug. 12th says:

The annual fair of the San Mateo and Santa Clara County District Agricultural Association, No. 5, opened yesterday morning. The association is assisted in the organization and management of the fair by the Santa Clara Valley Agricultural Society, under the presidency of Wm. Buckley, efficiently aided by Sec'y Geo. H. Bragg. All the noted stables have gathered their strings here, and the contests in the various events will be close and exciting. The program of races has been carefully arranged, so as to afford good sport and excellent opportunities for all classes of horses to show their mettle and speed.

A reporter of the *Herald* who visited the fair-grounds on the opening day noted two or three dozen coops of splendid fowls there; a herd of nine Jersey cattle belonging to John Connorr, on the Saratoga road; Col. Younger's celebrated herd of Shorthorns, 17 head, from little calves to a monstrous bull, all in the finest order.

The Cook stock farm at Danville, Contra Costa county, shows two fine stallions, for all purposes. Mr. Harris also exhibits two. David Abell of Austin, Nevada, shows two running horses.

C. B. Polhemus has a herd of nine demure-looking Jerseys.

Geo. B. Polhemus has a herd of 18 Holstein-Friesian cattle.

F. H. Burke of Menlo has a herd of 18 Holsteins, one Poland-Angus and one Hereford, three or four fine horses, and four pens of Berkshire hogs, one of which is a sow with pigs littered yesterday. They are very cute.

A few pens of sheep and hogs arrived about noon. The stock exhibit has hardly begun yet. The preparations are extensive enough to accommodate a very large display.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

GRAIN.—Haywards *Journal*, Aug. 9: The yield in this section is naturally light. The highest yield so far received is 24 sacks to the acre, but the average will be much below this. Still the quality of grain makes up for the light crops.

Butte.

BUNCH OF GRAPES.—Chico *Enterprise*, Aug. 7: We were shown at General Bidwell's office yesterday a bunch of grapes which measured 20 inches in length and 25 inches around the butt. We did not learn the weight of this bunch, but it is larger than the one shown last year, which weighed 14 pounds. Two years ago a bunch from the same vineyard weighed 18 pounds.

Contra Costa.

GRAIN CROP.—Martinez *Democrat*, Aug. 9: The grain crop in this county is turning out a great deal better than was expected, and our farmers are beginning to recover somewhat from their despondency. We are informed that the yield in the neighborhood of Brentwood and Byron will be larger and of better quality than ever before; also that the grain in Ygnacio, Pacheco and San Ramon valleys is of a better quality, and the yield far in excess of the most sanguine hopes.

LARGE CROPS.—Martinez *Gazette*, Aug. 9: The Marsh grant, we are told, will raise this season enough wheat to load three ships.

Fresno.

DRIED PEACHES.—Selma *Irrigator*, Aug. 9: Paris Allen brought in a four-horse load of dried peaches that netted 6720 pounds, for which Mr. Allen received a check for $1144. This includes about three-fifths of his present crop from nine acres of peach trees. This is more than $200 per acre, and allowing $50 per acre for all expenses, will leave a net profit of $150 per acre.

DRIED GRAPE PURCHASING. — *Republican*, Aug. 8: When M. F. Tarpey told a *Republican* reporter a few days ago that he would give 3½ cents a pound for all dried wine grapes in the county, he was laughed at by some of the bystanders. But Mr. Tarpey meant what he said and left a large margin of profit for himself when he offered 3½ cents a pound, for the packers at the same time were offering 3¾ cents a pound for dried wine grapes in the sweat-box delivered at the railroad depot in this city. This is equal to four cents a pound stemmed and in the sack. A prominent vineyardist was offered yesterday 3¾ cents a pound in the sweat-box for the entire product of 450 acres of wine grapes. This offer was made at different times by three different packers.

WHEAT.—Fresno *Republican*, Aug. 8: Good shipping wheat was quoted yesterday in this market at $1.15 a cental, and milling wheat at $1 20. It is estimated that the yield of this county will be between 210,000 and 220,000 tons, one-fifth more than that of last year.

HAY.—*Republican*, Aug. 8: J. V. Curd has shipped several carloads to Arizona from down the valley during the past ten days. The demand seems to equal the supply, and prices for grain and bald barley range from $9 to $10 per ton. Alfalfa (baled) is held at $8. He has no means of estimating the yield of the county, but does not think there will be any large amount for shipment.

Humboldt.

HAY AND GRAIN.—Eureka *Standard*, Aug. 7: Hay-making is in full blast, and as the brilliant orb of day steals its way o'er the eastern hilltops you can hear the click of the hay press which is busy under the management of Herrick, Haley & Co. These gentlemen are handling an immense crop of first-class hay. When this is baled their services will be required by other farmers who wish a good job done in short order....The grain crop promises a good yield, and in a few days the self-binding harvester will be brought into active use.

Kern.

LIVE-STOCK. — Bakersfield *Echo*, Aug. 7: More roads are crossing the Great West, and each new iron link brings us nearer to the Eastern markets, and it cannot be long before Arizona and New Mexico stock can be sent East as well as West. With the coast market left to California, Oregon and Nevada, and the demand greatly increased by the creation of foreign markets, prices must rule higher. It is evident, too, that the phenomenal growth in fruit culture must affect favorably the stock-growers in the hills and mountains. With more meat-consumers and fewer meat-producers in the valleys, the stock-raisers who continue in the business will find greater demands for their products.

Los Angeles.

GRAPES.—Pomona *Progress*, Aug. 7: We know of contracts that have been made here for the full crop of wine grapes on the vines at $13 and $14 a ton, and we know of some vineyardists who have contracted to sell their crops to the grape driers for $8 and $9 a ton on the vines.

DRIED FRUITS.—L. A. *Herald*, Aug. 9: In six weeks past a Monrovia firm has cut 500 tons of apricots and has shipped 16 carloads of the dried fruit. It has purchased already 850 tons of peaches, which are now being dried, the first carload of which will be sent East to-day. It has also purchased for the same purpose 600 tons of French prunes, and will dry about ten carloads of grapes. It employs 240 men and takes care of 40 tons of fruit each day.

BIG IRRIGATION PROJECT.—L. A. *Herald*, Aug. 9: Up in Antelope valley there are about 300,000 acres of land. Some of this is under cultivation, but a good portion extends into the Mojave desert and bears cacti and coyotes as its principal crops. Col. W. C. Alberger saw the valley and the contiguous so-called desert, and he hunted up a dam-site and now is hard at work with all the men he can get, excavating in the canyon of the Big Rock creek, or, as the more melodious Spanish name is, "El Rio de Llano." He found there a site which will require a dam 250 feet wide at the bottom, 600 feet at the top, and be 150 feet high, which will receive the water from a shed of 250 square miles. The site is only 15 miles from Alpine. The importance of this work is immense to Los Angeles county. The cost of the dam will be about a million dollars, besides that of the construction of a large system of canals and conduits.

BETTER SHIPPING FACILITIES.—L. A. *Express*, Aug. 9: The Santa Fe Co. has ordered a lot of refrigerating cars to be used the coming winter in shipping early fruit and vegetables to the East.

SUGAR.—L. A. *Express*, Aug. 9: A few days ago Senator Jones shipped from Santa Monica a carload of sugar beets to San Francisco, and upon analysis they were found to contain from 12 to 20 per cent saccharine matter. Sugar beet averages from 20 to 30 tons to the acre in production, and nets the producer about $7.50 to the ton. It only costs about $40 to plant some 30 acres, so the enormous profits can be readily computed. With this immense showing it is safe to reiterate that sugar-beet culture will soon have a productive hold on this county.

Mendocino.

HOPS.—Ukiah *Democrat*, Aug. 8: G. T. Rhodes of Ukiah valley will commence picking next week. Encouraging reports reach us from all the hop-growing sections of the county. The crop promises well.

Modoc.

VOLUNTEER WHEAT.—Alturas *Independent*, Aug. 7: John B. Linderman, a Surprise valley farmer, was in to see us last Monday morning, and told us of volunteer wheat that is growing on his ranch. Mr. Linderman is 6 feet 2 inches in hight, and says the wheat is as tall as he is. The other day he counted out of curiosity, and to his astonishment found that from a single grain of wheat there were 135 good plump heads, averaging six inches each in length.

Napa.

GRAPES.—St. Helena *Reflector*, Aug. 10: The dried grape market is stiff this week, large sales having been made at 3¾ cents per pound. A grape-grower of Fresno made a contract yesterday for 1400 tons at the above price, which will net more than $15 per ton. Over 100 tons of grapes were engaged in this vicinity last week at $12 per ton. Another party has also started in buying at $12. A Rutherford grape man, we understand, has refused $12 a ton for his grapes. In Yolo county $13 per ton are paid for Zinfandel grapes, which is $4 per ton higher than this time last year.

Nevada.

SEVENTEENTH DISTRICT FAIR — Grass Valley *Tidings*, Aug. 8: The Directors of the 17th Agricultural Fair Association have decided to postpone the date of opening the fair from the 19th inst. to Sept. 231. Fruit will be abundant along in the middle and latter part of September, and our growers will be enabled to make a large and interesting exhibit. Farmers, too, will be better prepared to meet the occasion and viniculturists will have no excuse for a poor display.

Orange.

WALNUT SALE.—Anaheim *Gazette*, Aug. 7: Mr. Gillman's walnut crop was sold yesterday. The crop is estimated at 40,000 pounds, and the price paid is said to be over nine cents a pound.

Sacramento.

HOW TO BUILD LEVEES.—Sacramento *Union*, Aug. 6: Engineers of much experience in revetment work say that the repair of the cave in the levee at the foot of W street should not be made with broken granite alone. That may slide down and out if the bottom is insecure; but if brush is mixed with the heavy material it will hasten the accumulation of deposits and thus tend to rapid rebuilding of the face of the levee from the foundation up to the surface.

San Benito.

HAY AND CATTLE.—Hollister *Advance*, Aug. 8: Splendid crops of hay are reported from the Gabilan. A. S. Perley has just finished hauling, and the report is that the average yield was three and a half tons to the acre. How is that for mountain land? Cattle are looking well and feed is still plentiful.

San Bernardino.

DRIED FRUIT SHIPMENTS, ETC.—Ontario *Record*, Aug. 6: The Ontario Fruit Company has shipped 87,500 pounds of dried apricots, about 44 tons, making four carloads. That means at least 260 tons of green fruit. We understand that E. G. Naramore of Cucamonga has sold his dried apricots for 15 cents per pound, and has been offered the same figure for dried unpeeled peaches.

San Diego.

FAIR, GRAPES AND IRRIGATION.—*San Diegan*, Aug. 5: The horticultural fair will be held at El Cajon Hights on the last Thursday and Friday of August. The prospects for a very large yield of grapes were never so flattering before, and as the acreage is three times as great as in former years, the crop of raisins will be at least that much larger than ever before. A great many raisin-growers are now using flume water to irrigate with, and they report the result as very encouraging. The vines are healthier and the grapes are larger and better in every way.

RAISINS.—Aug. 7: It is estimated that the raisin crop of this county this season will be 350,000 boxes, 200,000 of which will come from El Cajon. Chicago dealers have contracted for all the Cajon crop, paying 25 per cent over last year's prices.

STEALING BARLEY.—San Diego *Sun*, Aug. 9: Six men, who have been traveling about Perris for the past few days under the guise of showmen, were arrested yesterday, charged with stealing barley. Great quantities of grain are known to have been taken, and much excitement is said to prevail among the farming community there.

San Joaquin.

GRAIN-SELLING. — Merced *Argus*, Aug. 9: Owing to the good prices prevailing, the movement of the new grain to the bay is steady and increasing as the season advances. Farmers prefer to sell at fair figures rather than to hold for possibilities of futures and pay interest and charges.

Santa Barbara.

GRAIN CROP — FRUIT PLANTING. — Santa Maria, Aug. 9: There will be a fair average yield of grain in this section and the bean crop is looking well. Between 500 and 1000 acres of deciduous fruit trees will be in full bearing next season in addition to the existing orchards.

Santa Clara.

PRUNE AND DRIED GRAPES.—Mountain View *Register*, Aug. 9: Last week, John Snyder of Mountain View sold his prune crop, ungraded and on the trees, for nine cents a pound. Buyers are endeavoring to make contracts with the grape-growers in this section for dried grapes at 3½ cents a pound.

Santa Cruz.

BEET FACTORY AND WATER.—Watsonville *Pajaronian*, Aug. 7: Not much is heard now about poor-looking beet crops, but much is heard to the contrary. There are some fine beet crops in Pajaro valley this year, and several farmers expect to have crops that will surpass the previous record of tonnage per acre. It is expected that the beet factory will start up about September 5th, providing enough beets are on hand to insure a steady run. Beet hauling will commence about Sept. 1st. The big well at the beet factory is all finished and in shape for the season's work. At present 170 gallons of water per minute is flowing over the coping. When pumping begins this supply will increase to 700 gallons per minute, or 1,000,000 per day.

Solano.

HARVEST WORK.—Vacaville *Reporter*, Aug. 7: Farmers are not rushing now. Their grain is thrashed and in the warehouse. Their hay is in the barn, except a few stacks left in field for fall sale. Straw engages their attention now. They will take care of all they have this year and be short then. Straw is a good substitute for hay for stock in the winter. Those practical farmers who combine stock with farming find it pays to stack their straw under sheds. Some have straw all hauled in now.

Sonoma.

GRAPES.—Cloverdale *Reveille*, Aug. 9: Cook & Langley have contracted for over 800 tons of grapes at $8 per ton, paying $1 per ton in advance. Their plans are to dry the grapes for the raisin market. The making of raisins out of the wine grape is rather a venture, but there is a market for cheap raisins, and this opens up a new avenue by which to dispose of the overplus wine grapes.

FRUIT CROP.—Santa Rosa *Democrat*, Aug. 9: The fruit crop in Sonoma valley has been greatly influenced this season by the late warm weather and also by the excessive moisture of last winter. The peach crop, as a whole, is a failure, only a very small percentage of last year's shipment being sent to market this year. Probably 50 per cent of the young trees on bottom land were killed, as well as many on higher ground. The majority of the crop this season is small and wormy. Apple trees, although not killed like the peach trees, are affected. The yield is not up to the average either in quantity or quality. The fruit is acid, small, and like peaches, very wormy. Hardly any have been shipped yet on account of the lateness of the crop. The plum crop is varied. In the upper portion of the valley there appears to be a very good yield, although late, while in the lower portion there is scarcely any. On the "Eden Dale" farm, where last year large shipments of plums were made, this year hardly one is to be found. The fruit is of very good size and quality. Pears are very light, affected by worms slightly, but are of very good size and appear to be ahead of the rest of the fruit. Grapes are plentiful and promise a fine crop this fall, and will be cheap. The past few days of warm weather have hastened the ripening. The Tokay crop, however, has been slightly damaged, much being burned by the scorching heat. The vineyardists are holding the latter very high, refusing to accept $50 and $55 per ton in several instances for the entire vineyard.

Stanislaus.

IRRIGATION DITCH.—Oakdale *Leader*, Aug. 8: Work on the Oakdale irrigation ditch is rapidly nearing completion. Nearly 75 men are now employed on the force. At present teams are scarce, but if enough horses can be secured the scraper work will be completed by October 1st. The balance of the work will consist in building flumes and repairing the dam, which can be done in a short time.

Sutter.

HAY.—Y. C. *Farmer*, Aug. 8: The tule grass in the southern and western part of the county is reported to be excellent this year and will add considerable to the hay crop of the county.

Tulare.

WHEAT SHIPMENT.—Tulare *Register*, Aug. 8: There is at the present time an average of 150 carloads of wheat daily going into Lathrop from points along the division. This number of cars is all that is available, though three times as many could be brought into active use.

GOOD GRAPES.—Tulare *Register*, Aug. 8: P. D. Fowler came into this office this afternoon with a box of the finest grapes we have seen. There were three varieties, the Purple Damascus, Seedless Sultana and the Muscat. One of the bunches presented evidence of a queer freak of nature. It had ripened lying on the ground and when Mr. Fowler went to lift it he was surprised to find that it stuck there. Investigation showed that the stems of the bunch had sent forth roots several inches into the ground. The roots were still on the bunch when brought to this office.

BAD FEATURE.—Hanford *Sentinel*, Aug. 7: J. T. McJunkin informs us that a man near Traver, in the Alta irrigation district, was about to make a loan on his land from a city bank, but when the title was presented it showed the incumbrance of an irrigation-bond mortgage for 20 years, and the bank refused the loan, giving as a reason that it did not make loans on second mortgages. This is a new feature of the results of the Wright Irrigation law.

HARVEST AND WHEAT PRICES.—Traver *Advocate*, Aug. 7: Harvesting is pretty nearly over in the 76 country. Some of the farmers of large tracts will not be done for several weeks yet, and there are several small farmers waiting for the thrashers, but the bulk of the crop is harvested and the warehouses are having a lively time handling the grain, which crop has been very heavy even for this, one of the best wheat-growing sections of the State..... Wheat is quoted in the local market at $1.13@ $1.15 per cental. This is a good price, considering, and a great deal of grain is being sold. Although wheat is not ruling near so high as fruit, it seems that both wheat farmers and horticulturists are going to make something this year.

Yolo.

WHEAT.—Woodland *Mail*, Aug. 9: A. K. Robinson, a thrashing-machine man of many years' experience, and who has been thrashing for the past 30 days in this county, says that he had never thrashed wheat of so poor a quality as this year's yield. He says the wheat is shrunk, and in some instances much cheat is found.

Yuba.

FEATHER RIVER BREAKS.—Phil E. Drescher writes to the Marysville *Appeal* Aug. 7: The river now stands five feet —— inches. I made the examination and find that the Indian mound break is 150 feet wide. The water has cut a slough in the original bank ten feet deep, extending from the bank for 200 yards. The water stands now in it near the river-bank from three to ten feet deep, but is not running. This break is at a place where the course of the river forms a right angle, and below it the river is the narrowest between its mouth and the mouth of the Yuba. About one-half mile below the Indian mound break, at a point where the railroad embankment comes within 400 feet of the bank of the river, is another break 70 feet wide. The water has cut a slough 12 feet deep in the original bank. The water in it is on an average 7½ feet deep, and is still slowly running. Of the trestles of the railroad opposite this break, three piles have been washed out. It is painful to notice the destruction last winter's high waters have wrought to the old Nelson farm, the ground which has been torn up and the sand carried into the Sutter basin. I do believe that last winter's waters have carried more sand into the Sutter basins than all previous high waters from 1849 down.

NEVADA.

TWO CROPS.—*Lyon County Times*, Aug. 7: "Old Man" Barrett of Mason valley is doing something this year that has probably never been done in this State before. He has raised one fine crop of potatoes already this year, and is now planting a second crop, calculating that he will have plenty of time to harvest it. He is using for seed the potatoes that he has already raised this year, which are of the Early Puritan variety. If he makes a success of his venture, it will be quite an item for Nevada, and will show how wonderfully productive the soil of our State is.

ORCHARD PEST.—Reno *Gazette*, Aug. 7: Insect pests are playing havoc among the fruit orchards of Reno, and numbers of orchard owners are taking energetic steps to check the scourge. The fruit trees especially attacked seem to be of the apple, pear and cherry varieties. The leaves curl up over a great portion of the foliage, and upon examination are found to be swarming with tree lice. Many fine trees had already died before the extent of the evil became known.

[COMMUNICATED.]

AN OPEN LETTER.

STEAM PLOWING.

The Remington-Daniel Best Traction Engine.

To the Editor of the Farm Implement News:

Noticing your article "Steam Plowing," with a sub-head "Price's New Steam Locomotive" (the data for which you evidently had to rely upon Price), in your June number, allow me to say that the article in several of its parts, if not throughout, is misleading in the extreme. But the most prominent misleading feature of it is the attempt to make the public think that this Price machine is the great Pacific Coast machine, while the truth is, it is mine ("The D. L. Remington Machine"), with improvements made at the Daniel Best Agricultural Works at San Leandro, California.

By a cunning use of the word "type" in the article, the reader is left under the impression that everything that has been done by the "Remington" and "Improved Remington" had been done by the "Price Machine." A brief history of the "Remington," with improvements, and a statement of what it has done, will facilitate an understanding of the matter.

In 1885, I turned my attention to the construction of a traction engine, and with the crude appliances at hand in my "country shop," I in time turned out a small, roughly made engine, but one that worked beyond even my own sanguine expectations when put into the woods logging and into the field plowing and to general work. Subsequently, I made another and more complete one. This one, which I named "Rough and Ready," I took to California, arriving at San Leandro with it in March, 1888. Great crowds assembled almost every day for weeks to witness exhibitions of this machine, made in the neighborhood of Daniel Best's works. Its performances were truly astonishing and "Rough and Ready" was pronounced a grand success by all, and all included some of the most competent judges of such machines on the Coast. At this time I sold to Mr. Best the right to manufacture these engines on the Pacific Coast, and from that time forward he has been turning them out to the full capacity of his establishment and selling them as fast as they were finished.

The main feature of these machines, that is, the things that give them their great power and speed, remain the same as in the original machine and are my inventions. Mr. Best has made improvements, but these it is not necessary to mention in detail here, and he now offers to the public the handsome and powerful machine shown in the picture on this page and of which Crocker's Railroad Guide for 1890 says:

"For simplicity of construction it cannot be equaled. There is absolutely not a superfluous piece of iron or wood about it. It stands a trim, clean-limbed, *muscular*, steam-lunged, iron-ribbed giant, ready to tear up the earth with twelve 12 inch plows, running to the beam, at a tireless speed that would soon exhaust a hundred horses. And then in due season, with a 40-foot-cut Steam Harvester (if one so wide is required), to go into the field again and reap and thrash and clean and prepare for the market more than a hundred acres of grain in a single day. It is not a ponderous, unwieldy machine. It is just heavy enough to do the work required of such a machine, and its tractability is something wonderful. It will move in every direction, back and forth, in a circle, and in all imaginable curves, and turn a square corner with the same ease that a railroad locomotive can move back and forth on the rails, and it can climb as steep a hill as a team of horses can with a loaded wagon. It is truly the latest great improvement of the age." The performances of my engines well warrant the use of these strong words.

In your article it is said: "This question naturally arises in the minds of those who have given attention to steam plowing, 'Why does this type of engine show so much better results than any other?' for it is true that locomotive steam plowing has nowhere been a practical every-day business, except in California." To this, Mr. Price replies as follows: "Because in this machine are combined in a skillful manner certain features which have never been united in a field locomotive before."

Now the truth is that all the things done about which the wonder is expressed in the question, were done by the "Remington" engines. When the question was printed in your paper "this machine" of Price's was still in Racine and had not even started on its journey to California. And yet Price deliberately breaks the commandment and insults the intelligence of the people of the Pacific Coast, acquainted with the facts, by saying, by an artful twist of words, that all the great achievements of the traction engine in California are because "in this (his) machine are combined in a skillful manner certain features that have never been combined in a field locomotive before." What machine? let me ask. My query, "What machine?" lays bare in all its baldness the attempt on the part of Price to mislead. By "this machine," he must mean his. If he means mine, I take it all back. But the otherwise uninformed reader could come to no other conclusion from the reading of the paragraph than that he was to believe that his (Price's) machine and no other had "the combinations, etc.," that had worked the wonders spoken of.

Let us see. About a year before I took "Rough and Ready" down from Oregon, Price put up at the Daniel Best works a traction engine under a contract with the city of San Jose, California, to furnish an engine to crush bituminous rock on the streets of that city. No one will ever dispute Price's claim to this "type" of engine. I don't think anything like it was ever conceived by mortal man before or since. It was a travesty on all mechanical ideas and it was ridiculed by everybody that saw it. He took it to San Jose and struggled there with it three or four days to make it go, but failed. The thing was condemned by the authorities of San Jose and ridiculed and laughed out of the town by the papers and the people. The San Jose *Daily Mercury* of October 13th, 1887, contains a column editorial lampooning the abortion most unmercifully, and in one paragraph says: "It is a failure, was the verdict of every one that saw it, and the more the endeavors to make it go the stronger becomes this impression."



De LAFAYETTE REMINGTON, PROPRIETOR WOODBURN IRON WORKS, WOODBURN, OREGON.

In other parts of the *Mercury* article it is said:

The Price roller — price, $4000 — is still in town, although a rumor was current yesterday forenoon to the effect that it had been taken to the infirmary to mash potatoes for the invalid patients. As a matter of fact—and it is the purpose of this article to deal solely in facts—early yesterday morning the men from San Leandro adjusted the "tempered" springs, got up steam and coaxed the roller to slowly jerk its way along to San Pedro street. * * * *

Shortly after it started a gentleman whose name is suppressed out of consideration for a sick uncle who lives in the south of Ireland, placed a piece of brick in front of one of the big wheels. The engine puffed and snorted, and the unwieldy machine bucked and teetered and jerked and rasped and strained and worried. The brick was twisted and turned up. More steam was applied, the engine groaned piteously, the wheels slipped, the machine trembled and rattled, and, finally, by a great effort, the hardened clay was conquered and the roller jerked its weary way along. * * * *

"Do you expect to be able to start it up again in the morning?" inquired the reporter.

Mr. Price replied that he hoped to be able to get it started, but did not appear to be at all confident of success.

Provided the machine is repaired and it isn't shaken to pieces by its own motion, or mischievous boys don't throw pieces of brick and fruit in its way, it is possible that it may be induced to crawl as far as Santa Clara street before breaking down to-morrow.

Again, I quote from your article as follows: "Mr. Price enumerates many more points which, combined with the foregoing, go to show why his engine accomplishes more than others have done hitherto, but want of space prevents their insertion. He concludes his summary of them by saying that, applying the ordinary methods of computation, his machine shows 100-horse-power nominal."

Then, after going on in a long paragraph to claim great power for his machine, he says: "These machines in California work nearly the year round, first plowing the ground and sometimes (by means of seeders attached to the plows) sowing the grain; then, by the use of traveling threshers, harvesting and threshing it, and, finally, hauling it on wagons to the nearest railroad station. As they do this work for about one-fourth the cost of the use of horses, plowing the ground for 50 or 60 cents per acre, and harvesting and threshing the grain for even less, we look upon them as machines of great importance to certain sections of our country."

Again, I ask in the name of the spirit of fairness which should animate all men and pervade all business competition, What engine is "this engine?" and what machines are "these machines?" Surely not the machine that was standing in the shop at Racine when the article was written, and was and is the only one of "this type" manufactured by Price, a "type," by the way, of which he had not the most remote idea until he had seen "Rough and Ready" and grasped its parts and dimensions. Surely, it was not "this (his) machine" which never did a stroke of work in California. Why did not Price tell that the "Remington" engine had done these things and that he had tried to make one as near like it as he dared and hope to evade the law? But nowhere in the article is Mr. Best or myself mentioned or the engine manufactured by us, and all fair-minded people must regret the unfairness shown by this evidently *designed* suppression of such mention—this concealment.

My object in publishing this article is to give the craft and those outside interested in such machines the facts about my engine and "this (that) machine" of Price's. The achievements of my machine have indeed been wonderful, and so they have been pronounced by the most competent judges, and it stands to-day, I believe, with due deference to other older inventions, *par excellence* at the head of all traction engines in the world, and I wish to claim the honor due and to see that I get the profit as well. I don't intend, if I can help it, to let either be purloined from me. And I am glad that your article has given me the opportunity to let the country know in this way more fully that it is my traction engines, as manufactured by me and by Daniel Best, that have done the work in California that has made this method of cultivation an assured success, mechanically and financially.

I will be pleased to answer all inquiries asking for information in regard to my engine and for full information as to what these machines have done in California. I refer the reader to Daniel Best, San Leandro, California. D. L. REMINGTON.

Woodburn, Or., July 30, 1890.



THE REMINGTON TRACTION ENGINE WITH DANIEL BEST'S COMBINED HARVESTER.

De Lafayette Remington.

Mr. Remington is a scion of the Remington family so noted for its inventive genius, and he is closely connected with one of its prominent branches. He was born in Hancock county, Illinois, in 1847. In 1853, his father came to California with his family, settling in Placer county, where he and two of his sons died. In 1859, the remainder of the family emigrated to Oregon, where they still reside, at Woodburn. The subject of this sketch was brought up a farmer boy, but he early took to contriving and inventing, and "for over 20 years," to use his own expression, he has been "handling steam and steam machines." He has taken out a

number of patents, several of them pertaining to "reversing gear" and "automatic cut-offs." In 1888 he patented the excellent traction engine which bears his name as the patentee and which is the subject of the illustrated article presented on page 139, and which he claims is the first successful steam farm locomotive ever produced.

Mr. Remington is in the prime of life and is entirely devoted to the inventing and constructing of machinery, and with his mental endowments in these directions he may yet give us from his workshop up by the beautiful Willamette, the steam farm wagon, handy and economical for all purposes, that the world has been looking for these many years, and which, he feels sure, his "type" of engine, as now manufactured by himself at Woodburn and Daniel Best at San Leandro, California, approaches nearer than any other.

HORTICULTURE.

The Ultimate Orange.

In the *Florida Farmer* is a letter written by that veteran orange-grower, E. H. Hart, Federal Point, Florida, on the orange of the future:

It is perhaps to hybrids of the citrus family that we must look for the choicest oranges of the future. Every member has some superlative characteristic, and could all these be judiciously blended in one, the combination would form an ambrosial interminglingof flavors as yet "undreamed of in our philosophy." The pungent aroma of the lime, the exquisite fragrance of the lemon and bergamot, the cooling and refreshing juice of the mature grapefruit, the honeyed sweetness of the Sevilles, the sprightliness of the Malta strain, the satisfying richness of the Brazilian Navels, the spiciness of the Mandarin and the *je ne sais quoi* of the citron—would not the best traits of all united make a dish, like the four and twenty blackbirds, fit to set before a king?

This desirable consummation, at least in a progressive degree, will not require the labor of ages for its accomplishment. At Ocala, a stock-breeder looked over the broad expanse of glittering samples, and made the boast that he could breed up cattle much faster than we could evolve new oranges of startling merit. He did not consider that what he gained by slow gradations the more fortunate scientific fruit-grower sometimes achieves at a single bound—like a woman jumping at conclusions—and that happy accidents in the fruit line have a permanency unknown to flesh and blood.

Already the judicial board of the Florida Horticultural Society is beset by specimens of mixed races, of novel appearance, and of flavors that call for a second bite. The most sagacious of the conclave are often puzzled to determine the precise degree of admixture and decide which to class as mulattoes, quadroons or octoroons, when traces of widely opposite parentage are plainly apparent.

Dr. Bonavia, in his new work on Eastern oranges, thinks that the orange will not cross with the lemon. A Floridian who has never been in India may not venture to contradict him as regards the Orient, but like the French, we do things better here, and when a Floridian says oranges and lemons will not intermingle, we score him one for mendacity. Old growers have seen oranges, or what were oranges to all outward intent and purpose, growing on lemon trees and vice versa. Such varieties as Tardiff, Prata, White and Paper Rind St. Michael smack too strongly of the lemon to be, like Cæsar's wife, above suspicion; and the presence ofttimes, upon their outside, of lemon cells is plainly visible to the microscopist. The description and outline of a Navel lemon figured in the *Farmer and Fruit-Grower* of November 7th last is a tough morsel for unbelievers to swallow. There is an old saying that a molasses-barrel should be planted by every currant bush, and we know that many strawberries are sour enough to require a heavy draught upon the sugar-bowl before they "go right to the spot." Varieties containing a greater proportion of saccharine than usual are the most palatable, as the preferences of the birds demonstrate. If, in like manner, the juice of the lemon must always be diluted and qualified with sweet before we use it, it is not unreasonable to suppose that a slight dash of the superb dulcitude of a Washington Navel might render less sugar necessary in its use, without detracting from the acidulous potency.

Several hybrids of the Mandarin and common oranges have come up, good enough in flavor and keeping qualities to persuade the proprietors thereof that in them lies a mighty nice thing, which, if carefully guarded, will banish the letter I from flat purses. There was a suggestiveness about those Traveler oranges exhibited last winter at Ocala which caused a veteran taster to pause and observe, as he rolled a morsel over his tongue, that here was something which would be heard from again. Every specimen was broadly marked with the Navel—piquant, tender, with a smack of both grapefruit and Mandarin, and as distinct from aught else as the Mandarin from the common orange—a new departure, so to speak, which may be as eagerly sought in Northern markets some future time as was *citrus nobilis* in the palmy days of its first introduction. Another dainty little hybrid, evidently of the same descent, and never yet on exhibition, was indeed a surprise to me in marvelous piquancy and tenderness of pulp. Taking fruits like these as a basis and crossing and recrossing, who can tell what exquisite flavors may yet be attained?

If, trusting to the superlative quality of the oranges we already have, we are content to rest upon our laurels and rely upon the masterly inactivity of letting well enough alone, we may, in the phrase of degenerate vernacular, "get badly left." Does it not mean something to us when Dago Imperial Bloods sell for a solid V in Northern markets at the very time our brag oranges are, from abundance as well as immaturity, almost a drug? Does it not mean something when foreign fruit comes to us handsomely polished and showing traces of the brush, and set off by the shrewd Dago with glittering chromos and brilliant wrappers, the very ear-marks on the outside of the package giving testimony that the æsthetic tastes of classic ancestry have not yet died out in their descendants? The beautiful external appearance of California fruit, added to its handsome interior, goes far toward balancing the gustatory perfections, which we flatter ourselves are one of our peculiar institutions.

But our peculiar institution is not going to save us unless we gird up our loins and take hold. In orange-growing, as in all other mundane affairs, there is always room for improvement.

The Southern California Pomological Society.

H. W. Kruckeberg, corresponding secretary of this organization, has issued a circular from which we quote as follows:

The Southern California Pomological Society at its last meeting, held in Pomona, April 3, 1890, recognized that one of the leading obstacles in the way of rapid development of our rural industries was the lack of an organization that would represent all of our broad domain, and to obviate this evil concluded to make an appeal to every person engaged in producing anything from the soil to join the organization. The growers who have been "loyal and true" to the society feel that it has outgrown its distinctive local character and should now embrace a broader field and become the distinctive and representative body of the producing classes of Southern California.

The objects and benefits of such an organization are at once obvious and of wide application. There is much yet to learn, and by coming together and exchanging ideas and experiences, much good can be accomplished. The various subjects that the Pomological Society will deal with are all important, among them being: 1—Organization of local societies in every locality. 2—The building of large and substantial market-houses in every town, and regularly appointed market days by ordinance. 3—Formation of unions for selling, shipping and regulating prices. 4—Marketing, packing and shipping of green fruits. 5—Drying and curing fruits, and best methods to be employed. 6—Scales and washes. 7—Can infested trees be safely disinfected? 8—Fertilizers, values of different manures and commercial fertilizers. 9—Analysis of soils. 10—Quarantine against infested localities. 11—Efforts to secure proper legislation touching fruit pests, diseases and their extermination; besides a whole range of questions relating to planting, pruning, irrigation, cultivation, climate, soils, and a thousand other topics that enter into the successful practice of practical horticulture in Southern California.

Does not this array of important subjects appeal to your sympathies and your pocket-book? Is it not worth a small portion of your time to confer with your brother horticulturists, and by an interchange of opinions, experience and results, mutually benefit each other? Intelligent workers everywhere are in the field, each contributing his mite and knowledge to help develop the great industry of the country, and the greatest good you can do your fellow-horticulturists is to give them any suggestions and experiences you possess calculated to save labor, wear and tear, and thereby avoid mistakes. Do you not realize this fact from your own experience? And if so, why keep this knowledge to yourself when thousands are thirsting for it? The objects are certainly worthy of your hearty support, and the benefits to be derived are incalculable. Will you not join and be present at the meeting Thursday, October 2, 1890, at Rialto? Correspondence addressed to the secretary, D. Edson Smith, at Santa Ana will command immediate attention.

Cranberries in Washington.

A. F. Grow writes to the Washington *Farmer* of the cranberries native to the Pacific Coast, mentioning the fruit as found on the north end of Whidby island at the head of Dagualla bay: Our guide led us through a timbered swamp. Emerging from the swamp, we were soon walking over the soft moss forming the bed on which the cranberries had grown and ripened. We were soon picking as fine, plump berries as the writer ever saw growing in the cranberry marshes of the State of New York. We only picked over a small space on the southern border of the lake, but the berries seemed to extend over quite a large area.

The cranberry found in many parts of Western Washington is certainly very palatable. Those we picked on Whidby island were equal in quality and flavor to those we used to get in Illinois and Kansas, some of which were doubtless wild berries from Michigan and Wisconsin. Cranberry marshes were plenty in Western New York, but having on them tamarack and white cedar timber, and, unlike the marshes on Whidby, the berries were found where there was standing water, without the bed of thick moss. They were frequently picked where one had to be very careful to search out some root or hummock for the feet to stand on.

The moss on one cranberry marsh we visited on Whidby was from a foot to 16 inches thick and entirely dry. There was probably water on it in early spring.

Another difference between the Eastern cranberry and those on Whidby island is that there the soil was a rich, deep muck, while those seen by the writer here are utterly worthless for agricultural purposes. Cultivation would undoubtedly improve our wild cranberries. There are some cranberry farms near Olympia, and their cultivation wherever suitable land can be obtained ought to be made to pay well.

WEBSTER'S IDEA OF THE PACIFIC COAST.—It is somewhat singular that a man like Daniel Webster should have entertained such an erroneous idea of the value of the Pacific Coast as his own words show that he did. Less than 50 years ago a bill was brought before the United States Senate to establish a mail route from Western Missouri to the mouth of the Columbia river. Senator Webster opposed the measure as a useless expense and spoke as follows: "What do we want with the vast, worthless area—this region of savages and wild beasts, of deserts, of shifting sands and whirlwinds of dust, of cactus and prairie dogs? To what use could we ever hope to put these deserts, or these endless mountain chains, impenetrable and covered to their bases with eternal snow? What can we ever hope to do with the western coast—a coast 3000 miles long, rock-bound, cheerless and uninviting and not a harbor on it? What use have we for such a country? Mr. President, I will never vote a cent from the public treasury to place the Pacific Coast one inch nearer to Boston than it now is." After reading the above no one need be surprised that he made the great mistake, in his Webster-Ashburton treaty, of giving away our acknowledged claim to the Pacific Coast from the present northern limit of Washington to the southern boundary of Alaska, while all the country was crying out, "Fifty-four forty or fight!"

AUSTRALIAN BALLOT IN MONTANA.—The Supreme Court of Montana decided, July 29th, that the Australian ballot law was mandatory and not discretionary in its character. The case grew out of a suit for a justice's office, in which one of the candidates who received a majority of the votes, and who was given the office, had failed to notify the county clerk of his candidacy within the time fixed by law. The decision is regarded as one of great importance.

California's Stallions.

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[COPY OF LETTER FROM GEN. BIDWELL.]

CHICO, CAL., July 14, 1890.

To whom this may concern. The bearer, Mr. J. Luther Bowers, having been in my service for some time, several years ago, as a practical fruit-grower, it gives me pleasure to say that I found him competent and reliable in all respects, and as such I very cheerfully commend him to the kind notice of all persons. Very respectfully,

JOHN BIDWELL.

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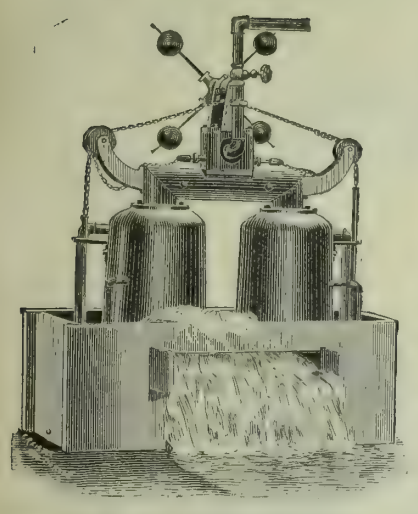
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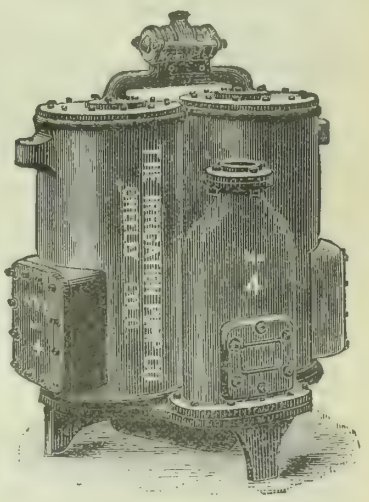
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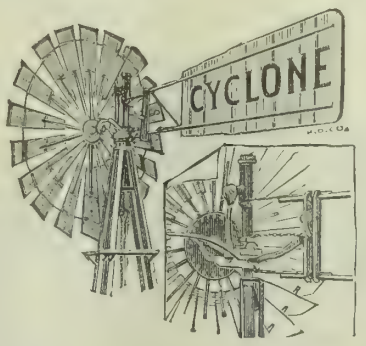
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Agricultural Engineer

Clarifying Water from Streams and Ditches.

Editors Press:—In a recent number of the Press the difficulties encountered in securing pure water, and the methods employed by the leading water companies, was ably written up and illustrated. This same difficulty was met and overcome by the miners of '49, and their experience may help to solve the problem of how to obtain pure water. The miner used the water in the mountain section where storms were frequent and severe; in consequence the wash from the hillsides and gulches soon filled his reservoirs and ditches. As a rule he was compelled to use water that carried all the tailings from a mine farther up the stream, and this had to be disposed of before it could be turned into another ditch. The '49er proved himself equal to the emergency in this as in everything else. Dams built across the ravines impounded the wash coming down from above. Headgates placed at different levels allowed the drawing off of clear water from the reservoirs. Where the sand filled into the ditches badly a slot was cut across the flume and a 2x4 placed back of it. Through this slot the sand dropped, and thus left the ditch free from accumulating sands where the mud or slickens was held in solution. Slum-boxes were built at the side of the ditch. The water, by means of gates, was turned into these slum-boxes, and at the lower end of the box turned out by another gate into the ditch. These boxes were about three feet lower than the bed of the ditch, and so acted as settling tanks. When nearly full the upper gate, which turned the water into the slum-box, was taken out of the flume and placed across the entrance to the slum-box; then a gate at the lower side of the slum box was opened and the slum either shoveled out or a stream of water was turned in sufficient to wash it out. These slum-boxes could be built in succession and the water settled until it was as clear as desired.

When in Dakota, in '80, the superintendent of the Homestake mine used the water appropriated by another, and although he restored it to the same stream, was sued for damages for fouling the water. He put in a series of slum-boxes, and when the case came up for trial, placed on exhibition a bottle of water taken from the stream at the point where his ditch diverted the water, and another bottle of water from the stream below where he discharged it from his slum-boxes. The court found that the water had been purified instead of befouled, as it was cleaner after than before using.

Murphys, Cal. E. H. Schaeffle.

Fashion Notes.

Girls' Dress.

Fig. 1.—In this instance plain and embroidered nainsook and blue gingham are united in the dress, and embroidered edging prettily trims the neck and wrists. The full, round skirt is finished at the bottom with a deep hem and gathered at the top to fall in free, graceful folds from the waist, to which it is joined, a cording of the material being included in the joining. The ornamental front and back of the fanciful waist are arranged in box-plaits and mounted on plain high-necked portions, the box-plaits being ornamented with rows of tiny buttons.

A puff, which widens at the center of the front and back, droops prettily over the ornamental sections, and its upper edge is finished with a cording of the material. Above the puff the plain portions are exposed in round-yoke shape and faced with embroidered nainsook, and an upturned frill of embroidered edging at the neck. The sleeves are made over coat-shaped linings; the lower part of each sleeve is made of white nainsook and has the effect of a shirt sleeve, and a full puff of gingham forms the upper part, rising stylishly high above the shoulder. Wristbands of embroidered nainsook finish the sleeves, and a frill of embroidered edging droops prettily over each hand.

The mode is adaptable to all sorts of woolen and cotton textures, and cashmere, serge, fancy gingham, seersucker, cambric, embroidered flouncing, zephyr, China and India silks, pongee, batiste, challis, lawn, etc., will be especially favored for it. Embroidered edging, washable or other laces, novelty bands and fancy stitching may be added in any pretty way for garniture.

Misses' Dress.

Fig. 2.—The dress here shown developed in plain and figured India Silk and violet ribbon in three widths and embroidered edging provide the garniture. The full, round skirt falls in graceful folds from the fanciful bodice, to which it is joined; and the lower edge is hemmed and trimmed with three rows of velvet ribbon of different widths. The bodice has a plain front adjusted by single bust darts, over which a full portion, shirred at the top to form a frill, and a smoothly fitting portion are arranged to reveal the pointed yoke-facing of figured India silk. Rows of velvet ribbon arranged in points at their front ends trim the smooth front effectively. Full backs corresponding shoulders. The part below the puff is of figured silk, and an upturned row of embroidered edging forms a petty wrist-finish.

Combinations of fabrics or colors will develop attractively by the mode, which is well adapted to all seasonable goods of silken, woolen or cotton texture. Lace, embroidery or velvet will frequently be united with with the full front are arranged over plain, high necked backs that are fitted by side-back gores. The plaited ends of silk sash-ties are sewed over the side seams, and the ties are arranged in a pretty bow of long loops and ends at the back. The sleeves are in coat-sleeve shape, and each is rendered fanciful by a deep puff which extends nearly to the elbow and rises stylishly high over the



Fig. 1—CHILD'S DRESS.

Fig. 3—LADIES' LEGHORN HAT.

Surah, casemere, fancy gingham, etc., for the yoke and the plain portion of the sleeve, and a dainty arrangement of velvet or grosgrain ribbon will complete a most charming costume. Embroidered flouncing will make up very prettily in adress of this description.

The hat is of Neapolitan and is prettily trimmed with flowers and ribbon.

Ladies' Leghorn Hat.

Fig. 3.—For sea-side or carriage wear this hat is especially handsome. The brim is slightly rolled at the sides and bent up at the back. A large bunch of fine white flowers, purple velvet pansies and large leaves cover the crown and falls prettily over the brim. A *pouf* of Valenciennes lace is arranged at the back, and from it falls a long lace barb that is wound several times about the throat or pinned on the corsage. This hat may supplement an elaborate toilette.



Fig. 4—CHILD'S HAT.

Fig 2—MISSES' DRESS.

Child's Hat.

Fig. 4.—This picturesque hat is a black Leghorn flat and has a fancy-edged brim. The crown is encircled by a band of black velvet, and a wreath of yellow blossoms, leaves and grasses lies flatly on the brim. At the front is placed a large rosette of narrow velvet ribbon that falls partially on the brim and rests upon the crown. The brim may be bent up in the most becoming manner, if a flat brim be not desired; and tulle or *crepe* may be used for trimming.

For Information, our readers are referred to H. A. Deming, No. 124 Post street, S. F., a leading and well-established house, for paper patterns of plates illustrated in our present issue.

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Just now we are offering some bargains in EMBROIDERED HALF FLOUNCINGS at 75c, $1 and $1.25 a yard. The patterns are exquisite, being much finer and deeper than the usual run of Half Flouncings at those prices. They will be found excellent for Children's Dresses. If you can use these goods, either now or hereafter, you will find it worth your while to order soon. We will send samples at each of the prices if desired.

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Our Illustrated Fall and Winter Catalogue will be out next month. Send us your name and a list of your friends and receive a FREE COPY.

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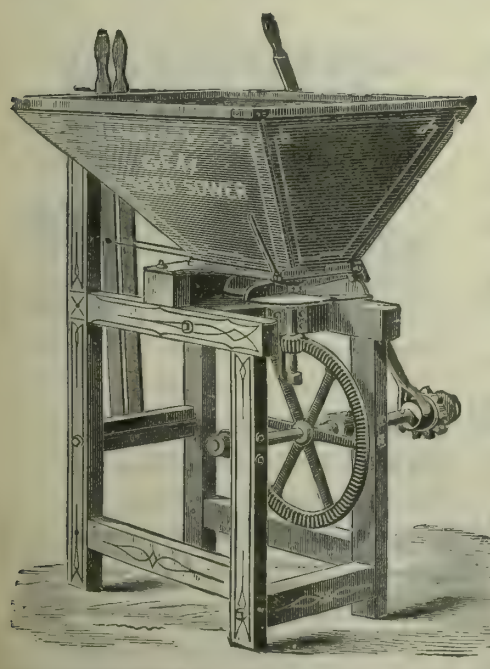
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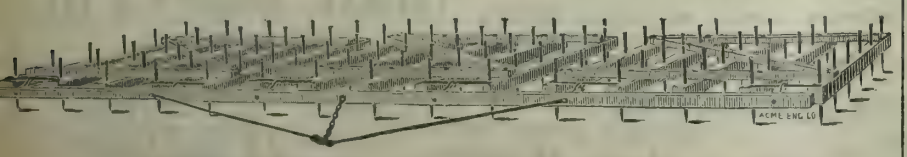
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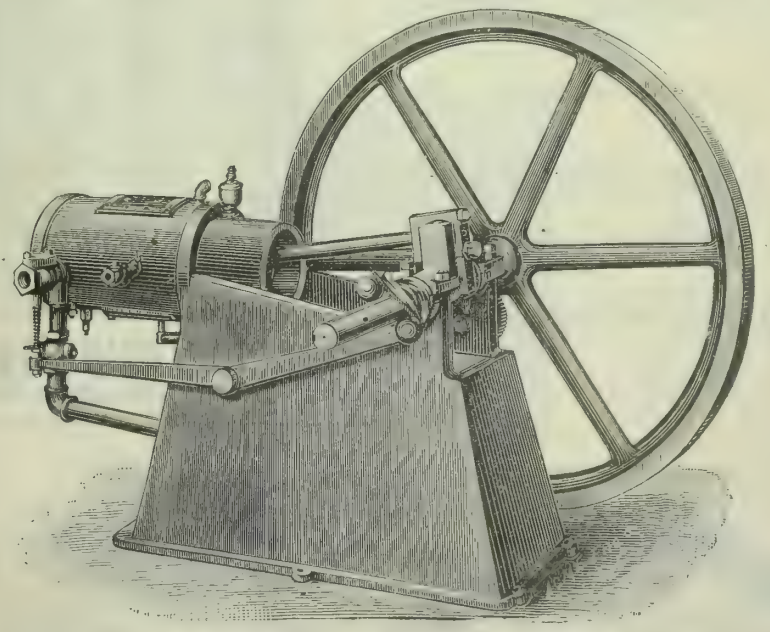
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Thirtieth Annual Exhibition

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And Lasting One Week.

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Reduced rates for fare and freight on all transportation lines to and from the fair. Important improvements have been made upon the grounds and increased facilities are offered exhibitors.

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Entries for premiums close Monday at 7:30 P. M. Exhibitors are urged to make as many of their entries on Saturday before the fair as possible. Goods, animals and articles for exhibition must be in their places by 10 P. M. on Monday.

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Send to the Secretary at Portland, Oregon, for a premium list.

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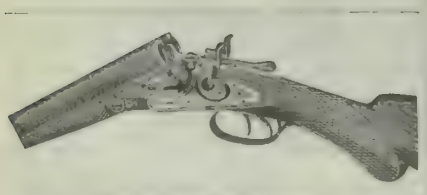
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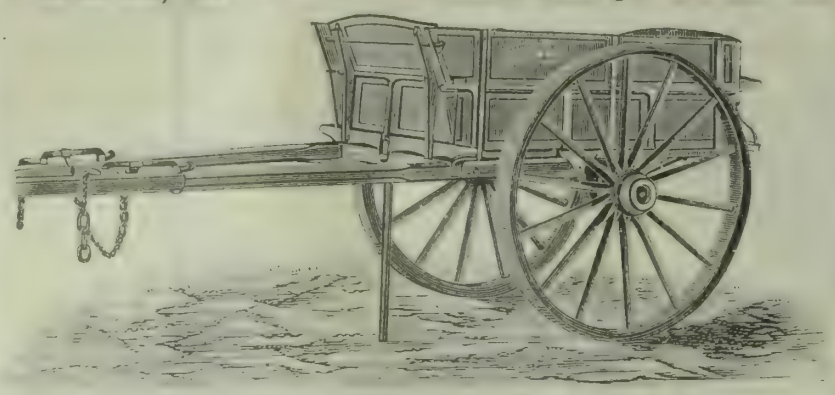
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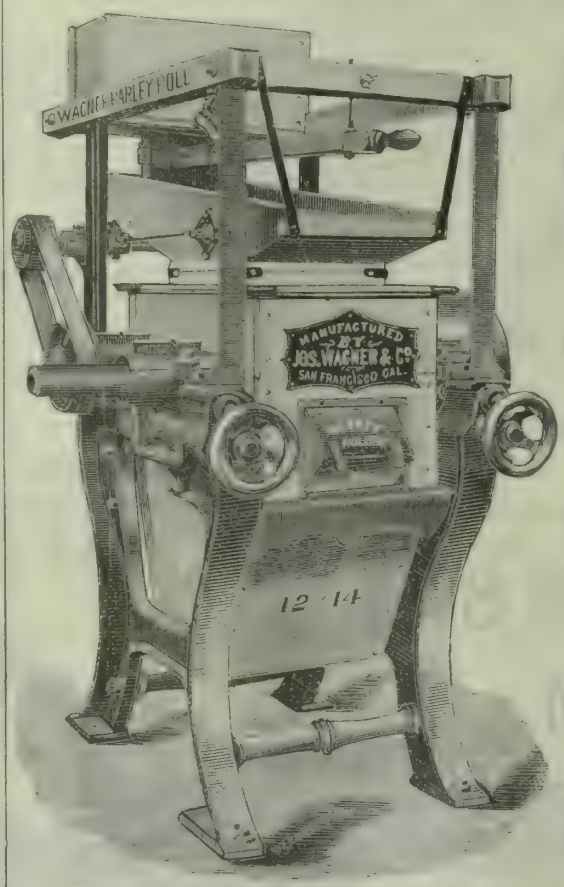


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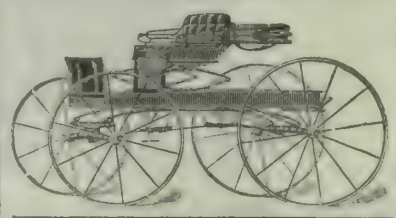
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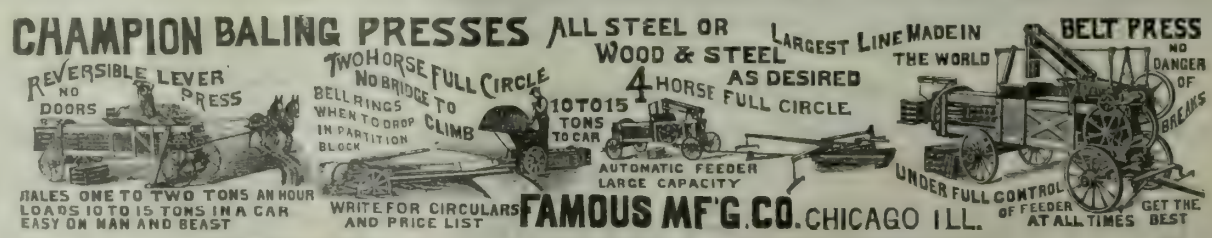
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Sheep and Wool.

Handling Shropshires.

As Shropshire sheep are gaining ground in this State, perhaps the following experience, as given at a recent meeting of Ohio stockmen by C. Hills, will be read with interest:

The care and general management of Shropshires, I suppose, should be much the same as are given to other breeds. For best results in obtaining strong lambs with a large percentage of doubles, the ewes should be in good, strong breeding condition at the period of coupling, and all that are not so should be drafted and fed lightly with oats, which will very soon bring them in heat, so that conception will usually take place by first intention, and flockmasters may look with reasonable confidence for their produce at the normal period of 21 weeks. About the first of October is the time ordinarily adopted for putting the ram with the ewes, which brings the lambs in March. This is a good time to have them come, so that they will be ready for grazing with the first starting of the grass. If not provided with good quarters for the lambing, the coupling had better be deferred for a month.

It is of great importance that the ram should be in vigorous condition at this time; by this I do not mean that he should be fat, for an overfed ram is generally a poor worker, but he should have been carefully fitted by judicious feeding of oats while yet at grass to bring him into the best estate. About 25 or 30 ewes are as many as one ram should be coupled with unless he be stood, and that involves so much trouble that I have abandoned the practice. The ram is turned in with the bunch of ewes selected for him in the evening and is taken out in the morning and kept in stable during the day, when he will be quiet and relish his food, which should be frequently varied and of the most nutritious sorts. In my practice the rams are taken off first of December.

Breeding ewes require a good deal of exercise during the two or three weeks preceding parturition, and should be kept out in pasture every day—unless the weather is very bad—which renders the lambing process one of comparative ease.

Close stables are not wholesome for sheep; they require a constant supply of fresh air and rarely suffer from the cold. In my practice better results have been had when the sheep have been kept in cheap sheds boarded upon two or three sides, allowing them to go in and out at pleasure except during heavy rains or sleety weather, which is the worst kind for them.

At the close of the grazing season our sheep are fed upon clover hay with an occasional change to corn-fodder, if we have it, until within two or three weeks of lambing, when they are fed lightly once a day with some oats and bran. After a week or ten days this feed is doubled—that is, fed morning and evening, and with one of these feeds a small addition of old-process oil-meal is given. A skillful flockmaster can readily tell by examination of their udders within two or three days of the time of dropping their lamb, when those most advanced should be given comfortable quarters for this interesting event. It is well to have a number of small inclosures in which one or two may be placed at night so as to avoid the confusion that frequently occurs when several ewes would lamb the same night. A few light hurdles placed at corners of the sheepfold answer a good purpose, and can readily be put up or removed as occasion requires. If the lamb is not up within ten or fifteen minutes after its birth helping itself at the maternal font, it should be carefully assisted to nurse; after which, unless it be a weak one of two or three from the same dam, very little further attention is required. When two or three days old they may be removed from the small pens and all the mothers and lambs allowed to run together. The lambs may be docked when two weeks old, castrated at three, and ear-marked at four, so as to insure proper identification. As soon as they begin to feed, troughs should be placed in adjacent pens separated by hurdles from their dams, admitting lambs only, when they should be fed a mixture of bran, oil-meal and oats. The ewes during the suckling period require liberal feed with the same, or until grass comes, with an occasional feed of sliced beets or mangels, which helps to keep up and sustain a liberal flow of milk, the most important element for growth in the lamb.

By this process they can be weaned at four months, and will continue to thrive rapidly if put into fresh pasture and out of hearing of the dams. The ewes should be put upon short pasture and their udders relieved every two or three days until dry, when they may be given better grazing, giving ample time for getting them into good condition for the next period of coupling.

Successful flock management requires careful and constant attention to several little things which might be thought trivial by some, but which are specially important, such as frequent changes of pasture, a constant supply of water and salt, frequent tarring of their noses in fly-time, and occasional trimming of their feet.

A daily examination of Shropshires while in pasture is necessary, as by reason of their broad, flat backs they sometimes get cast over and cannot recover themselves.

Shropshires do the best when shorn rather early. If troubled with ticks, the lambs will get the most of them in 10 or 12 days afterward, when they should be dipped in tobacco water or carbolic or arsenical preparations.

The methods mentioned for the care of sheep are those practiced mainly on my farm, and have proved reasonably satisfactory for a period of 10 or 15 years, since my adoption of the Shropshire breed. My purpose has been to keep the flock most nearly in accordance with their natural requirements, feeding them almost wholly upon the grasses and grains produced upon the farm, aiming to keep them constantly in good health and strong breeding condition without pampering.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING AUGUST 5, 1890.

433,609.—Pile Covering—Almon Ames, Berkeley, Cal.

433,614.—Device for Drawing Beer—Frank Batter, Marshfield, Ogn.

433,558.—Wrench—A. T. & A. W. Brann, Dayton, Nev.

433,849.—Oil-Cup—C. L. Burbeck, Ft. Bragg, Cal.

433,670.—Ore-Mill — Carl & Paterson, San Diego, Cal.

433,672.—Sash Holder—A. T. Church, East Oakland, Cal.

433,617.—Garment Supporter — Gertie D. Cluff, Lodi, Cal.

433,618.—Stencil and Stencil Plate—G. H. Cunningham, S. F.

433,452.—Cover-Holder for Dinner-Pails—John Dorsch, Tacoma, Wash.

433,892.—Safety Guard for Railways—H. Ewing, S. F.

433,787.—Slate Sponge—Emma C. Hudson, Seattle, Wash.

433,596.—Sash Balance—Axel Johnson, Oakland, Cal.

433,600.—Sash-Fastener — Benj. Marshall, S. F.

433,484.—Hay Press—S. H. & C. L. Miller, Stockton, Cal.

433,540.—Street Pavement—G. W. Parker, S. F.

433,601.—Traveling Block — A. Rewrick, S. F.

433,545.—Smoothing-Iron—Silberstein & Amos, Los Angeles, Cal.

433,913.—Tool for Inserting Saw Teeth—R. P. Smith, Marshfield, Ogn.

433,753.—Wagon Brake—R. P. Taylor, Gold Hill, Nev.

433,555.—Horse Controlling Device—Clara Turney, Sausalito, Cal.

433,608.—Gang-Plow Harrow—W. A. Zumwalt, Farmington, Cal.

The following brief list by telegraph for Aug. 12 will appear more complete on receipt of mail advices:

California—Ciser Bazus, S F., mat for fermenting vats; Jerome B. Harris, assignor of one-half to J. Gambetti, Stockton, traction machine; William P. Humphreys, assignor by mesne assignments to A. M Stinson, S. F., joint connection for suction pipes and protectors of dredgers; Charles A. Hussey, Fort Bidwell, cartridge shell reloader; John Isele, San Diego, spring motor; Angus E. McMillan, Oakland, miter box; Edward E. Park, S. F., rotary blotter.

Oregon — Charles Hill, Portland, clothes-hook; William A. Miller, Wapintia, cross-cut saw; Martin L. Pipes and E. F. Pernot, Corvallis, copy-holder for type-writing machines; Junius F. Whiting, Albany, means for reaper and mower knives.

Arizona—Dudley I. Craig, Silver King, adding machine.

Note.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Irrigation Dam in the Tuolumne.—At a joint meeting of the Modesto and Turlock irrigation directors, held on Saturday last, it was decided to build a joint dam 90 feet high in the Tuolumne river, 1800 feet above the Wheaton dam, for the use of both districts. Litigation with M. A. Wheaton was compromised by the payment of $35,000, the Turlock district paying $32 500 and the Modesto district $2500. The engineers of each district will submit plans for a masonry dam, the best to be accepted by the boards in joint session. The amount of water to be diverted by each district is upon the basis of the acreage of the districts. Each district will have equal privileges in the water rights which may be acquired in the future. The action of the boards is considered most important and advantageous.

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Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to soliciting subscriptions and advertisements for this journal and other first-class popular newspapers. Apply soon, or address this office, giving address, age, experience and reference. Special inducements to old agents.

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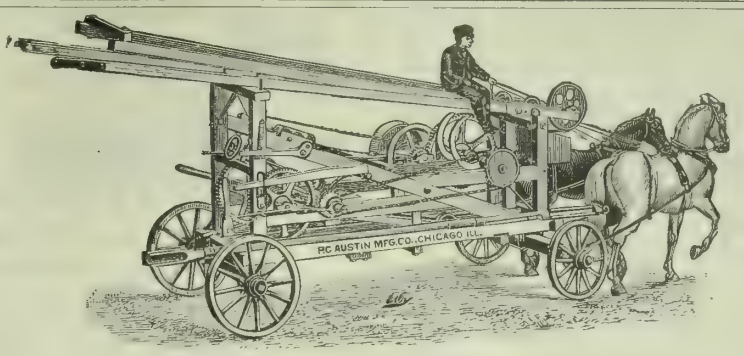
Culture and Behavior.—The Oaks Home and Day School, situated at Madison and Eleventh streets, Oakland, is advertised in another column. Besides the regular course of studies, young ladies are trained in elegance of deportment and general etiquette.

Some weeks ago Mrs. McCormick of Pasadena ran a rose thorn into the thumb of her left hand. Inflammation set in so that the thumb had to be amputated.

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Should this paper be received by any subscriber who does not want it, *or beyond the time he intends to pay for it*, let him not fail to write us *direct* to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. Look carefully at the label on your paper.

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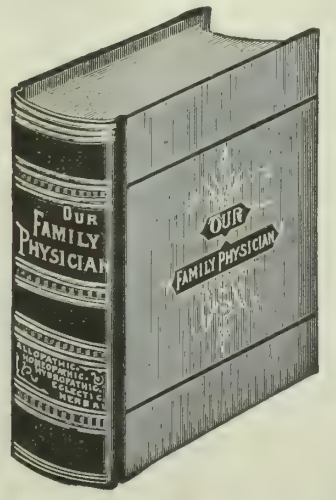
The article we are going to give away is no cheap or common-place affair. On the contrary, *it is the most valuable gift ever offered by a newspaper to each of its subscribers.*

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Another Thing (and this is why we think the book worthy of our use in this way), it is different from all other works of the kind ever published, and the difference is such that it makes it more valuable than any or all of them!

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All similar books tell what to do if you know what the disease is. This book tells you how to detect the disease, and then what to do for it.

No other book published is up to this.

SECOND—When a person is really attacked by a *dangerous disease*, it enables you to know the fact, and in such cases its advice is: "Send for a competent physician at once." But in all ordinary cases, such as can be easily cured (and most of the ailments in a family are of this kind, if only you could recognize them) it gives full directions for treatment. The point is, that it teaches you to distinguish between a *dangerous* and a *trifling* disease, and tells you when it is necessary, and when *not* necessary, to call a physician.

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THIRD—In its directions for treatment it is not confined to the practice used by any *one* class of physicians; but it gives, *separately*, and for each disease the methods used by each of the different "schools" of medicine; and in all cases the prescriptions are most eminent men in their respective modes of practice. This makes the work especially suited to the needs of every family, no matter what "school" of medicine they prefer.

No other book published does this.

Besides this, there are three chapters in the work which are worthy of special mention, namely, those on "Diseases of Women," "Diseases of Infants," and "Care of the Sick."

The first of these is a model of its kind. It is chaste in language, contains no disgusting pictures for children to happen on and be over curious about, and taken altogether is the most practical, sensible and straight-forward treatise upon this delicate subject that has ever been printed.

This chapter alone is worth many times the cost of the book to every mother, even if it had to be purchased at its regular price.

The other chapters referred to are equally well written and valuable.

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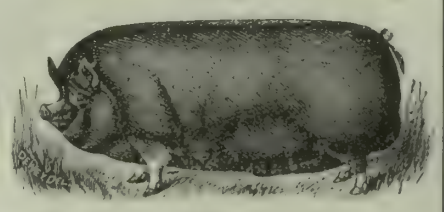
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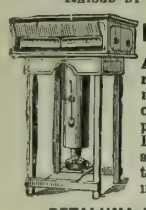
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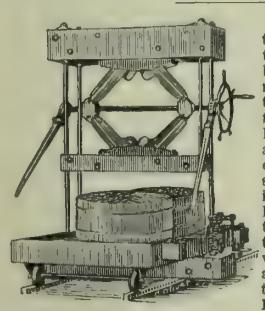
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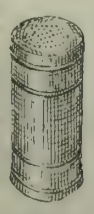
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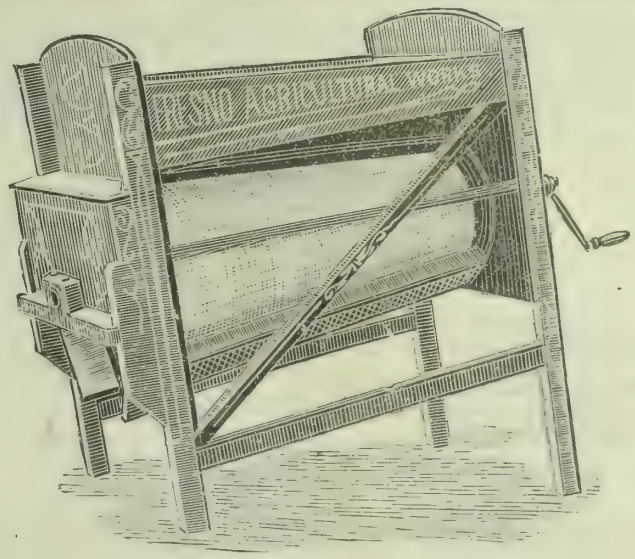
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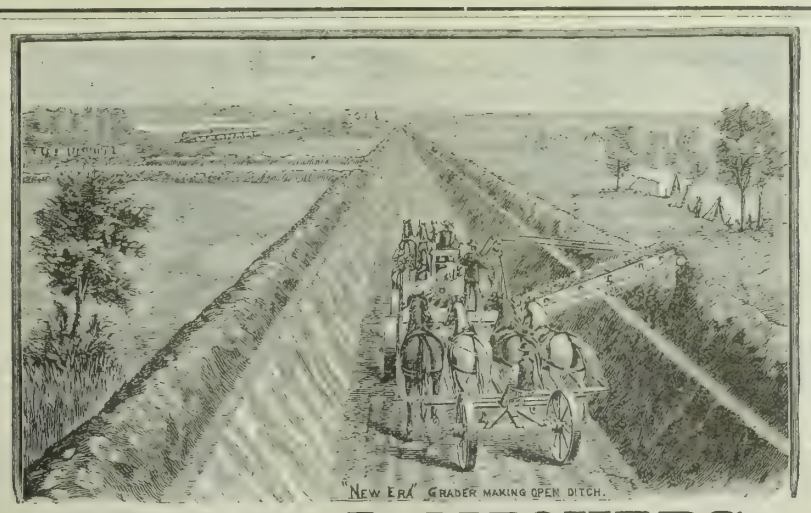
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Aug. 13, 1890.

General trade in farm products has been fairly active with steady prices ruling. The weather continues favorable for harvest work and fruit drying. The money market is reported fairly easy, with a free call for advances on stored grains. While the European wheat market has ruled barely steady, the Eastern markets have held strong at higher figures. The following is to-day's cablegram:

LIVERPOOL, Aug. 13.—Demand fair and prices a shade higher. California spot lots, 7s 3d to 7s 6d; cargoes off coast, 38s; just shipped, 37s 9d; nearly due, 38s; cargoes off coast, firmly held; on passage, quiet but firm; Mark Lane wheat, firm; English and French country markets, firm; wheat in Paris, steady; flour, quiet.

Foreign Grain Review.

LONDON, Aug. 11.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: English wheats were stronger at an average advance of 1s 7d. Foreign wheats were quiet. The news that the French crops will be 5 per cent under full average caused a slight rise. Oats were weak. Barley was firm. Corn dropped 3d. At to-day's market fine English wheat was very firm at 3d advance. Foreign wheats were steady. Flour was firm. American corn recovered 3d.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday	7s4½d	7s5½d	7s6d	7s6½d	7s6½d
Friday	7s3½d	7s4d	7s6d	7s5½d	7s5½d
Saturday	7s4d	7s4½d	7s5½d	7s5½d	7s6d
Monday	7s5½d	7s6d	7s8½d	7s7d	7s7d
Tuesday	7s6½d	7s6d	7s6½d	7s7½d	7s7½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	38s0d	37s9d	38s0d	Slow.
Friday	38s0d	37s9d	38s0d	Firm.
Saturday	38s0d	37s9d	38s0d	Quiet.
Monday	38s0d	37s9d	37 9d	Steadier.
Tuesday	38s0d	37s9d	38s0d	Improving.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York for the past week:

Day.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Thursday	98¾	99¾	99¾	100¾	101¼	...
Friday	97¾	98	98¾	99¾	100¼	...
Saturday	100¾	100¾	100¾	102⅛	100¼	...
Monday	102⅜	102⅜	103¼	104	104¼	...
Tuesday	103¼	104	104⅜	105¼	106⅛	...

The closing prices for wheat have been as follows at Chicago for the past week:

Day.	Aug.	Sept	Dec.	May.
Thursday	94¼	95⅜	98¼	102¼
Friday	93	94⅜	97⅝	101⅜
Saturday	95	96¼	101¼	104¼
Monday	98	99⅛	103½	107¼
Tuesday	99¼	100⅝	104½	108⅜

CHICAGO, Aug. 13.—Wheat—$1.00¼ for August, $1.01⅝ for September, $1.04¾ for December, and $1.08½ for May.

NEW YORK, Aug. 13.—Wheat—$1.06¼ for cash, $1.04⅞ for September, $1.05⅜ for October, $1.06¾ for December, and $1.10⅝ for May.

Crops

WASHINGTON, Aug. 9.—There has been considerable reduction in the condition of spring wheat, amounting to fully seven points. It is less in the Dakotas than in the other spring wheat districts. The average of the condition is 80 in Wisconsin, 80 in Minnesota, 87 in Iowa, 71 in Nebraska and 88 in the Dakotas. The latter is a decline of seven points, owing to hot southern winds. The oat crop is certain to be one of a very low yield and probably poor quality.

Another crop of great importance, potatoes, has also been much damaged by drouth, and a low rate of yield is assured.

ST. PAUL, Aug. 8.—On account of the hot weather and lack of rain during the last few weeks, the former estimates of 100,000,000 bushels as the wheat crop in the Dakotas will probably be a little out of the way. In South Dakota and Southern Minnesota the harvest is nearly over and the general yield will be fair. The railroads have weekly crop reports on which they base their estimates of the wheat yield, to know how much they are going to draw. If they are not mistaken, the yield will reach above 90,000,000 bushels.

KANSAS CITY, Aug. 8.—The total failure of the corn crop is reported in nearly all the territory in the northern part of the State from Junction City westward to the State line, and from Larned westward. Less than a third of the average yield is expected, or about 75,000,000 bushels.

OMAHA, Aug. 8. — Advices from nearly every county in the State show the condition of corn far below the average, several counties being entirely ruined by hot wind. In the extreme western counties where irrigation was tried the wheat has yielded heavily. In Iowa the indications are that corn will average about half a crop compared with last year.

INDIANAPOLIS, Aug. 8.—Reports to the State Agricultural Board indicate the wheat yield about 65 per cent of the average crop, and corn will mature half a crop. Fruit is a failure.

COLUMBUS (O.), Aug. 8.—According to the report of the State Board of Agriculture, the present indications show a decline of six points in the wheat prospect since the estimate of July 1st. The result of the threshing has been a disappointment to farmers in most sections of the State. The yield is not so great as anticipated from the appearance of the growing grain, and corn is badly injured. The indications are that only from 60 to 75 per cent of the average crop can be realized. Oats are badly injured by blight or rust, and apples, peaches and pears are almost a total failure.

Local Markets.

BAGS—The market for standard size grain-bags is very firm at 7¼c. The unusual heavy demand from Oregon and Washington is a prime factor in causing the advance. The increased demand from up north is due to heavy crops.

BARLEY—Notwithstanding the free receipts, the market has held strong. In futures, the dealing on Call has been quite free. The following are to-day's reported sales:

Morning Session: Buyer 1890—100 tons, $1.30½; 100, $1.30. Seller 1890, new—100 tons, $1.24½; 100, $1.24¼ ₩ ctl. Afternoon Session: Buyer 1890—100 tons, $1.30¼; 100, $1.30½; 600, $1.30; 200, $1.29¾; 100, $1.29⅞. Buyer season—100 tons, $1.36½; 100, $1.36 ₩ ctl.

BARLEY.

	Buyer Season.		Seller 1890.		Buyer 1890.	
	H.	L.	H.	L.	H.	L.
Thursday	133½	132	121½	121½	128½	127½
Friday	132	132			127	126½
Saturday	132½	132½			127	126½
Monday	134½	134½	122½	122½	128½	127½
Tuesday	135½	135½	1.4	123½	129½	129½

BUTTER—Increasing receipts of Eastern and dealers buying pickled butter, caused the market to shade off, with an easy tone at the close.

CHEESE—The market shows an easier tone, under a lessened demand and stocks accumulating.

EGGS—The market has held strong throughout the week, with a good demand ruling. The cold storage supplies are going out.

FLOUR—The market is steady, with a fair demand ruling.

WHEAT—The sample market has ruled strong throughout the week, in sympathy with the Eastern and foreign markets. Buyers continue their usual bear tactics so as to beat the market down, but without success. In futures, trading has been fair at slight fluctuations. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—100 tons, $1.45⅝; 100, $1.45⅜; 1100, $1.45¾. Buyer season—400 tons, $1.54⅝; 300, $1.54½; 1100, $1.54¾ ₩ ctl. Afternoon Session: Buyer 1890—600 tons, $1.44½; 400, $1.44⅝; 500, $1.44¾. Buyer season—500 tons, $1.53½; 1800, $1.53⅜. Seller 1890, new, season's storage paid—100 tons, $1.40⅝; seller 1890, new, season's storage paid after September 1st—400 tons, $1.40½; 1000, $1.40¼ ₩ ctl.

WHEAT.

		S. S.	Nov.	B. '90.	B S.	S. '90.
Thursday	h.	...	...	143½	153⅝	136
	l.	....	....	142½	151½	136
Friday	h.	....	....	142½	151	....
	l.	....	....	141½	149⅝	....
Saturday	h.	....	....	143½	151½	....
	l.	....	....	143	151½	....
Monday	h.	....	142	144½	153½	140⅝
	l.	....	142	144½	153	140⅝
Tuesday	h.	....	....	144½	153½	141½
	l.	....	....	144	152½	141½

[COMMUNICATED.]

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Aug. 12th, were as follows:

Flour, qr. sks	86,143	Middlings, sks	2,235
Wheat, ctls	241,905	Alfalfa, "	....
Barley, "	32,958	Chicory, bbls	94
Rye, "	374	Broomcorn, bdls	283
Oats, "	5,134	Hops, bls	39
Corn, "	5,901	Wool, "	1,067
*Butter, "	1,138	Hay, tons	3,115
do bxs	549	Straw, "	118
do bbls	1	Wine, gals	206,730
do kegs	69	Brandy, "	7,590
†Cheese, ctls	681	Raisins, bxs	33
do bxs	86	Honey, cs	112
Eggs, doz	42,300	Walnuts, sks	11
do " Eastern	48,060	Flaxseed, sks	....
Beans, ctls	2,785	Mustard, sks	....
Potatoes, sks	24,486	Almonds, sks	....
Onions, "	3,496	Peanuts, sks	16
Bran, sks	4,900	Popcorn sks	....
Buckwheat, sks	....		

*Overland 350 ctls. †Overland 221 ctls.

Cereals.

The local wheat market has held strong throughout the week. The supply of available disengaged tonnage in port is light, which is against shippers; but as the supply to arrive is large, buyers will store their grain until the vessels begin to put in an appearance, which should be soon. Large farmers are reported to be letting go of their wheat slowly, but the smaller farmers are said to be meeting the market quite freely, being satisfied with present prices rather than incurring expenses and paying interest for a prospective rise in prices. The markets abroad and at the East have been and are still governed to a large extent by the weather. Present advices report unfavorable weather, which is causing better markets to obtain.

Harvest advices in this State are confirmatory of a large outturn in the southern part of the State, and also in localities in the central counties. Taking the State as a whole, the shortage will be fully as great as that heretofore published in the RURAL PRESS. The Oregon and Washington crop is the best known for years.

The barley crop in this State is light, which is in favor of holders. The crop in the Central States is short and not of the best grades, which should still further improve the prospects for this coast.

Corn is strongly held. The crop does not promise to be as large as heretofore claimed. In the Central States the crop, it is now confidently stated, will be short.

Oats are firm at steady figures. In this State the crop is reported to be short. From Oregon, advices are rather conflicting; while our advices report a full average crop, others claim that there will be a shortage.

Rye is quiet but firm. The crop in this State is short.

A leading New York paper, Aug. 2d, says: The talk this morning was that every day of such burning hot weather as is being experienced at the West meant a reduction of 50,000,000 bushels in the corn crop. The estimates of the crop are being rapidly reduced, and the bulls claim that the Government report will show a reduction to 67 or 70. The conservative element is now talking 80, and perhaps 75. A condition of 75 would indicate a crop of 1,700,000,000 bushels, and a condition of 70, a crop of about 1,600,000,000 bushels. Such a crop, with a shortage in oats of 100,000,000 bushels, in wheat of 60,000,000 bushels, and a poor potato crop, would be a serious calamity. When the crop of corn is 2,100,000,000, a reduction of 100,000,000 or 200,000,000 is not so serious, but a reduction of 500,000,000 to 600,000,000 is very serious. Unless rain comes, and comes soon, the worst hopes of the bulls will be realized.

Feedstuff.

In ground feed another advance in prices has been made. The demand is fairly active, while the supply is not so liberal. The consumption appears to be increasing.

Notwithstanding the heavy receipts, hay has strengthened under freer consumption and a fairly good shipping demand. It is very generally claimed that there are from 10 to 20 per cent more animals being fed than there was at this time in 1889. The main increase comes from a larger fruit crop and more railroad building and other outdoor improvements going on, which require more work horses.

Fruits.

Berries are meeting with fair sale. As the receipts are not large, the market holds fairly strong, with raspberries slightly higher.

For tree fruits the market set off for peaches, pears and apricots. The decline is due to canners having free deliveries on old contracts, and consequently their not being able to handle that coming in on consignment. The bulk of the pears and peaches are overripe for keeping, which compels forced sales. We noticed in our rounds this morning several consignments that will not keep 24 hours without assorting. It is these kinds of consignments that forces the market down. White plums are taken by canners, which keep them steady. Other kinds of plums are slow. Apples are coming in quite free, but as there is a good demand for the better kinds, the market keeps steady. Crabapples are slow.

Grapes, under free receipts, have been sinking, but to-day sales were made slightly higher, owing to a good shipping demand, which, when met, will stop for a short time. Some Zinfandel wine grapes were placed the past week at from $15 to $16 a ton.

In dried fruits we notice that apricots are more sluggish. This is owing to Eastern dealers having their first wants met. Peaches are quite hard to quote, owing to the high asking prices. Nectarines are coming to the front under favorable circumstances. Apples and pears are steady. Prunes are in demand at high prices. As near as we can learn, the following covers the range of prices for this season's dried fruits: Apples, evaporated, 11c; sliced, 8@9c; quartered, 7¾@7¾; plums, pitted, 8@10½c; peaches, unpeeled, bleached, 18@22c; peeled, 28@30c; apricots, sacked, bleached, 14@17c; boxed, slightly higher; white nectarines, 14@16½c; red, 12@13½c; prunes, ungraded, 10@10½c; grapes, 3@4c.

Raisins for September and October delivery continue to be inquired for. Layers range from $1.80@2.25, according to brands, and loose Muscatels, $1.65@2.

Live-stock.

The market for bullocks and mutton sheep is against sellers, as it is against large hogs, but small-sized hogs suitable for the block are wanted, chiefly for the Chinese trade. As outdoor work draws to a close, medium-size work horses are slow of sale. Large draft horses are wanted, as are general utility horses and matched teams.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4¾@4¾c ₩ lb; dressed, 7¼@8½c ₩ lb.; heavy, 3¾@4¾c ₩ lb.; dressed, 5¾@6¼c ₩ lb. Stock hogs, 4¼@4¾c ₩ lb

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¾@—c ₩ lb.; second quality 5@5¾c ₩ lb.; third quality, 4½c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6@8c ₩ lb.; large, 4@6c.

MUTTON—Wethers, 6½@7c ₩ lb.; ewes, 6@6½c ₩ lb.; lamb, spring, 7@8c.

Vegetables.

Garden truck does not show any material change, receipts and demand being about equal.

Onions are weak at lower prices under free receipts and only a fair demand. Red onions are hard to sell. Small-sized onions for picklers have a fair sale.

The receipts of potatoes are free, being in excess of the demand, owing to many points being supplied by local farmers. The quality continues exceptionally good.

Beans are higher and strong at the advance. The crop is not as large as heretofore claimed, while the weather in the Central States is against growing crops.

Miscellaneous.

From the *Commercial News* of Aug. 13th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	273,011	236,549
On the way to neighboring ports	20,014	24,6 2
In port, disengaged	6 596	14,919
In port, engaged for wheat	41,976	56,025
Totals	341,597	332,095

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Aug. 6, 1890, the following are the exports from this port: 1890. 1889.

Wheat, ctls	974 481	1,162,753
Flour, bbls	118,842	143,351
Barley	27,996	67,074

Poultry is without any particular change to note, the demand and supply being about evenly balanced. Honey shows a fairly firm tone for 1-lb frames and choice white extracted, but other grades are slow. The following are the quotations: Choice white comb, quotable at 8@9c; do, in 1-lb frames, 10@11c; ordinary comb, 7@7½c; white extracted, 5½c; amber, 4½@5c ₩ lb.

For new crop nuts there is a good inquiry, with sales of almonds at 13@13½c, and walnuts at 9@10½c.

Hams, bacon and hides are strong at a slight advance. The poorer corn crop prospects in the Central States is in favor of better prices for hog product.

Hops are firmly held, with another advance obtainable for future delivery.

In wool more business is reported, but at unchanged quotations.

Exports by sea the past week aggregate as follows: Beans lbs, China, 7401. Barley ctls, Japan, 2947; Honolulu, 3962. Flour bbls, China, 11,645; Japan, 954; Manilla, 1000. Apples, boxes, China, 322; Japan, 75.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Aug. 13, 1890

BEANS AND PEAS.		**HIDES.**	
Bayo, ctl	4 00 @ 4 50	Dry light to heavy	10 @ 11
Butter	1 90 @ 2 00	Salted	5 @ 8½
Pea	2 60 @ 2 85	**HOPS.**	
Red	4 00 @ 4 25	Oregon, 1889	15 @ 21
Pink	2 75 @ 3 10	Cal 1889 Choice	20 @ 21
Large White	— @ —	do Fair to G'd	18 @ 19
Small White	2 60 @ 2 90	1890 hops future	17 @ 21
Lima	3 50 @ 4 25	**ONIONS.**	
Pid Peas, blk eye	— @ —	Silver Skin	1 50 @ 1 80
do green	— @ —	Pickling	75 @ 80
do NLea	2 00 @ 2 25	**NUTS JOBBING.**	
Split	6¼@ —	Walnuts, Cal. lb	9 @ 10
BROOM CORN.		do Chice	11 @ 12
Choice to Extra	00 @ 85 00	Almonds, bd shl	5 @ 6½
Fair to Good	65 00 @ 70 00	Softshell	12 @ 14
Poor	45 00 @ 60 00	Paper shell	5 @ —
CHICORY.		Brazil	11@ 13
California	6 @ 6½	Pecans	9 @ 14
German	6½@ 7	Peanuts	6 @ 8
DAIRY PRODUCE, ETC.		Filberts	11@ 12½
BUTTER.		Hickory	6 @ 9
Cal. Poor to fair, lb	17 @ 22½	Chestnuts	14 @ —
do good to choice	24 @ 25	Pine nuts	7 @ 8
do Giltedged	26 @ —	**POTATOES.**	
do pickled	17 @ 20	Early Rose, sks	50 @ 75
do in kegs	14 @ 16	Chile	75 @ 90
do Creamery in rolls	27 @ 28	Peerless	75 @ 1 10
Eastern do	19 @ 20	River Reds	— @ —
do do, in tubs	17 @ 18½	Humboldt	@ —
CHEESE.		Petaluma	@ —
Cal, choice mild	10 @ 11	Burbanks	75 @ 1 25
do fair to good	8 @ 9½	Sweet	2½@ 3½
Young America	10 @ 11	**POULTRY AND GAME.**	
N. York Cream	13 @ 14½	Hens, doz	5 00 @ 7 00
Western	8 @ 11	Roosters, old	5 50 @ 6 50
EGGS.		do young	6 50 @ 7 50
Cal. ranch, doz	24 @ 26	Broilers, small	2 00 @ 3 00
do do sel'cted	26½ @ 27½	do large	3 50 @ 4 00
do. store	19 @ 23	Fryers	4 00 @ 5 00
Eastern cold storage	— @ —	Ducks, tame	3 50 @ 4 50
do fresh	16 @ 20	do young	4 50 @ 5 50
do selected	21 @ 22	Geese, pair	1 50 @ 2 00
do to arrive	— @ —	Goslings	1 50 @ 1 75
FEED		Turkeys, Gob'r	18 @ 23
Bran, ton	17 00 @18 00	Turkeys, Hens	15 @ 17
Feedmeal	27 00 @28 00	Pigeons	2 50 @ 3 00
Gr'd Barley	27 50 @29 00	Rabbits, doz	75 @ 1 25
Middlings	25 00 @25 50	Hare	1 25 @ 1 75
Oil Cake Meal	25 00 @ —	Venison	10 @ 14
Manhattan Food		Dove	50 @ 75
Per 100 lbs	7 50 @ —	**EGG FOOD.**	
HAY.		Manhattan, ₩ lb	12 @ —
Compressed	11 00 @15 00	**PROVISIONS.**	
Wheat, per ton	9 00 @12 50	Cal. Bacon.	
do choice	13 50 @14 50	Heavy, lb	10½@ 11
Wheat and Oat	10 00 @14 00	Medium	12 @ —
Wild Oats	8 00 @11 00	Light	13 @ —
Tame do	8 00 @10 00	Extra Light	@ —
Clover	8 00 @10 00	Lard	9 @ 12
do choice red top	— @ —	Cal. Sm'k'd Beef	11 @ 12
Barley	7 00 @10 50	Hams, Cal	12 @ 13
Barley and Oats	— @ —	do Eastern	12½@ 13½
Alfalfa	— @ —	**SEEDS.**	
Alfalfa C'mpr'd	— @ —	Alfalfa	9½ @ 10
Stock Hay	— @ —	Canary	4 @ 4½
Straw bale	45 @ 55	Clover, Red	12 @ 13
FLOUR		White	20 @ 22
Extra, City Mills	4 25 @ 4 50	Cotton	20 @ —
do Co'try Mills	4 2 @ 4 50	Fxaseed	2 @ 2½
Superfine	3 25 @ 4 00	Hemp	8 @ 8¼
GRAIN, ETC.		Italian Rye Grass	10 @ 11
Barley, feed, ctl	1 21½ @ 1 25	Perennial	7 @ 9
do Choice	1 26½ @ 1 27½	Millet, German	5 @ 6½
do Brewing	1 27½ @ —	do Common	5 @ 6
do do Choice	1 32½ @ —	Mustard, yellow	1½@ 2
do do gilt edg'd	1 35 @ —	do Brown	2½ @ 3
Chevalier once	@ —	Rape	1½@ 2
do cut to good	— @ —	Ky. Blue Grass	14 @ 16
Buckwheat	@ —	2d quality	13 @ 14
Corn, White	1 15 @ 1 25	Sweet V. Grass	75 @ —
Yellow	1 22½ @ 1 30	Orchard	12 @ 14
Oats, milling	1 65 @ 1 75	Hungarian	75@ 80
Surprise	1 70 @ 1 75	Lawn	27½@ 40
Choice feed	1 60 @ 1 65	Mesquit	6 @ —
do good	1 55 @ —	Timothy	6 @ 6¾
do fair	1 50 @ —	**TALLOW.**	
do Gray	1 45 @ —	Crude, lb	3 @ 5
do Black	1 30 @ 1 40	Refined	6 @ —
New oats are quoted 2½c less.		**WOOL, ETC.**	
Rye	1 25 @ 1 43	SPRING 1890	
Wheat, milling.		Humboldt and Mendocino	19 @ 24
Gilt edged	1 45 @ —	Sac'to valley	15 @ 22
do Choice	1 42½@ —	Free Mountain	18 @ 24
do fair to good	1 40 @ —	S. Joaquin valley	12½@ 17
Shipping, cho'ce	1 38½@ —	do mountain	17 @ 22
do good	1 35 @ —	Cala'v & F'th'l.	15 @ 22
do fair	1 32½ @ —	Oregon Eastern.	13 @ 22
Sonora	1 32½@ 1 37½	do valley	20 @ 25
		So'n Coast, def.	10 @ 14
		So'n Coast, free.	12½@ 19

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Aug. 13, 1890.

Bananas, bunch	1 00 @ 2 50	do Malvoise	75 @ 1 00
Cranberries	— @ —	Green Ginger lb	1½@ 2
Limes, Mex	3 50 @ 4 50	Watermel'ns lb	8 00 @12 00
do Cal sml cases	75 @ 1 50	Cantaloupes crt	1 00 @ 2 25
Lemons, Cal., bx	2 50 @ 3 00	Nutmeg melons	75 @ —
do Sicily, bx	10 00 @11 00	Crabapples, box	60 @ 1 00
do Malaga	5 00 @ 7 00	**VEGETABLES**	
do do Seedling	4 00 @ —	Okra, dry, lb	6 @ 10
Pineapples, doz	3 00 @ 5 00	do green	4 @ 7
Strawberries fair, chest	4 25 @ 6 00	Parsnips, ctl	1 25 @ 1 50
Apricots, lb	2½@ 3½	Peppers, dry, lb	12 @ —
Raspberries do	8 00 @ 10 00	do green, bx	35 @ 50
Blackberries, do	4 00 @ 5 00	do Bell	60 @ 75
Huckleberries lb	9 @ 12½	Turnips, ctl	75 @ 1 00
Figs, box, black	75 @ 1 00	Beets, sk	75 @ 1 00
do white	75 @ —	Cabbage, 100 lbs	60 @ 75
do Smyrna	— @ —	Carrots, sk	50 @ 60
Plums, lb	1½@ 2½	Mushrooms, Cultivated, lb	— @ —
Egg plums	1½@ 2½	Wild, lb	— @ —
Pears, bx	50 @ 1 00	Cucumbers box	25 @ 60
do Bartlett lb	1½@ 3	Tomatoes, bx	20 @ 70
Peaches box	50 @ 75	Garden peas, lb	2 @ 3
do choice	90 @ 1 60	Sweet do do	1½@ 2
do canning, lb	1½@ 3	String Beans	1 @ 2
Apples com box	50 @ —	Lima do	2½@ 3
do choice	1 00 @ 1 50	Wax, do	1 @ 2
Nectarin s, Red	75 @ 1 00	Fountain do	1 @ 2
do White	75 @ —	Squash, summer, bx	25 @ 50
Grapes, box	35 @ 40	do Muscats	40 @ 75
do Muscats	40 @ 75	Marrowfat, ton	20 00 @25 00
do Rose of Peru	35 @ 60	Garlic, lb	5 @ 7
do Tokay	75 @ 1 25	Green corn doz	18 @ 22½
do wine Zinfandel	15 00 @16 00	do do corn sk	1 00 @ 1 10
		Egg Plant, bx	50 @ 75

Rope.

Baling, Duplex, lb	
" Manilla, lb	
Twine, for hops, balls, tarred, lb, Manilla	
" " grape vine, balls, lb "	
" " " coils, lb "	
" spring, lb "	
" binder (600 ft. to lb), lb	18

Duplex twine 3c per lb le s.

SHEEP AND DOGS.—The census will not only tell us how many sheep were killed by dogs within the past year, but will tell us how many dogs it took to do it. Leaving out the dogs harbored in cities, it will without doubt be shown that there are more dogs than sheep on the farms of the United States. Sheep pay; dogs don't. It was a rule of Ricardo that to be successful in business, we must "cut off losses and let profits run on."

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE. Aug. 6-12.	Olympia. Rain	Temp.	Wind	Weather	Portland. Rain	Temp.	Wind	Weather	Eureka. Rain	Temp.	Wind	Weather	Red Bluff. Rain	Temp.	Wind	Weather	Sacramento. Rain	Temp	Wind	Weather	S. Francisco. Rain	Temp	Wind	Weather	Fresno. Rain	Temp	Wind	Weather	Keeler. Rain	Temp.	Wind	Weather	Los Angeles. Rain	Temp	Wind	Weather	San Diego. Rain	Temp	Wind	Weather
W.	.00	76	N	Cl.	.00	76	Nw	Cl.	.00	58	Nw	Cl.	.00	94	SE	Cl.	.00	86	SW	Cl	00	62	SW	Cl.	.00	100	W	Cl	T	82	E	Cy	.T	72	W	Fr.	T	70	W	Cy
T...	.00	78	Nw	Cl.	.00	82	N	Cl.	.00	52	Nw	Cy	.00	98	S	Cl.	.00	84	S	Cl	.00	58	SW	Cy.	00	96	Nw	Cl.	....	....	....	....	.00	70	W	Cl.	.00	72	Nw	Fr.
F...	.00	74	Nw	Cl.	.00	78	Nw	Cl.	.00	58	Nw	Cl.	.00	98	SE	Cl.	.00	84	S	Cl.	.00	56	SW	Cy.	.30	102	Nw	Cl.	.00	92	Nw	Cy.	60	70	W	Cy	.00	70	W	Cy.
S...	.00	72	N	Fr.	.00	72	Nw	Cl.	.00	60	Nw	Cl.	.00	96	SE	Cl.	.00	80	SW	Cl.	.00	58	SW	Cl.	.00	98	N	Cy.	....	....	....	....	T	72	W	Fr.	.00	73	SW	Cy.
S...	.00	70	Nw	Cl.	.00	74	Nw	Cl.	.00	60	Nw	Cl.	.00	90	SE	Cl	.00	80	SW	Cl.	00	62	SW	Fr.	.00	94	SW	Fr.	....	....	....	....	.02	70	W	Cl.	00	70	W	Cl.
M..	.00	64	N	Cl.	.00	70	Nw	Cl.	.00	58	Nw	Cl.	.00	96	SW	Cl.	.00	86	S	Cl.	.00	62	W	Cl.	.00	96	Nw	Fr.	.00	82	SW	Fr.	.00	68	W	Cl.	.00	68	W	Cl.
T...	.00	62	Nw	Cl.	.00	86	Nw	Cl.	.00	54	SW	Cy.	.00	92	S	Cl.	.00	84	SW	Cl.	00	60	W	Cy.	.00	90	Nw	Cl.	.00	88	S	Cl.	00	70	W	Cl.	.00	70	W	Cl.
	.01	....	....	....	.00	....	....	....	.00	....	....	....	.00	....	....	....	00	..	....	....	.00	....	....	....	.00	....	....	....	.T	....	....	....	02	..	....	....	T	....	....	....

EXPLANATION. Cl. for clear; Cy, cloudy; Fr., fair; Cm., calm; — indicates too small to measure. Temperature, wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. 'T' indicates trace of rainfall.

California Fruits East.

CHICAGO, Aug. 9.—The Porter Brothers Co. sold to-day seven cars of California fruit. Nectarines, red, $1.75@2; Early Crawford peaches, $1.25@1.85; Orange Clings, $1.95; Susquehanna peaches, $2.05; Foster peaches, $1.70; Columbia plums, $1.45; Fallenbergs, $1.70@1.75; yellow egg plums, $1.65; French prunes, $2.30@2.40; Bartlett pears, $3.25@4.05.

NEW YORK, Aug. 9.—Among buyers who have an assured outlet a keen interest prevails in large prunes. Other buyers are disposed to await the bringing to the market of French supplies. Though there is a glowing prospect for Pacific fruit, too much must not be expected for stock off from good to fine. Close economy will be exercised in the East in everything that can be preserved for the cheapest wants and "pie timber." A remnant of old dried unpeeled peaches brought 20c. New are quoted at 23c spot. There is some inquiry for raisins, but no material snap demand. Buyers rather falter at the excited condition of dried apricots, but, as nothing can completely take their place, court prices are likely to follow. Late spot rate 19@22. Canned fruits are buoyant. Salmon has practically favored sellers, while the demand is good.

CHICAGO, Aug. 11.—The Montgomery Auction Co. sold to-day seven carloads of California fruit for account of W. R. Strong Co., Gregory Bros. and the Earl Fruit Co. at the following prices: Peaches, Foster, $1.40@1.45; Early Crawford, $1.35@1.60; Orange Cling, $1.25@1.55; Lemon Cling, $1.25; Susquehanna, $1.55@1.60; pears, Bartlett, $3.50@4.15; Howell, $3.35; grapes, Rose de Peru, half crates, $1.40; Muscats, $1.95@2.15; Tokay, $3@3.40; Blue Malvoisie, $1.40; Fontainebleau, $1.40; Chasselas, $1.40; plums, Egg, $1.60; Columbia, $1.55@1.65; Fallenbergs, $1.40@1.50; Purple Egg, $1.50; Golden Drop, $1.20; Washington, $1.25; Gros prunes, $1.60@1.80; nectarines, $1.25.

NEW YORK, Aug. 10.—Much fear is entertained by dealers in California fresh fruit that the present strike will play havoc with the business which is now in a flourishing condition. The press has constant accounts of California fruit sales and the merits of the fruit. Never before has there been such interest taken on the subject. This is to be expected, as New York is dependent for fruit almost entirely this year upon California. Pacific Coast hops sell at 18@21c; hides, selected, 21@25 lbs., 14½c; raisins, two crown, $1.90; three crown, $2.20; layers, $2.10 to $2.45; prunes were quoted at 12c, but none are for sale; California walnuts, 7½c. The wool market is slow; but during the week the sale of 17,000 lbs. spring was made; scoured California sold at 15½c; another sale of 11,500 lbs., on private terms, was said to be at 19c.

CHICAGO, Aug. 12.—Porter Bros. sold California fruit to-day as follows: Bartlett pears, $3.50@4.25 except one car in poor order sold at $2.35@2.90; peaches, Early Crawford, $1.45@2.20; Beurre Hardy pears, $2.50; nectarines, $2.05@2.10; Susquehanna, $1.85@2.05; Rose de Peru grapes, $2.50; Muscat, $1.70@3.60; Fontainebleau, $1.35@1.65; Black Hamburg, $2.10; Tokay, $1.80@2.35; Hungarian prunes, $1.80@1.85; Gros prunes, $1.90.

CHICAGO, Aug. 12.—The Montgomery Auction Co. sold to-day seven carloads of California fruit for account of W. R. Strong Co., the Earl Fruit Co and others at the following prices: Pears, Bartlett, $3.15@4.05; Howell, $3.45; peaches, Early Crawford, $1.75@2; Orange Cling, $1.35; plums, Washington, $1.25; Bradshaw, $1.20; Fallenbergs, $1.40; Egg, $1.30@1.50; Columbia, $1.30@1.40; Bulgarian, $1.15; German prunes, $1.40@1.50; Gros, $1.75@2.20; French, $1.10@1.15.

NEW YORK, Aug. 11.—Sgobel & Day sold two cars of California fruit to-day as follows: Early Crawford peaches, $2.20@2.85; Gros prunes, $2.10; Bradshaw plums, $1.95; Washington, $1.50@1.80; Purple Duane, $1.75; Golden Drop, $1.75@1.80; Bartlett pears, $4.90@5.25; all in prime condition.

The following has been received from the above firm, agents of the California Fruit Union: Buyers are hungry for fruit in good condition. The market is very strong, especially on Bartlett pears and Crawford peaches. Agents announce daily sales in refrigerator cars.

NEW YORK, Aug. 12.—It is reported that 4000 boxes of French prunes, the first of the season, have been sold at 32½ francs. The *Commercial Bulletin*, which has this news, says that this was a speculative sale upon the part of a Bordeaux firm, as there are numerous buyers prepared to pay considerable advance on this price, but are unable to secure attention to their bids. The fact is, there is a general disinclination to make firm offers for goods for shipment at any price.

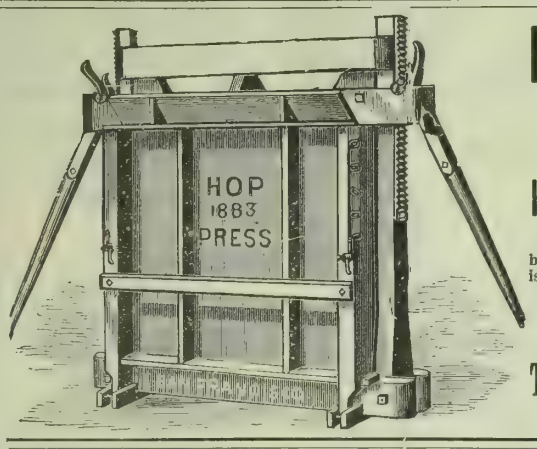
MINNEAPOLIS, Aug. 12.—The first auction of California fruit here occurred to-day. Twenty-five buyers were present from Minneapolis and St. Paul. The bidding was lively. One carload was disposed of in half an hour. Pears brought $3.80; prunes, $1.30; and peaches, $1.85. There was a rush for 100 crates of Muscat grapes at $3.10.

CHICAGO, August 13.—California green fruits continue quite active, with prices ranging as follows: Nectarines—boxes, 20 lbs., 75c@$1.25. Peaches—Crawfords, boxes, 20 lbs., $1.25@2; Orange Clings, $1.50@2. Pears—Bartlett, green, $4@4.25; Bartlett, ripe, $2@3; Howell, $2.25@3.50; Duchess, $2.25@2.50. Gros prunes—20-lb. boxes, $2@2.25; Plums—Purple Duane, 20-lb. boxes, $1.25@1.75; Washington $1.25@1.50; Egg plums, $1.25@1.50; Columbia, $1.50@1.75; German prunes, 20-lb. boxes, $1.50@2.25; grapes, Fontainebleau, one-half cases, 4 baskets $1.50@1.75; Muscat, $1.75@2; Tokay, $1.75@2; Rose of Peru, $1.25@1.50. California dried fruits remain at last quotations. At present the market is a little more quiet. Of apricots there are moderate offerings. Less demand from local jobbers exists, but there is a moderate outside order trade. Holders remain firm. The market is quotable at 17½@18½c. A few unpeeled peaches, very choice, have been received. They are firmly held at 24@24½c ₱ lb. No sales reported.

CHICAGO, August 13.—Porter Brothers sold eight carloads of California fruit to-day as follows: Bartlett pears, $3.25@4.40, with the exception of two cars of ripe stock at $2.15@2.60; Early Crawford peaches, $1.40@1.95; Susquehanna, $1.85@2.10; Foster, $1.55@1.70; Orange Cling, $1.60@1.80; Columbia plums, $1.40@1.65; Fallenberg, $1.40@1.60; Gros prunes, $1.40@2.15; Silver, $1.45@1.60; Muscat grapes, ₱ crate, $1.60@2.

CHICAGO, August 13.—The Montgomery Auction Co. sold to-day six carloads of California fruits for account of W. R. Strong Co., the Earl Fruit Co. and others at the following prices: Bartlett pears, $2.75@3.40; Beurre Hardy, $1.90; Early Crawford peaches, $1.50@1.75; Orange Cling, $1.45@1.85; Hale's Early, $2.10; Albright, $1.60@2.05; Silver prunes, $1.50@1.55; Columbia plums, $1.40@1.50; Egg, $1.40; Fallenberg, $1.40; Muscat grapes, ₱ crate, $1.60; Black Hamburg, $1.50; Purple Damascus, $1.30; Nectarines, $1.60@1.70.

NEW YORK, August 13.—Sgobel & Day, agents of the California Fruit Union, write that peaches are very strong here at $3@3.50 ₱ box, and prospects are very favorable.



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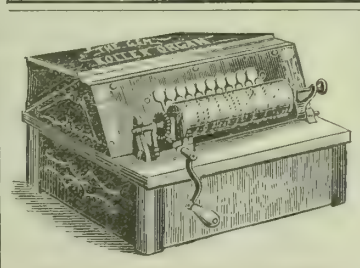
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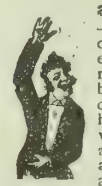
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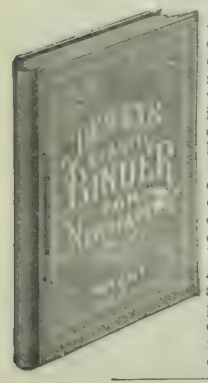
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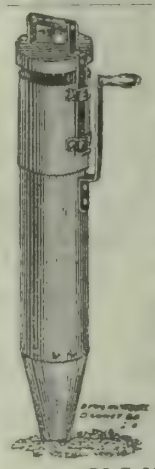
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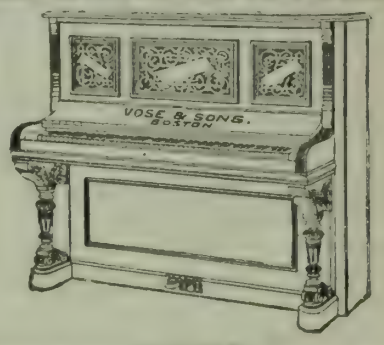
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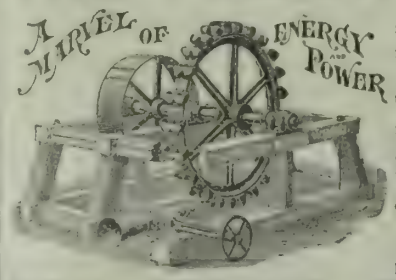
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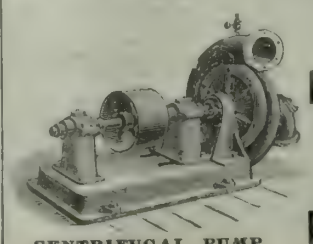
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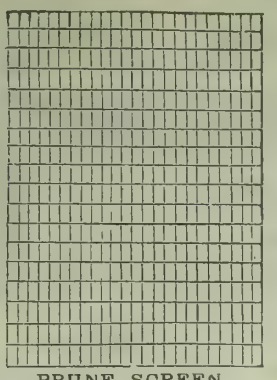
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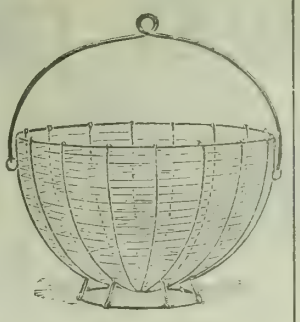
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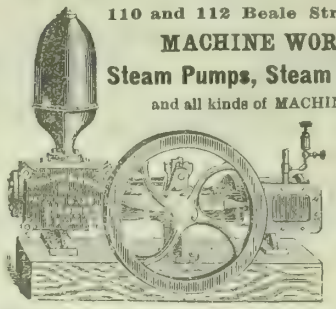
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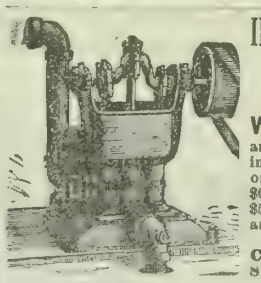
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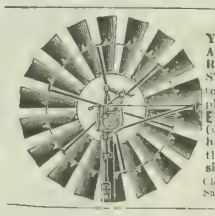


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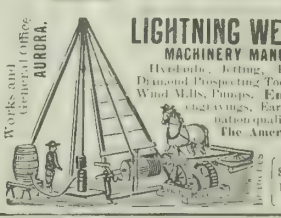
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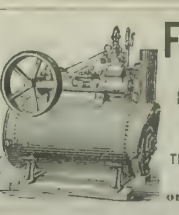
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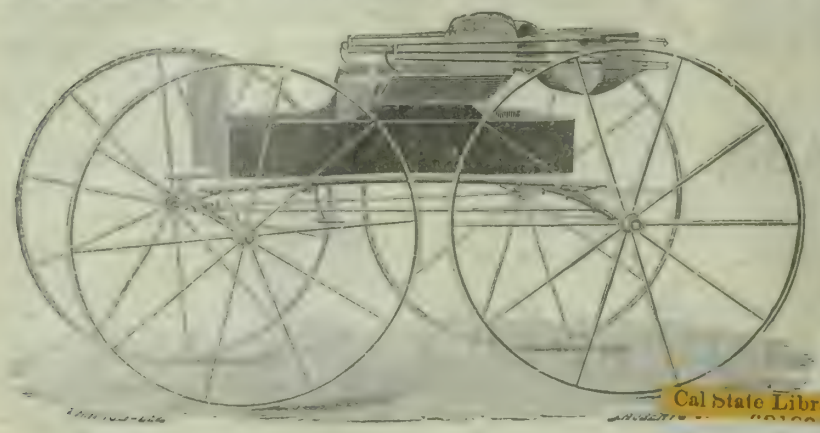


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PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XL.—No. 8. SAN FRANCISCO, SATURDAY, AUGUST 23, 1890. DEWEY & CO., Publishers, Office, 220 Market St.

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THOROUGHBRED DEVON BULL, LOCK 3677 OWNED BY J. R. ROSE, LAKEVILLE, SONOMA COUNTY, CAL.

A Fine Devon.

We are pleased to give the place of honor in this week's RURAL to a representative Devon, for at least two reasons. First, the animal belongs to the rich region which will send its best products to the Petaluma fair next week; second, the Devons as a breed are not recognized for their full worth in this State. Fortunately a few breeders, notably Mr. J. R. Rose of Lakeville, whose animal we illustrate, have upheld the Devon standard and continue to do so, but regarding the State as a whole, it must be acknowledged that Devon merits and adaptations are not adequately considered. For this reason also we are pleased to lay before our readers a sketch of the achievements and claims of the breed which appears on page 157 of this issue. We are advocates of no particular breed, but rather of all good breeds, which should be selected and located wisely and with due reference to the characters of the lands to be devoted to them and the products expected of them. The Devon would undoubtedly become more prominent if his worth and fitness were better known to our people generally.

As the article on page 157 to which we have referred gives quite fully the claims of the Devons as a breed, we need allude in this place only to the representative of the race whose portrait appears herewith. He is a thoroughbred Devon and bears the name Lock, and his registry number is 3677. Lock was bred by Luther Rawson of Wisconsin from imported stock, and Lock's pedigree, which we have before us, traces back ten generations on side of both sire and dam, the earliest ancestor being Champion No. 26, which shows that his pedigree extends to the beginning of accurate Devon records. Mr. Rose's stock has been selected with reference to purity of descent as well as individual characteristics, and his herd traces directly to the herds of Messrs. Quartly, Davys, Bloomfield and other noted breeders, and to their most distinguished animals.

Mr. Rose's breeding-farm near Lakeville, Sonoma county, is almost an ideal location for a stock farm. It has upland and rich meadow. It is in a region of abundant rainfall, and in an atmosphere which, from its proximity to large bodies of water, is moist and favors late growth of feed. There is also enough exposure to free air to make animals hardy and hearty. The delights of the situation and the excellence of the stock will repay the appreciative visitor.

GEORGIA WATERMELONS.—The special investigation in "Truck-farming" in the agricultural division of the census office is already developing some interesting and valuable figures. The crop of Georgia watermelons alone this year will be 8000 cars of 1000 melons each. This yield of 8,000,000 melons will probably be increased next year to 10,000,000. One grower has 457 acres in this crop. They net the grower six cents each and leave the land in fine condition for the cow-pea crop, making two yields in one season. Georgia lands yield on an average 700 melons per acre, some experts getting 2000 to the acre. The railroads get about 12 cents a melon for moving the crop, or twice what the grower gets, each acre giving the railroads an income of $50. They are carried as far east as Portland, Maine, and west to Denver, Colorado.

TEXTILE INDUSTRIES.

New Zealand Flax.

As the plant called New Zealand flax (*Phormium tenax*) grows freely in the coast valleys of California, and as the plants, through distribution from the University and otherwise, have become widely spread, the following letter, which we take from a consular report issued by the Department of State, will be read with interest and may be suggestive of a profitable enterprise:

Inasmuch as flax fiber has become an article of considerable commercial importance in New Zealand during the past year, I have endeavored to procure some of the seed, which I forward herewith,* together with such information as I have been able to obtain in relation to the cultivation of the fiber. The purchase of New Zealand flax by the United States has largely exceeded that of any other country during 1889. I have therefore deemed it my duty, in view of the immense commercial value to which this exclusively New Zealand product has attained during the brief space of one year, to acquaint the Department of its growing importance as an article of export to the United States and other countries.

I am convinced, if handled with intelligence and care, that the *Phormium tenax* plant can be successfully and advantageously cultivated in the United States. The climate and swamps of many of the Southern States are peculiarly adapted to the propagation of New Zealand flax. The climate of California is also suitable for the cultivation of the flax plant. *Phormium tenax* is indigenous to New Zealand, Norfolk island, Chatham islands, and other smaller islands situate between 30° and 50° south latitude. The most robust and finest plants are to be found between 35° and 41°. It grows on any soil from the sea level to an altitude of 2000 feet, but it is found in the greatest luxuriousness in swamps and on the banks of rivers and lakes. The leaf or blade often attains the length of 15 feet and from 2½ to 3 inches in width. Before the Maoris adopted European clothing, considerable care was bestowed on the selection and cultivation of the plant by them. They dressed it by a process of steeping and scraping and hand-scutching, which produced a fiber almost as fine and glossy as floss silk, of which they wove their mats and "kakahu" (clothing). But of late years, since the Maoris have learned they can procure their clothing from their European neighbors with much less effort than they could manufacture it with the primitive methods at their command, no steps have been taken for the conservation of the better varieties.

The seed accompanying this paper is of a superior quality, was procured for me by a Mr. Jeffs, who has lived in this colony for nearly 40 years and who is thoroughly familiar with the flax industry of New Zealand. It may be proper to state that Mr. C. K. Jeffs of Onehunga, N. Z., is willing to furnish seeds and practical information to any one desiring to engage in the cultivation of *Phormium tenax* in America. The seed above referred to was obtained from an old Maori cultivation, and is highly prized by those natives who still devote their attention to the weaving of mats and other useful ornaments manufactured from the fiber.

The flax used for export is usually cut from the swamps, marshes and river-banks. It is in its wild, uncultivated state, and it is cut down and run through the machines without any attempt at selection. This is much to be regretted, as with a little care, even with the crude machinery in use at present, a much finer article could be produced.

The persons usually employed to cut the green flax are paid by the ton. It is therefore to their interest to get as much weight as possible, and, in consequence, they cut as close to the ground as they can. The lower end of the leaf is thick and fleshy, containing a large amount of gum and vegetable matter, and weighs heavily as compared with upper portions of the leaf; besides, the fiber obtained from the butt end is very much inferior in texture to that procured from the body and top of the blade.

To imperfect machinery and carelessness in the selection of green plants may be ascribed the apparent coarseness and inferiority so often complained of in the flax exported from certain portions of New Zealand. But with improved flax-dressing machinery and proper care exercised in the selection of the raw material, a very superior article can be produced. The *Phormium tenax* fiber is susceptible of a much higher degree of preparation than has been bestowed upon it up to the present. This, however, is not altogether the fault of those who are engaged in its manufacture; it is for want of the necessary machinery. The hand-dressed article prepared by the natives is as fine as silk as compared with the modern machine-dressed flax of to-day. This only demonstrates the fact that the fiber may be reduced to a much finer quality, and all that is necessary to do this is an improved machine. If New Zealanders cannot produce the requisite machinery, I trust the inventive genius of America will come to the rescue. There is certainly a splendid opportunity and a fortune for any man who will invent a machine that will successfully and economically reduce New Zealand flax to a proper degree of fineness.

Many who profess to thoroughly understand the toughness and durability of the *Phormium tenax* believe that if it could be properly reduced it would enter largely and successfully into the manufacture of valuable textile fabrics.

The quantity of seed I have forwarded to the Department, I am reliably informed, is nearly sufficient for an acre of ground, and with ordinary care in its cultivation will be in a proper condition to send to the "flax-mill" at the expiration of three years from the date it is put in the ground. It takes about 1200 healthy plants to the acre, and, to use Mr. Jeffs expressive language, "in three or four years it would be so close you would hardly be able to ride a horse through it."

For additional information on the subject, reference to my report to the Department dated Dec. 31, 1889, may be of some value.

JOHN D. CONNOLLY, Consul.

United States Consulate, Auckland, March 6, 1890

*Sent to the Department of Agriculture.

THE VINEYARD

Resistant Vineyards.

NUMBER II.

[Written for the RURAL PRESS by W. B. WEST.]

We have seen in a previous communication (RURAL PRESS of Aug. 9th) that the experience of Europe is almost universally in favor of American resistant stocks. The next important question, then, will be what variety of stocks should be used.

The vine-grower who is in danger of phylloxera should commence a series of experiments to determine the kind best suited to his soil—that is, if the matter has not been previously settled by the experience of his neighbors. Then it would be an economical plan to plant cuttings of these stocks in nursery, so that he will have them at hand when they are wanted, for it is not always possible to get them from the nurseryman, and when obtained they would not be so reliable as those grown at home, or, in other words, the proprietor can take more care in the growth and handling than the nurseryman can afford to do. Experience has proved to me that rooted vines are better than cuttings. I therefore never plant anything in vineyard but stocks that have been in nursery one or two years.

A saving of time could be made if nurserymen would graft some of the most approved kinds and have them for sale at moderate prices. French nurserymen advertise many of the prominent wine varieties grafted on the different resistant stocks at $40 per thousand.

Seedling vines have been recommended by some as being hardy and making better roots than cuttings. I have found the opposite to be the fact. The cuttings formed a good system of roots, were more sure to grow when transplanted, and made better wood to graft into; the seedling wood was very difficult to graft and the roots were very poor.

Propagation of Different Resistant Vines

The Riparia grows easily from cuttings and does not require much effort in ordinary soil to get all the stocks necessary.

The Lenoir—Cuttings of this variety are difficult to root. I plant them in beds of four feet wide and as long as is practical to irrigate, where the slope is gentle, say 80 feet long. The cuttings are planted across the bed four inches apart; the rows may be one foot apart. The borders of the bed should be raised in order to keep the water on the plants. To those who have no experience in irrigation, I would say that a vine cutting in the spring, when the roots are pushing, requires the soil to be wet (not moist as some suppose), and if irrigated freely, then many cuttings will strike that would perish if neglected.

The selection of varieties for stocks, as I have said before, is a delicate matter and should be looked into thoroughly before deciding what kind to use; for instance, the Riparia is probably the best stock known for universal planting and yet on my place is useless. The stock must be thrifty and suited to the soil, or it will not be resistant. I will only mention a few of the best known kinds.

Adaptations of Resistant Varieties.

Vitis Riparia is probably the best suited to most of the soils of California. It is very resistant and on sandy or gravelly loams does well, but does not thrive on my place, where the soil is deep and rich but rather dry. It takes the graft easily and forms a good union. It strikes easily from cuttings.

V. Rupestris is an utter failure here. It is of slow growth, making small wood, and when grafted grows poorly.

V. Æstivalis—One of the best known of these is the Lenoir. This has proved the most successful of all the stocks that I have used. They grow freely in the worst phylloxerated ground, take the graft well, and so far, after an experience of five years, have proved satisfactory. The Lenoir should be planted in deep, rich soil with a dry subsoil. It may thrive on a shallow soil a year or two and then die.

V. Californica with me is a failure, and after five years' trial I was forced to dig them out. They have not proved wholly resistant, or satisfactory in ground free from phylloxera.

Nuevo Mexicana, from Texas, has proved an excellent grower, exceedingly well adapted to dry ground. Vines planted late in the dry years of 1887-8-9 in badly infested ground have grown well, even better than the Lenoir. Some vines received from the Viticultural Commission in May of 1889 have grown well under the most adverse circumstances. It roots easily from cuttings and promises to be a better stock for dry land than any that I have knowledge of. Another variety from same source is the *Berlandiera*. It is well adapted to very dry soils. These varieties may make it possible to plant resistant vineyards where other kinds will not succeed. I have never grafted either of these kinds, but as they are quoted in French catalogues, they must be known to be resistant.

Grafting Grapevines

Does not require much skill. The most important factors are, the proper time to do it and the proper condition of the cion. The best time to graft is in the spring, when the new wood has made a growth of from two to four inches. At Stockton this is from the 1st to the 12th of April. The cions should be cut in February and heeled in on the north side of some building or in an open shed, where they will remain dormant until the time for grafting.

I usually employ three men in a gang—two to dig around the vine and fill up around the cion, and one to graft and tie. I do not exact a large amount of work, but insist on its being done well. Grafts are put in two to three inches below the surface; in dry years a little deeper. The dirt is hilled up to the top of the cion. My average of success in five years has been 90%; a few failed to unite, more were displaced by after cultivation, and now and then one was lost by digging to remove the suckers from the root and the roots from the cion.

For tying, I use baling rope and have found no occasion for anything better. My stocks are now nearly all Lenoir and about the same size, from one-half to three-quarters of an inch in diameter. The larger size are cleft-grafted, but on the smaller I employ a method of "side grafting" entirely new to most vine grafters, but not to nurserymen who graft delicate evergreens. I make an inclined cut, an inch or more long, down the stock, cutting to the middle of it; the cion is then cut to fit it. By this method two excellent surfaces, each an inch or more in length, present themselves for the cion to unite with. It is then tied firmly, but no clay nor wax used. A portion of the top is cut off, but enough is allowed to remain to draw up the sap. When the cion has grown a foot or two, the stock is cut off at the union. The value of side-grafting is best seen in dry seasons. The stock draws up the sap and keeps the cion moist and more sure to unite and grow. If it should fail, the stock will be there, healthy and strong for another year. This is not always the case when the stock is cut off, as is the case in cleft-grafting.

At first sight it would seem that this method requires more labor than cleft grafting, but it is not so, as continued effort is required to keep the suckers from the stock and roots from the cion in both cases, and the little extra trouble of cutting off the stock after the cion has firmly united is more than counterbalanced by the less number of suckers made where there is an outlet for the sap.

Summer treatment requires continual watchfulness to keep suckers from the stock, and in a wet spring like the past, to take the roots from the cion. When thrifty varieties such as table grapes are grafted, much care is necessary during the months of May and June to prevent the young shoots from being blown off. They should be tied up, and in some cases the ends cut off.

Characteristics of Varieties Which Have Been Grafted.

The Black Prince, or Rose of Peru, is a variety unusually subject to black knot. I find that by giving it plenty of wood the difficulty is lessened. It unites better with the Lenoir than with the Californica.

The Flame Tokay unites well and makes a good vine.

The Black Ferrow pushes its shoots vigorously in the spring, many of which will be blown out if not properly tied up.

The Emperor is a very strong grower and hard to manage on that account. In most cases the vine is twice as large as the root—this is the only doubtful case that I have among all the vines that I have grafted.

Most wine varieties unite well and give me no trouble.

Will They Bear Well?

The next question that is continually thrown up to me by the doubters—Will these grafted vines bear as well as they did on their own roots? From my own experience I cannot say, as my oldest grafts were lost on account of not being on proper stocks. Vines three and four years old show remarkable fertility.

I have to fall back upon French authority. Many reports of Vine Commissioners, most reliable and of undoubted authority, state that the grafted vineyards show remarkable vigor and bear unusually heavy crops, especially with the *riparia*. I see no reason for a doubt in this matter. Most of the resistant vineyards of this State are still young and cannot be expected to show full crops until at least five or six years. I think time will show that on the proper stocks our vineyards will be even more prolific on resistant stocks than on the *vinifera*.

The Future of Viticulture.

It is true that there have been many discouraging circumstances connected with viticulture—the heavy losses by the phylloxera, the low price of vine products (wines, brandy and table grapes), which have ruled during the three past years, has been disheartening, but I think the experience will not be wholly lost. Younger men will start with a knowledge of the past. They will reconstruct the vineyards with resistant stocks, will graft more desirable varieties, will make better wine and establish business on a better basis.

The outlet for table grapes is increasing. I can recollect when a carload would glut the Chicago market, where now a train is demanded. Oregon, Texas and the Territories are now great consumers. These considerations should encourage us to renew our vines and maintain the industry.

Stockton, Aug. 14th

FRUIT MARKETING.

Fruit Sales in New York.

EDITORS PRESS:—The past week has been a very eventful one in the history of the California fruit trade, so far as New York is concerned, 34 carloads having been disposed of from Monday until Friday. Owing to low prices ruling in Chicago during last week, our Monday's market opened with prices ruling at $3.50 on Bartlett pears, $1.60 a box on peaches and plums, and prunes at about from $1.75 to $2.

In spite of the daily sales that were held of from four to nine cars, we were able to force the market up each day about 10 cents on peaches and 25 cents on pears, with about 25 cents as a total advance on plums and prunes. At my Thursday's and Friday's sales the average on pears was about $4.75 per box, with fully 3500 boxes of peaches averaging $2.15.

The demand has been good and the market firm, and inasmuch as new buyers are daily coming into the salesroom and commencing to handle California green fruits, the outlook is favorable for the balance of the season. It is a significant fact that small dealers in the interior of the State are now having daily supplies of California fruits shipped to them by the jobbing houses, and that this is not confined to the near-by towns, but extends for a radius of 500 miles from New York.

Tokay grapes have opened well as regards prices, single crates from Vacaville having been sold this week by me at $5.10 per crate, equal to $10.20 for crates of 40 lbs each.

New York, Aug. 9th. E. L. GOODSELL

A Package of California Apricots.

EDITORS PRESS:—In a letter just received from a San Francisco lady now in the East, she writes, under date of July 30: "I have just returned from a shopping trip to New York. While there I bought one of those small wooden baskets of apricots, not holding more than four pounds, and for which I paid $2."

Think of it! Fifty cents a pound! Of course they must have been California apricots. Would it not be interesting to trace that basket back to the grower, to see that $2 dwindle down to what he received, probably 10 to 15 cents for the four pounds at the outside?

Then if any quantity can be sold in New York at 50 cents a pound, how great a quantity could be sold at 10 cents per pound?

MIRAMONTE.

A Decision on a Sale Contract.

The Watsonville *Pajaronian* describes a case which will interest all fruit-sellers as follows: Last Friday Judge Swank had an all-day session with the case of R. H. Pearson vs. L. G. Sresovich. The former owns an orchard about one mile east of town. On the place is a patch of raspberries, which has been leased and handled by J. R. Strange for the past two years. Sresovich bought the fruit on the place this year, but Pearson's understanding, in making the sale, was that he sold the orchard fruit and not the crop of the berry-patch which was leased to Strange. Some time ago Sresovich saw that he would run behind on the orchard, and he refused to make the final payment unless the berry crop was given him. This Pearson refused to do, and he entered suit for $299 99. The case was heard on Friday, and attracted much notice. A number of expert witnesses were examined and the main point appeared to be the definition of the word "fruit." The court held that Pearson sold only the orchard fruit, and gave him judgment for the full amount. As the opinion was written, we have been requested to give it in full. It is appended:

"The law is, relating to contracts that where through fraud, mistake or accident a contract fails to express the real intentions of the parties, the intention may be ascertained by parol evidence.

"Words are to be interpreted as usually un-

derstood by persons in the business to which they relate.

"A contract is to be interpreted according to the law and usage of the place where it is to be performed.

"A contract may be explained by reference to the circumstances under which it is made and the matter to which it relates.

"In the construction of an instrument, the intention of the parties is to be pursued, if possible. From the law, evidence was necessary to interpret the contract in question to ascertain the intent of the parties—what they meant by the word 'fruit' at the time the contract was ratified.

"'Fruit' being a comprehensive term, it is necessary that a limit-line should be interposed. From the evidence in the case, the court is convinced that berries were not included in the purchase and sale of the plaintiff's fruit crop and that he is justly and morally entitled to recover. Judgment is therefore given to the plaintiff for $299.99, the sum asked for in the complaint, with costs."

Florist and Gardener.

The Canchalagua.

EDITORS PRESS:—If you visit this winter some of the Spanish sections in Southern California, where the large, spacious adobe house still remains in fashion, you may from curiosity desire to cross the threshold of some humble Mexican family or even to glance within the squalid hut of the Indian. Should you do any of these things, it is more than likely that you will find carefully hung in some safe place bunches of a little plant that has been dried for use in case of emergency.

The plant to which I refer is the *Conchalagua* or *Canchalagua* of the Mexicans and Indians, the Californian pink or centaury of the English race, *Erythraea venusta* of botanists. Medicinally this plant possesses valuable antiseptic and febrifuge properties and is in high repute as a bitter tonic and stomachic. With the old Mexican families and the few surviving Indians it is an ever-present and valued household remedy, and is seldom missing from their rafters, together with red-peppers and "jerky," when they have not become too civilized for these luxuries.

Some have asserted that this plant forms the basis of the widely advertised medicine known as August flower, but of this I have no satisfactory proof. However, it is used by the the medical profession to a considerable extent, and I have an order from a prominent homeopathic firm for a quantity of the drug.

But it is not to the real or fancied medicinal qualities of this herb that I would call attention, but rather to its surpassing loveliness as a flower, ranking among the foremost of the many handsome flowers which California has given to the horticulturist.

It seldom exceeds a foot in hight, the plant being a low-branching annual, bearing a multitude of showy flowers on pale-greenish stems with light apple-green foliage. The corolla is rotate, with a slender tube and five (rarely four or six) divisions. The corolla exceeds an inch across, the five divisions of a brilliant shade belonging somewhere between solferino and magenta—too dark and brilliant for rose-purple, with a narrow white circle where the five divisions unite. The center and tube of the corolla is of a greenish sulphur-yellow, while the prominent exserted, erect, spirally twisted anthers are of a brilliant lemon-yellow. The slender style and filaments are white, the stigma of a delicate sulphur-yellow.

The blossoms close their eyes upon the going down of the sun, turning their fresh faces to him again as he rises in the east. Not until after the last rains of the season, and May Day is safely past, does the canchalagua put out its stars of color; but from then on to the middle of July it replaces the earlier spring flowers and gives the eager schoolchildren pretext for wandering over hill and mesa in search of flowers.

And such bouquets as they do gather! Nothing but apple-green and solferino which match well with the children's happy faces; and these flowers seem to mind their rough handling the least bit in the world. Whether left by the roadside, or in the hall to wither, or in a parlor vase without a drop of water, they still persist for days and weeks in turning a bright, independent face to the sunlight as if they were contented, as no doubt they are.

While the flower is usually nearest akin to solferino in color, yet sometimes, though rarely, it is of a delicate pale lavender or else pure white. In 1884, I gathered numerous examples of this with pure white corollas, and on sending specimens to an eminent botanist, he was at first inclined to consider it a new species, until I explained that they were innocent albinos, with no intent to deceive.

The plant is widely distributed on the Pacific Coast, throughout Southern California, southward, I believe, to Chili, in South America, where it first gained notoriety as a medicinal herb. In Southern California it is quite variable, sometimes with quite small, inconspicuous flowers, but more commonly with the large brilliant flowers, as above described.

The genus contains numerous European species also, and belongs to the well-known Gentian family, so many members of which belong in good society that I do not hesitate to introduce this new beauty to horticultural circles. Dr. Veit Brecher Wittrock, of the Royal Academy of Science of Stockholm, Sweden, has made a special study of the genus. At his request I sent him the Californian forms accessible to me, and among them he found one (from Washington, collected by a correspondent,) that was new to science. He made carefully prepared figures and descriptions of our canchalagua and its relatives, but his introduction only brought it to the attention of botanists—not to horticultural notice.

Doubtless it would do well in cultivation if given a little encouragement and not too much water. Try it when you can get the seed.

San Diego. C. R. ORCUTT.

Cabbage-Growing in San Diego.

R. H. Young, secretary of the Producers' Union, writes as follows to the San Diego *Sun*: This seems to be an unfortunate year for nearly all of the Eastern and Central States. The fruit crop, taking it altogether, is less than half what it usually is, and some of the other crops are not nearly what they should be. The hot weather in some portions and dry in others is cutting even the vegetable crop short. Take Ohio, for instance, with its Miami valley, one of the finest in the country. The elements have been such that the vegetable gardens and fields are yielding very much less than in other years, and to-day vegetables are very scarce in Cincinnati and other cities of that region. If this is the case now, what will it be next winter?

The above by way of introduction to a cabbage letter.

It seems more than probable that there will be an excellent demand for cabbage in all the Northern States next winter and spring. California ought to supply the demand, and no other portion of this big State can do it easier than the southern.

As stated before in these letters, the Early Jersey Wakefield is the best kind. Small, solid, conical heads are preferred, for the reason that they ship better and sell better than do others. By the time California cabbage reaches the East, is handled by one or two commission men and then by a retailer, the price is up to several cents a pound. If the heads are too large, families, except the rich, will not buy them. If they are small, anybody who wishes cabbage can get just what he desires.

This cabbage seed costs the Union $3 a pound and the freight. It is turned over to the growers at cost. In one ounce there are 2000 seeds. Because of the small heads, 12,000 Jersey Wakefield plants are put on an acre, so it takes six ounces of seed per acre, or a little over a dollar's worth.

It is not yet time for those who have no water to put the seed in the beds. Rains cannot be calculated upon before some time in November, possibly the first of December. As a rule, those who cannot irrigate should not put out the plants until the first rain. Those who have water should sow the seed-beds for the first planting by the last of this month, so as to have the plants ready some time in October, and hence cabbage ready for market by the latter part of January or the first of February. The second planting should go in about a month later.

The first supply of cabbage seed received was exhausted several days ago and another order sent in. It is now all engaged, and a third order will be forwarded to-day. All who are intending to raise cabbage, especially of the Early Jersey Wakefield variety, should send in their orders for seed at once. It takes from two to three weeks to get it from the East, so it should be ordered while there is plenty of time.

Fruit Preservation.

Fruit-Drying in Los Angeles County.

EDITORS PRESS:—A visit to the Monrovia fruit-drying grounds at this season is one of the most cheering and inspiring pleasures to the lover of rural scenes and to all engaged in this industry.

The oldest deciduous orchards are not more than ten, and the majority from five to seven years old. The pioneer settler in this district, Mr. Monroe, some eight years ago planted his fine domain liberally with all deciduous varieties, even cherries. Our way led through East Pasadena, where Mr. Bonine with some 30 cutters was harvesting apricots and nectarines, one of the most perfect crops for size and beauty we had ever seen. On through the Sierra Madre, and some miles of wild pasture, exactly like the acres transformed so recently into these rich plantations.

At Monrovia we found seven acres covered with drying-trays, laid out most conveniently for handling, and cut at suitable distances by tramways for moving this immense crop. At a little distance this drying-ground seemed a wonderful crazy quilt of color, the bright gold of the Crawfords shining against the more silvery white peaches; the delicate lilac of the nectarines relieving the intense apricot yellows, while nearer the center of operations the fruit fresh from its bath of glucose glittered in the sun.

Under the cool sheds the women, boys and girls of Monrovia were earning from $10 to $12 a week, some working by the box—the more expert earning $1.50 per day. A few worked in the evening, as the sun hurried up the work.

John H. Leslie & Co. of Chicago are furnishing a market and all needed facilities for handling the deciduous fruits of this neighborhood, including the later plums, prunes and pears. They have now been cutting six weeks, and the late peaches will run into September.

On the day of our visit they were loading the eighth car, each car holding 22 tons of dried fruit. It was estimated that from 10 to 12 more carloads of apricots would be furnished in the Monrovia neighborhood. The agents of this house are also purchasing dried fruit along the line of the Santa Fe railroad.

The late peaches will carry this work into September, and the prune harvest promises to be large. The price of dried apricots ranges from 12 to 15 cents per pound; and so favorable has been the season for ripening that the color has never been so uniform as this year.

The prunes are mostly of the variety Petite d'Agen; around Pasadena thousands of trees are in bearing from buds obtained at Carmelita from trees of undoubted pedigree. Mr. J. Routier of Sacramento county, who furnished them, obtained his stock directly from the Agen district in France.

Almost in sight of the Monrovia drying ground is the fine orange orchard of State Controller Dunn; and all the wealth of the Duarte orange groves, now rejoicing in the total disappearance of the cottony cushion scale. The prospect of the grape crop also brightens as we move eastward toward the old vineyards of Cucamonga, never so rich in leafage and fruitage as in this moist year; while thousands of town lots in Los Angeles county are groaning under their crops of corn, Lima beans and pumpkins, sure tokens of renewing prosperity.

JEANNE C. CARR.

Carmelita, Aug. 8, 1890.

[Such a note is eloquent of the permanent prosperity of the South country. We trust our esteemed correspondent may find leisure to send many more like it.—EDS. PRESS.]

Fruit Drying at Tulare.

We condense the following from the Bakersfield *Echo* of last week: At Paige & Morton's fruit farm, a few miles from Tulare City, on a single day, 99,370 pounds of ripe peaches were set out to dry. High-roofed, unsided sheds are filled with tables, and at these sit a chattering group of 175 to 200 boys, girls, women and men, all busily splitting, pitting and spreading the fruit upon trays. The tables are about 16 feet long, and six or eight operators sit upon one side. The tables are arranged in pairs, so that between each couple those who serve the fruit and trays have an alleyway for their work.

The work is paid for at a rate of 3 cents per tray. The trays are about three feet long and two wide, with a narrow rim on each side. The operator takes a peach in the left hand and with one cut severs the fruit to the pit, with a rapid twist then flirting out the pit, and then, with the left hand, laying the halves down, cut side up, upon the tray. There is one bright-eyed little lady whose daily average is 70 trays. The best ever done by an operator was 110 trays. As soon as the tray is filled, the call "tray" is made, and the attendant takes the filled one and places it on a car so constructed as to hold about 100 trays, placing an empty tray before the operator. As soon as the car is filled, it is run outside of the building into the sulphur-house. This place is only a little larger than the car. A pan with about two pounds of sulphur is placed beneath the car and ignited. The door is tightly shut, and the car and contents indulge in a sulphur bath for about 20 minutes. Then the car is run out to some vacant space amid the drying-racks, where the trays are placed in the sun for from three to five days. When dried, the trays are brought back and the contents emptied into "sweat-boxes" and stored, one above another, in a rather tight wooden building.

There are many other enterprises carried on under the same roof, such as packing choice fruit in 20-pound boxes for shipment to the East, peeling other choice fruit by the lye process before halving for drying, and so on.

MECHANICAL DEVICES.—Perhaps, says a cotemporary, one of the best examples of a mechanical device working its way into great prominence against early prejudice is found in the steam pump. When the late Henry R. Worthington invented his direct-acting steam pump and proposed to use it for feeding boilers, he was met by eminent engineers to whom he showed it with the remark to the effect that, while it was ingenious and all that, no one wanted such a pump. This was the first reception of a machine which, in various forms and modifications, made by different manufacturers and for different purposes, is in use in every civilized country in the world and on board every steamship. No one doubts its utility or its influence on mechanical progress. Perseverance won in the instance of the steam pump, as it has in the instance of many another invention. It is not wise to drive bull-headed against all mechanical opinion, and it is equally unwise to be turned aside by every contrary opinion. Mr. Worthington's belief in himself has been an excellent thing for the world.

The Dairy.

The Columbian Dairy Association.

A meeting of delegates from the most prominent dairy associations of the Union was held in Chicago, July 16th, for the purpose of representing the dairy industry at the World's Fair, and that through their organization the Commissioners of the World's Exposition might be notified of the wishes of the dairymen.

Governor W. D. Hoard of Wisconsin was selected for president; R. Lespinasse of Illinois for secretary, and John Boyd of Illinois for treasurer.

The president appointed a Working Committee of 21 to originate and perfect suitable plans for the dairy exhibit to be presented to the World's Fair Commissioners in October.

Several of the State Dairy Associations pledged $200 to defray necessary expenses until the Legislatures of the different States would meet. The following resolutions were adopted:

WHEREAS, The dairy interest of the United States is of such vast magnitude, reaching in annual increment an aggregate of $640,000,000, giving employment to hundreds of thousands and representing a capital of over $2,000,000,000; and

Whereas, It is of great importance that this vast interest should be adequately represented at the Columbian Exposition of 1893, this convention, representative of dairy organizations, desires to give expression to the following resolution:

Resolved, That the World's Fair Directors be urged to provide buildings suitable for caring for dairy cattle, milk, butter, cheese and machinery adequate to keeping working dairies on exhibition each day of the fair, that it may be educational as well as artistic; and that a commission be appointed to visit every section of Europe having dairy interests and solicit exhibits.

Upon call of the president, the Advisory Committee met at the Sherman House in Chicago, July 30th, and elected Wm. H. Gilbert of Richmond, N. Y., chairman; W. H. Morrison, Madison, Wis., secretary; and John Boyd, Chicago, Ill., treasurer. A general discussion in reference to a working dairy and dairy school in connection with the general exhibit of dairy products and dairy utensils, with a written communication from J. H. Monrad about foreign exhibits, the working dairies, implement show, premiums for dairy products, and plan for the buildings, resulted in the selection of the following sub-committees: Committee on Buildings; Working Dairies; Dairy Cattle; Butter and Cheese; Dairy Utensils; Miscellaneous.

The secretary and the sub-committees were instructed to procure all the data in their different departments that could be obtained, as a meeting of the committee would probably be called the latter part of September to report to the Commissioners of the World's Fair in October.

The dairy department of the World's Fair must be something more than a large show of dairy cattle and their products. The different methods of separating the cream, the working dairy, giving daily exhibitions in the manufacture of butter and cheese, will be practical and educational; and this great dairy school, with students from every nook and corner of our country, will be the means of increasing the percentage of first-class dairy goods, and will add millions of dollars to our dairy industry.

Answers Desired from Dairymen.

At a meeting of the Advisory Committee of the Columbian Dairy Association held at Chicago July 30, it was decided that the committee will be unable to present plans and specifications to the Commissioners of the World's Fair, in October, commensurate with the importance of the dairy industry, without a full interchange of views. Have the kindness to answer the following questions at your earliest convenience:

1. Do you think it practicable to continue the exhibition of dairy cattle during the entire six months of the fair?

2. Should exhibits of dairy stock be unlimited as to number and quality, or restricted by the Commission?

3. Can you give me an estimate of the dairy cattle, either by cattle clubs or individuals, that will probably be exhibited?

4. Do you or do you not think it would be for the interest of the breeders of dairy cattle to exhibit such cattle in conjunction with the general dairy exhibit rather than with the general live-stock exhibit?

5. Will you give me your judgment as to the best method of exhibiting dairy cattle?

6. Shall we have a working dairy during the entire fair?

Your answers to the above questions, and any estimate or suggestions that you may give us, will be of great value to our committee in presenting to the Commissioners the wants and needs of the dairy industry in making an exhibit that will command the commendation and approval of all visitors.

Madison, Wis. W. H. MORRISON, Sec'y.

[Mr. Morrison invites correspondence from dairy associations on the above subjects. As there is no active State association of dairymen in California, it would be well for some of our progressive dairymen to correspond personally with Mr. Morrison, that our great dairy State may not go unrepresented in such an important undertaking.—EDS. PRESS.]

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

The College-Endowment Bill.

In a letter to the Cincinnati *Grange Bulletin*, dated 23 inst., Prof. W. A. Henry, Director of the Wisconsin Experiment Station, speaks as follows regarding the Morrill bill for the endowment of colleges of agriculture, etc.:

"Any money given by the Government to agricultural colleges should be appropriated only after the most careful restrictions have been thrown about it. This is only fair and business-like. If Congress intends the money to be used for agricultural and mechanical colleges, let it say so, and that in unequivocal sentences; then there will be no disputes nor quarrels hereafter. No one will be enabled to interpret doubtful sentences in favor of the general use of the funds.

"Let no ammunition be used, however, to kill the bill, but rather to see that amendments sufficiently explicit are added to the bill; then that it is put through. Under proper restrictions the gift will be of great value; given without restrictions, it will be a source of trouble and irritation to every State and school that receives it."

The *Bulletin* editorially gives Prof. Henry's views a hearty indorsement, adding that farmers cannot get mad and try to kill such an important bill, but must see that it is passed in proper form.

On Tuesday of this week the U. S. House of Representatives took up the Senate Agricultural College bill. J. D. Taylor of Ohio spoke in favor of a proposed amendment providing that the appropriations be applied only to instruction in agriculture, mechanic arts, the English language and various branches of mathematical, physical, natural and economic science, with special reference to their application in industrial life, and to provide the facilities for such instruction. After a long debate the amendment was agreed to, and the bill as amended passed without a division.

As the amendment thus agreed to is the one for which our Legislative Committee at Washington has been so strenuously contending, we feel much gratified at the action of the House, and hope it will speedily be ratified by the Senate

Eden Grange.

EDITORS PRESS:—Eden Grange held its regular meeting Aug. 9th and gave a

Reception to Sister and Brother Adams.

Grange opened at 1 P. M. On account of the brief stay of W. S. M., DAVIS, who had accepted an invitation to be present, all the regular business was postponed until later in the day, and the first hours were spent in listening to W. M., DAVIS and partaking of lunch.

After lunch, Brothers Adams and Blackwood gave utterance to some stirring sentiments on the farmer as related to the political questions of the day, Bro. Adams telling of his experience in visiting the halls of Congress and the manner of disposing of some of the great problems by the law-makers, while Bro. Blackwood never tires of showing up the tariff system. Sister Adams and Bro. Renwick advocated the social features of the Grange as of far greater interest than the political, taking the position that if the social was carried to the highest, purest standard, the political would necessarily be better understood and more honorably followed. Sister Adams told of her interest in "Woman's Work in the Grange," and appreciation of the sentiments and methods of Sister Kinney's circular.

They were followed by Brother Dennis, speaking eloquently on "Woman in the Home," and her unequal hours of labor as compared with man's. Bros. MONSEN, HOLLISTER, PERHAM and others spoke on the meeting of the State Grange. J. S.

AS EDUCATIONAL AGENCIES.—The *Torch of Liberty* says: If the farmers' organizations could accomplish nothing more, they have proved to be one of the greatest schools of political economy ever known and are doing more to set the people to thinking for themselves, instead of allowing others to think for them, than any other society in existence. Go where you may, you will find the masses talking intelligently upon subjects that two years ago they were wholly ignorant of. They no longer look to party bosses for their opinions, but study for themselves.

YUBA CITY GRANGE.—In order to avoid clashing with the District Fair in Marysville, the next meeting of Yuba City Grange had been fixed for Aug. 30th; but as the annual meeting of the Anti-Debris Association takes place upon that day, the date of the Grange meeting has been changed by the officers to Friday, Aug. 29th, at 10 A M, when the third and fourth degrees will be conferred, with a Harvest Feast.

BRO. GEORGE ABBEY has been elected Secretary of Watsonville Grange in place of Sister Kidder, resigned.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

It is more than gratifying to those of our Order who have been faithful to its principles and purposes to know that during the first half of this year there have been 363 new Granges organized. In addition to this, there has been a large increase in the membership of Granges already in existence.

The farmers of America are awakening to the power and influence that the Grange has to bestow, and it is safe to predict that in a short time the Order of P. of H. will be more powerful than ever before. The work accomplished during the present session of Congress by the Legislative Committee of the National Grange has done much to confirm the Patrons in the belief that to be a member of the Order is no idle honor.

The more the farmer learns of the ways of the world, especially of the commercial and financial world, the more the Grange will grow and flourish. Every member of the Order has, or ought to have, a heart for those who are poor and ignorant and yet are striving for light, liberty and better life. Let us help them. The Grange *can* do it. The Grange *will* do it. Fellow-farmer! join us in this noble work. Be a true and faithful Patron of Husbandry!

Educate the boys to be farmers! A college-bred man can find ample field for all his talents on the farm. He need not study law, medicine nor theology merely because he is a graduate. Try the farm! There is room for plenty of thoughtful men on our farms—in fact they are much needed. Brain and muscle make a splendid farm team.

Stand by the Grange if you want your taxes reduced; if you want pure elections; if you want competency in office; if you want better times.

Do you know, if the active, energetic, live Patrons of America were all in line, that the army of Grangers would be larger than the combined armies of Lee, Johnson, Grant and Sherman? Yet so it is! And still the people stop to say: "We can't *do* anything." Just think about it for a moment and see if we can't. See if we won't! See if we haven't!

There is no politics in the Grange, but there is lots of common sense that proposes to stop this foolishness and roguery of pot-house politicians.

There is money to be made by joining the Grange, for there are brainy men and experienced and virtuous women there, who are fighting, praying, working for the welfare of their common country and of mankind. Don't you think such associations are valuable?

Be careful of extremes! Better be cautious and be right than be hasty and be wrong.

The fruit harvest in California is bringing a good deal of needed money to our farmers. Surely they will need it all this fall about tax-paying time.

County fairs are now in progress. How much of the money appropriated therefor by the State will go to the farmers?

Only a few weeks till the State Grange. Are you ready for the session? Deputies and Masters of subordinate Granges, and all officers of the State Grange, will please have their reports ready.

Don't forget to study up the Australian Ballot law, for that subject will in all probability be discussed at State Grange. Bro. J. D HUFFMAN is an encyclopedia on the subject. For full information write him at Lodi, Cal.

Grange Fairs.

The New Hampshire Grange Fair Association was instituted for the purpose of promoting the agricultural and mechanical interests of the State and the welfare of the Patrons of Husbandry. Its constitution provides that the Board of Directors shall consist of one member elected by each subordinate Grange in the State and the president and secretary shall be *ex officio* members with full privileges. The officers and Executive Committee of the State Grange, and the directors, as elected by the subordinate Granges, constitute the membership, but all fourth-degree members of the Grange are eligible to office in the association.

Secretary Geo. R. Drake of So. Pittsfield, N. H, has favored us with the official premium list, rules and regulations for their Fifth Annual Exhibition, which is to be held near Tilton, in the Valley of the Winnipiseogee, Sept. 10th to 12th inclusive.

The park wherein the fair is to be held is easily accessible by rail; contains about 50 acres; is carpeted with greensward; has a bountiful supply of water; neat, covered pens for cattle, colts, sheep, swine and poultry, and box-stalls for horses; an excellent half-mile track; spacious buildings for the display of farm products and agricultural implements; and an historic old church will be used for the exhibit of dairy products, flowers and fancy-work. A large grove at the upper end affords opportunity for people coming with teams to hitch their horses, and this retreat will be guarded by police during the fair. No gambling nor liquor-selling will be allowed upon the grounds.

The premium exhibits are confined to members of the Grange in New Hampshire, and all Patrons in the State are urged to contribute to the exhibition. The agricultural implement department, in which no premiums are offered, is open to exhibits by any one, wherever located.

The three days' program includes the showing off of draft horses, oxen and trained steers at the cattle ring; of walking and driving horses, farm teams, etc., on the track; of a butter extractor in operation; and trials of speed, but no races for a purse except one 300-yards footrace, where the prizes offered amount to $6! (six dollars!) Besides the customary addresses, there is to be an evening farmers' meeting at the town hall, for general discussion of agricultural topics, open to the public.

We have spoken thus particularly of this far-distant fair, because it seems to us that the Grange here on the Pacific Slope should take a more active part and claim a more controlling voice in State and county fairs, or else have fairs under their own direction and management, for the promotion of genuine agricultural interests.

A Visit to Watsonville.

EDITORS PRESS:—Saturday, Aug. 16, 1890, was a grand day for Watsonville Grange. The third and fourth degrees were conferred on a class of 35 by A. P. Roache, W. O. of the State Grange, assisted by the well-trained officers of the subordinate Grange. The W. M., Sister Roache, has not regained sufficient strength since her severe illness to perform all the labor pertaining to her office, but her vigilant eye was on every detail, and the presence of a masterly spirit was apparent in every move.

"Order Is Heaven's First Law."

Patrons, if you wish to see it exemplified, visit Watsonville Grange. Its members have been in perfect sympathy with their W. M. during her illness, and their faithful efforts entitle them to much credit for securing a class of 40 members, five of whom were unable to be at the meeting from sickness and other good reasons.

Lack of time prevented their carrying out their full literary program. The music was fine, and a dialogue by two little girls very amusing.

Bro. Roache met me at the train Friday evening and conveyed me to their lovely home, where I was introduced to the young Granger whose advent into this world was attended with such a mingling of pain and delight. "Granger" is his name—a name most appropriate for a baby boy whose features already show sparks of intelligence worthy of parents who have proved themselves so true Patrons of Husbandry.

I spent a restful Sabbath with Bro. and Sister Cox at their quiet home six miles from Watsonville, and greatly enjoyed the beautiful view it commands of valley, hills and mountains.

The Grain Crop

In this section is considered poor, but I saw some fields of corn, beans and sugar beet that are very fine. Some portions of the valley were completely submerged during the winter and produced no crop this season. The flow of water was impeded by willows growing in the river. An effort is being made to have them removed.

On our way to the depot, Bro. Cox pointed to a field and remarked: "Two crops of beets were grown on that field and then a crop of wheat. The wheat crop was as good as when the land was new. I don't think it was the beets that made the difference—it was the culture of the land." Thorough cultivation should be our motto, fellow-farmers. Let's extend it to ourselves and break up the monotony of farm life by calling dormant powers into activity. I. C. STEELE.

[With respect to the above meeting, "A. P. R." adds: The commodious Masonic hall was so well filled with Patrons and candidates as to remind one more of a State Grange session than anything else. The U. W. was exemplified by the veteran Past Master Steele (who, by the way, never omits to steal the love and respect of all who come in contact with him), in a simple and convincing manner. His eloquent words of wisdom, after completing the ceremony, will long be remembered.]

CALIFORNIA AT CHICAGO.—MRS. Flora M. Kimball appears to be the choice not only of the "Ladies' Annex," but of San Diegans generally, as *the* woman to represent Southern California on the Board of Managers of the coming World's Fair. We can think of no one more competent and every way desirable for that honorable office than the lady mentioned. She would certainly do credit to our Order and our State.

WORTHY MASTER DAVIS has recently returned home to Santa Rosa, after a ten days' absence. He was at Pacheco last Saturday, with Bros. Flint and Huffman, and writes that they had a fine meeting.

ANTI-DEBRIS.—The annual meeting of the Anti-Debris Association of the Sacramento valley will take place on Saturday, Aug. 30th, at 2 o'clock P. M., at the court-house in Yuba City.

Carpinteria Grange Picnic.

EDITORS PRESS:—The Grange picnic held in Franklin's canyon on Thursday, 14th inst., was a very pleasant affair.

By 10 A. M., the people began to arrive at the grove of live oaks and sycamores.

By 11 o'clock a delegation of the Farmers' Alliance and others arrived from Santa Barbara, Montecito and Summerland.

The orchestra made the air ring with sweet music, while with chat of friends and making new acquaintances the hour for dinner soon came, and judging by the lively converse and cheerful laughter, everybody present enjoyed the spread of good things.

Soon after dinner Bro. Webster by request explained to us how and why the Grange was organized, its purposes, benefits, etc. He was listened to very attentively and I presume his address will be given to the readers of the RURAL.

After Bro. Webster, Dr. Rush of Montecito being called for, came forward and addressed us on the necessity of organization. He said we should join the Grange, Farmers' Alliance, or some industrial union, to protect ourselves and get some compensation for our labor, etc.

About 4 P. M. the Grangers began to make their way to the hall, where the Grange was opened in due form. Bro. Webster was again called for under the head of "Good of the Order." We spent an hour or two in the exchange of ideas and posting ourselves somewhat in the work.

We will let Bro. Webster say what he thinks of Carpinteria Grange, which has struggled along since Aug. 20, 1873, and still has a little life left. O. N. CADWELL.

Carpinteria, Aug. 17, '90.

Past Master Webster's Account.

EDITORS PRESS:—At Carpinteria Bro. O. N. Cadwell met me with a Patron's grip. Thence through walnut groves and fields of alfalfa and Lima beans, we traveled two miles eastward to the picnic grounds, where were gathered about 150 farmers with their wives, children and friends. The location was at the mouth of a canyon in a fine grove of tall, trimmed, broad-branching live oaks. The feast was served before any other exercise was undertaken. It was certainly a sumptuous affair, spread on snow-white cloths on the ground, several hundred feet long, with every lady seated on the ground. For quality and variety of fruits presented the display has seldom been excelled, while the good matrons appeared to have samples of everything under the sun worth cooking.

After the feast and good music by the local band, came two speeches—one by a Granger and the other by an ex-preacher and present Alliance enthusiast. The whole affair passed off very pleasantly, and a more jolly, genial, Granger-like crowd it has never been my good fortune to meet.

About 3 o'clock a closed Grange meeting was proposed, and with this view fully 30 members of Carpinteria Grange repaired to their hall, where some two hours were spent in discussing Grange matters, exemplifying the secret work and talking of papers worthy of farmers' support. The officers understand their work well with an ever-watchful and intelligent membership. The valley being cut up into small farms occupied by a thrifty people, I think there need be no fear of Carpinteria Grange failing in the near future.

In the evening I went home with Bro. Cadwell, and from his elevated place beheld the sun apparently setting in the bosom of the Pacific ocean. Being some 200 feet above the sea-level, no frost nor chilling winds disturb his limes and bananas.

A Trip Around the Valley.

Next day we took a trip around the valley, which is about two miles wide by six miles in length, and wherein everything under the sun appears to grow. Lima beans are the principal annual crop, yielding from 1200 to 1600 pounds per acre, for which the farmers are offered 3½ cents this year.

All lands suitable for English walnuts are being set with that tree. Every acre of such ground, unimproved, will sell readily for $300. There are hundreds of acres already in bearing. Many thousands of the trees, from 15 to 20 years old, will each bear annually about 100 pounds of walnuts, which are now being contracted for at from 9 to 10 cents per pound. On the lower lands alfalfa is grown successfully, yielding two or three good hay crops a year without any irrigation.

After rounding the valley and visiting the homes of many Patrons, including that of the W. Master and W. Secretary, we finally reached the delightful residence of Bro. Blood. Being situated some 300 feet above sea-level, the whole valley, the ocean, hill and dale are spread out to the view of the observer like a vast panorama. Bro. B. has crossed the line of three-score years and ten, but physically, financially and socially he is well prepared to run past the end of this century. He says, in fact, that "there is no death. The form may fail and wither away, when the soul starts into new life, with mind and memory as when coupled to the body, and ever present the consciousness of the good and evil done in this life. That there is no heaven but conscious right, and no hell but conscious wrong." J. V. W.

[Bro. Webster has also sent us notes of his trip from Creston to Carpinteria, which, as well as his address, will appear next week.—EDS.]

The Stock Yard.

Points of Value in the Devon.

[Written for the Pacific Rural Press.]

The Devons, so tersely styled "The Rubies" —tracing their origin farther back than any well-established breed now in existence—derive their name from the county of Devonshire, where for over 300 years the breed has been kept in its purity, and is, as an English writer recently said, "so near a perfect breed that the introduction of blood from any other breed could not benefit the Devon."

A late president of the New York Agricultural Society and the editor of the "American Shorthorn Herd Book," speaking of Devons, says: "This beautiful race has been considered by some authors aboriginal, and is claimed to have been known in England at the time of its invasion by the Romans. Be the fact of their remote origin as it may, there is no necessity of disputing it or speculating on other probabilities. They are like no others, and by no intermixture of any other known breeds have they been or can they be produced."

Their beauty is summed up in a short extract from the *Rural New Yorker*, which every lover of stock of any breed, that ever saw Devons, must admit to be just and right: "With their bright eyes, uniform color, well-developed milk veins, symmetrical bodies and forms, which are the ideal of perfect animals, produced by *breeding*, not by high feeding."

The Devons are conceded by all writers upon the bovine race to be excelled by none and equaled by few other varieties in point of hardiness—as their wide distribution through every State and Territory of the Union, through British, Central and South America, through Mexico and Japan, adapting themselves to every climate and subsequent conditions, proves. In the columns of every stock journal not devoted exclusively to the booming of some other breed, you find such testimonials as the following: "More profitable for all purposes than any other breed." (L. Fisher, Kansas.) "The Devons are the best cattle for this climate we can obtain." (T. A. Wyatt, Miss.) "The Devons are the coming cattle to put on the range." (Col. Cody—"Buffalo Bill.")

F. Satio, of the Imperial College of Agriculture and Forestry, Tokio, Japan, says: "There are different breeds in Japan imported from Europe and America, but after considering the several conditions here existing, I am in favor of the Devons, as they are hardier than the others, and so I am recommending them to our breeders."—*Amer. Devon Bulletin, Jan. 1, 1890.*

Often you see the expression in treatises on other breeds, "Hardy as a Devon," showing conclusively that it is a high merit to attain and admitted by all to be possessed so thoroughly by the Devon race.

In the roundness and fullness which accompany the proper development of a Devon, the silky, wavy laying of the hair, and the elastic touch of the flesh as the finger is pressed upon it, the beholder will at once see the animal that most surely conveys its likeness to its offspring; also a muscularity and aptitude to fatten that is so characteristic of the breed that we will dispense with the various expressions of breeders and hurry on to tests more recent, showing that Devon breeders are cognizant at least of the value of the "Rubies," and not always wear them with the satisfied expression that their worth will speak for them. But after all has been said and done, the "little Devon," as commonly called, is already found standing by the side of the lordly Shorthorn, contending for highest honors at the recent Smithfield, England, Fat-Stock Show. The three special judges of the award of the champion prizes for best steer or ox were several hours in making their decision, so close was the contest. For the best steer, the Queen's Shorthorn, Mr. Worthley's Devon, Mr. Colman's Red Poll, and Mr. Mann's Aberdeen Angus were the contestants. The two Polls were gradually forsaken, and the struggle for supremacy was between the Shorthorn and the Devon. Ultimately the award was made to the former, the Devon being marked as *reserve.*

Mr. Rose of Lakeville, Cal., says: It is not unusual to see cows weighing from 1600 to 1700 pounds, and bulls weighing from 1700 to 2000 pounds, and that he has raised bulls weighing as high as 2240 pounds at four years of age. Experiments show most conclusively that no stock when crossed with the Devon is diminished in size; rather the reverse, and improved in fattening and many other qualities. Especially the quality of Devon beef in America takes the lead, but few other breeds arriving at that degree of excellence as to be a close imitator in marbling its steaks and roasts.

For instance, I call your attention to the decision given by the three able judges at the Chicago Fat-Stock Show in 1889 of all breeds upon the block, when first prize for three-year-olds was given to the pure-bred Devon steer New Era—an award which was not seriously questioned. In the sweepstakes between the prize carcasses of the three ages competing, the Devons again won (quoting *Breeders' Gazette*), "showing the lordly red, white and roan," the crack Herefords, the far-famed Scotts and all the rest a clean pair of heels at "the death."

In the sweepstakes on the block in 1888, at Chicago, the prize was also awarded to a Hereford-Devon cross.

At England's great cattle show of 1887, the best specimens from *seven hundred* head of all breeds were brought out to be judged by a jury of seven for the great sweepstakes prize of plate, valued at £25, offered by the Queen for the best beast of any breed in the show. The prize was awarded the Devon cow owned by Mr. Skinner.

In the recent test at the Colorado Agricultural Farm of grade steers of Herefords, Galway, Angus and Devon, the Devon took the lead, yielding the largest percentage of dressed meat.

These records place the Devon in the first class for fineness of flesh and delicacy of flavor, while in London it ranks second only to the Highland Scot in point of flavor, and usually bringing a penny per pound over that of other breeds.

In an essay Mr. Hicks says: "It is scarcely worth while for me to state the fact, so generally admitted, that Devons are superior to all other cattle as draught animals, their muscularity, activity and quick motions, and small but hard bone, settles the question; besides, with their beautiful color, graceful carriage and general symmetry, they more nearly resemble a team of thoroughbreds than a yoke of sleepy oxen."

For the dairy, the Devon takes a most satisfactory position as among the best all the year around producers of milk and butter. We give a few of the many 15 to 20 pounds per week cows included in our list, and several of the tests were made on grass alone, without the aid of rich foods so commonly used: Pomeroy's Elith 3d, 1049, made 15½ lbs. in 7 days; King's Beauty, 589, made 19⅔ lbs. in 21 weeks on grass alone; J. Buckingnam, in three months from four cows, made 534 lbs., besides using the cream and milk for a family of seven persons; Dutton's Roxy, 4323, made 15⅝ lbs. in 7 days; Baker's Fancy, 1222, made 408 lbs. in 6 months on grass alone; Mr. Hurlbert's Beauty, 506, averaged 16 lbs. per week for four weeks when she was 14 years old; Fish's Juno, 4302, made 16¾ lbs. in 7 days; Baker's Bright Promise, 724, made 20 5-16 lbs. in 7 days; Mr. A. C. Skinner's Myrtle 7th, 5554, in 1883, after winning first prize as a breeding cow at the Royal Agricultural Show at York, was sent the same year to the London Dairy Show, where in the contest for the best dairy cow exhibited, she took second honors. The London *Field* adds: "The claims of distinction of Myrtle are above the highest of any cow this year of any breed."

Mr. Rose also states: "My dairy averages me 230 pounds of butter each per year, besides using cream and milk for a family never less than eight and some parts of the year as high as 14 persons, the cows feeding upon grass alone and over one-third of the number two-year-old heifers."

Again quoting from Allen: "The Devon may be called medium, in the quantity of milk she yields, and in its *quality, superior.* A gallon of Devon milk yields more butter than that of almost any other breed, as it does now, except the Alderney." He also pronounces the Devon as a race, "when bred with an eye to the development of the dairy quality, *good dairy cows*, both in the quantity of milk they give and its *yield* of butter."

The *Dairy World*, in commenting on the Devon winning in the dairy class in Wisconsin, says: "The breed comes as near the compromise of beef and milk as you can get the bovine race," and those are just the qualities the farmer wants.

In a report of the analysis of Devon milk to the Pennsylvania State Agricultural Society, Prof. Thomas Cochran found that it contained casein, fat and sugar in proportion almost identical with those found in human milk.

Dr. J. Cheston Morris, also a recognized authority on milk analysis, says that Devon milk is better adapted to human wants than any other that is known, and recommends it especially for infants, invalids and family use.

Mr. Rose gives his experience as follows: "Twenty-five years I have been breeding thoroughbred cattle, including Shorthorn, Ayrshire and Devon. The latter I have found to be far more profitable for beef or dairy than either of the others, and for the past 14 years I have bred Devons exclusively, selling steers at three years old, dressed weight, as high as 990 pounds, and two years old 750 pounds, not including hide or tallow, and fatted on grass alone. I prefer the Devons, as they hold their milk longer than any other breed that I have tried, are less liable to disorders of the udder, or diseases of any nature, and are in good condition upon pastures where others but barely live."

With the summing up of these points, we claim for the Devon the fairest representative of a general-purpose animal. In all his points the Devon is the finest formed, most bloodlike and active of cattle. He is to his congeners what the Arabian is to other horses.

A Novel Proposition for the World's Fair.

J. H. Sanders, publisher of the Chicago *Breeders' Gazette*, has written a letter to the World's Fair headquarters relative to a unique and thoroughly original plan for the live-stock exhibit at the exposition. His plan embodies the following features:

There shall be selected and placed on exhibition thoroughly characteristic and fully representative male and female matured specimens of each and every breed of horses, cattle, sheep and swine raised in America; the breeds to be classified and grouped with reference to the special adaptation and uses of each.

The specimens so selected need not necessarily be the best or most expensive that might be found, but in every case must be such as are most thoroughly characteristic of the breed represented. In the selection of these specimens, none but animals bred and raised in the United States should be considered.

The Secretary of Agriculture has assured Mr. Sanders that he feels disposed to adopt this as a part of the plan of the exhibit to be made under the direction of his department. To reap the greatest possible benefit of this part of the exhibit as an attraction to draw the public, Mr. Sanders says invitations should be sent all over the world soliciting foreign countries to furnish representations of breeds not yet introduced into this country.

Simi Notes.

Editors Press:—Threshing is nearly completed in the Big Simi, and it is found that wheat is a somewhat better crop than in 1889, though probably not of so good a quality. Barley is generally light, though some pieces yielded well. However, the better price obtained this year will more than make up the deficiency. Hay was a good crop and of excellent quality. Corn was not extensively planted, but promises a fair yield on ground properly prepared and tilled.

Peach and apricot trees planted in '89 have fruited quite freely, and surprised us all with the excellence as well as the abundance of their yield. Mr. F. G. Howland reports 90 pounds of peaches from one tree (Salway) planted in March, '89. Young trees of nectarines, peaches, prunes, apricots, etc., have also borne heavily at Mr. O. E. Hoar's beautiful little canyon place. Mr. Austin, now resident in Chicago, planted in February an orchard of about 35 acres, which seems to be coming on finely. Mr. Hoar, Mr. Gardner and others have also planted quite largely—all, I believe, with good success.

Our new schoolhouse (cost $2600) is completed, and the first term of school opened. We are not having a boom, but people all seem in good spirits, hopeful for the future, and I think a few years will see our now undeveloped valley well improved and filled with a prosperous population. Seba.

Simi, Ventura Co., Aug. 15, '90.

Items from Carpinteria.

Editors Press:—This is one of the warmest days of the season. Mercury was up a little above 90° before 11 A. M., but has settled down a trifle for the afternoon. If this warm weather lasts long, the beans and corn must suffer somewhat and be lighter in yield.

The fruit harvest is hastening along. Most of the apricots, peaches, prunes and nectarines have been gathered and are now being sent away in the dried product, which brings a good price.

Pears are a very light crop—Winter Nelis a complete failure; Bartletts, very few; more of the Flemish Beauty, but no market here for them.

Natural Gas

Has been found at Summerland, about six miles east of Santa Barbara. The late strike was about 39 feet from surface. It is estimated by some one that more than 30 times as much gas as is consumed in San Francisco is escaping from a nine-inch pipe. We hope it is true and that it can be put to some profitable use to brighten our business prospects which for a time have been so rusty. It is claimed to be the largest flow of gas yet found west of the Mississippi. O. N. Cadwell.

Carpinteria, Cal., Aug. 17, '90.

Passing Fraudulent Scrip.

An old swindling game has been started up again in Washington, and one that is just as liable to be played on Californians. The Spokane Falls *Chronicle* says a fellow was arrested there the other evening for passing a Confederate $5 note to a Chinaman in payment for a laundry bill. When he handed the note to the Chinaman it was folded, so that he observed nothing but the figure five and the color of the bill. Soon afterward, when the celestial offered the bill in payment for a drink, the bartender chanced to notice that it was merely a promise of the Confederate States to pay the bearer $5 after a treaty of peace between said Confederate States and the United States had been ratified.

It subsequently appeared that a number of business men in the city had been defrauded by means of this scrip. The swindlers always passed the bill folded, that the inscription might not be seen.

It was decided in court that the man could only be arraigned on the charge of obtaining goods under false pretenses, as the scrip was not a counterfeit of United States money.

Polled Angus Heifers.—With regard to the Polled Angus stock, which he elsewhere advertises as "For Sale," Dr. G. M. Dixon of Sacramento writes us that they are all smooth, even blacks and remarkably choice, individually and collectively; indeed, he claims that they are "the finest lot of P. A. heifers west of the Mountains."

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING AUG. 12, 1890.

434,014.—Mat for Fermenting Vats—C. Bazus, S. F.

434,142.—Conductor's Punch—A. W. Coffin, S. F.

434,251.—Adding Machine—D. L. Craig, Silver King, A. T.

434,131.—Traction Engine—J. B. Harris, Stockton, Cal.

434,417.—Clothes Hook—Chas. Hill, Portland, Ogn.

433,943.—Joints for Suction Pipes, etc.—W. P. Humphreys, S. F.

434,339.—Cartridge Shell Loader—C. A. Hussey, Ft. Bidwell, Cal.

434,064.—Spring Motor—Jno. Isele, San Diego, Cal.

434,134.—Miter Box—A. E. McMillan, Oakland, Cal.

434,352.—Crosscut Saw—W. A. Miller, Wapinitia, Ogn.

434,135.—Rotary Blotter—E. E. Park, S. F.

434,356.—Type Writer Copy-Holder—Pipes & Pernot, Corvallis, Ogn.

434,401.—Nailless Horseshoe—S. Pruden, Los Angeles, Cal.

434,369.—Operating Pumping Engine—J. F. Whiting, Albany, Ogn.

The following brief list by telegraph, for Aug. 19, will appear more complete on receipt of mail advices:

California—Frederick H. B. Babbe, Santa Rosa, portable bedstead; Mora M. Barrett and J. F. Daily, S. F., gas or vapor engine attachment; Isaac K. Clever, Deacwood, hanging-up attachment for stamp batteries; Richard E. Eads, Gerson, and A. J. Eads, Pomona, animal trap; J. Weaton, Placerville, handle for hammers, mallets and other striking tools; Milo P. Holmes, S. F., lifting-jack; Oscar A. Horner, assignor of one-half to R. B. Emerson, Eureka, gun sight; William F. Mitchell, S. F., leaf twiner; Emil F. Moening, S. F., safety device for elevators; William D. Nelson, Traver, slat protector for drapers; George Pardy, deceased, W. Pardy, S. F., executor, riveting machine; Frank Rademacher, assignor of one half to H. H. Leithad, steam condenser and water heater; Josiah H. L. Tuck, S. F. subsoil irrigator and fertilizer; George E. Woodbury, S. F., belt or apron for ore concentrator; Dueber Watch Case Manufacturing Co., Canton, Ill., Cincinnati, O., Newport, Ky., Chicago, Ill., New York, Boston, Mass., and San Francisco, composition watch cases. Oregon—John T. Durkee, Portland, fireproof paint; Peter Wilhelm, Portland, stove lid and center piece and lifter therefor; Thomas C. Wilkins, Independence, harvester. Washington—Charles O. Heacock, Tacoma, tool-box.

Note.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Spray From Bartlett Springs.

Bartlett Springs are a success.

There are still several hundred visitors tarrying at Bartlett Springs.

Bartlett Springs water has been a success for a quarter of a century.

The new hotel at Bartlett Springs is superior to any other in Lake county.

There are nearly 100 cottages and neat cabins surrounding the hotel at Bartlett Springs.

Capt. Andrew Wolf of Stockton was among the lively guests last week at Bartlett Springs.

A. T. Dewey returned on Monday from one week's visit to Bartlett Springs, Lake county.

Mrs. L. E. McMahan and sons are the owners and successful managers of Bartlett Springs.

The stars appear unusually bright and numerous at Bartlett Springs, owing to the rare purity of the atmosphere.

Mr. and Mrs. Howard Overacker of Centerville have been spending a short and pleasant season at Bartlett Springs.

The little steamer Bartlett affords a delightful passage from Lakeport across Clear Lake on the route to Bartlett Springs.

Important improvements have been made annually at Bartlett Springs during the past few years and more will follow.

Mr. S. H. Rendall of Bonnie Brae and Mrs. Stevens and family are among the Los Angelenos visiting Bartlett Springs.

Morning passengers from S. F. can reach Bartlett Springs in the evening by either Hopland and Lakeport or Sites (Colusa county) routes.

The rare scenery of mountains and lake viewed by passengers from Hopland to Bartlett Springs is seldom surpassed in this or any other country.

Bartlett Springs water is bottled and shipped at the rate of 1500 quarts per day. Arrangements are contemplated for soon doubling that quantity.

A beautiful spring of pure, sweet water is now being conducted to the hotel and grounds at Bartlett Springs in quantity and under sufficient pressure to be used for sprinkling and fire purposes. It is taken, through a tunnel 200 feet in depth, from the mountain-side west of the hotel.

Mrs. Frank Waterhouse of Bolinas Bay has a rare collection of amateur photographs of Yosemite valley and other picturesque portions of California, which it was our pleasure to examine while at Bartlett Springs. Many of her views are perfect gems of artistic photography. We hope to reproduce some of them for our paper.

Pears En Route East.—It is telegraphed from New York that Sgobel & Day, agents of the California Fruit Union, furnish the following for the information of shippers of California fruit: The consignments of pears arriving in ventilated cars are yellow ripe; those arriving in refrigerator cars are greenish.



The Happy Farmer.

At last, at last, the evening shadows fall,
And wearily but happily I hie me home,
While in my heart I hear the call
That bids me from the hillside to the hearthside come.
O parting day, that brings the parted near!
O dusky shade, when higher lights appear!
I welcome thee, with heart and carol free,
I welcome thee, blest hour, when fond hearts welcome me!

How loiteringly the burning day goes by,
How heavily the hours impose their meed of pain!
But comes at length the lenient evening sky,
To bend with rest and coolness o'er the throbbing brain.
O tender eve, that bring'st from toil release!
O holy night, with brooding wings of peace!
I hail thy shade, that homeward beckons me,
I welcome thee, blest hour, when fond hearts welcome me!

—*E. C. L. Brown, in Boston Transcript.*

Off for Slumberland.

Purple waves of evening play
Upon the western shores of day,
While babies sail, so safe and free,
Over the mystic Slumber sea.

Their little boats are cradles light;
The sails are curtains pure and white;
The rudders are sweet lullabies;
The anchors, soft and sleepy sighs.

They're outward bound for S'umberland,
Where shining dreams lie on the sand,
Like whisp'ring shells that murmur low
The pretty fancies babies know.

And there among the dream-shells bright
The little ones will play all night,
Until the sleepy tide turns—then
They'll all come sailing home again!

—*Caroline Evans, in St. Nicholas.*

Fortune.

George Hallowell of Elmsboro' died at the age of 80, worth half a million of dollars. People generally thought he had lived a very long time, but they would not deny the fact that he had improved the time and got together a very respectable fortune.

Early in his young manhood he had married Estelle Cleaves, the daughter of a poor actor; and some incongruity of taste, of temper, nobody knew which—for Hallowell kept his own secrets and death had long since sealed the lips of his wife—had separated them after about ten months of married life.

The wife had gone forth, nobody knew whither, and Hallowell lived on his sour, crusty and monotonous life in the old home where he was born, where before him were born his father and his grandfather.

He never went into society; he received no company; he had no friends, and it was a matter of great wonder to whom he would give his property when he was dead.

And when the announcement came that the old man was gone, everybody pricked up his or her individual ears, and the wonder grew.

Three old servants, nearly as old as himself—a man and two women—had always been with him, and constituted the only family he had.

The old male servant was named Gilbert, and in his hands Mr. Hallowell had left his will.

The funeral was largely attended by the entire neighborhood, and at its close Gilbert requested all those interested to remain and hear the will read. Of course, in a matter like this, everybody was interested, and old Gilbert had a good audience.

Squire Secors read the will. It seemed he had drawn it up a year before for the testator. Divested of its formalities, it bequeathed handsome life annuities to each of the three servants, $10,000 to each of the two churches in the village, $1000 for the support of Jim, a large striped cat which the old man held in high regard, and all the rest of the property—houses, lands, stock and money—was bequeathed, without reserve, to Marian Easterly, the village school-mistress!

The people were all stricken dumb with astonishment, and Miss Easterly was, perhaps, more surprised than any of them. A few words in pencil, in old Hallowell's own handwriting, on the margin of the will, explained his reason for this disposition of his property:

"I have been friends with nobody"—so ran the marginal reference—"and people have looked upon me as long destitute of the attributes of humanity. And it was my own fault. I made no complaint. Only one of my townspeople has seen deep enough beneath the surface to surmise that Old Hallowell might have feelings of his own, and she never passed me by without a kind good day. And once when I passed by her little garden she gave me a bunch of pansies, and I think of her always when I see them. And so, because Marian Easterly has treated me as if I had a soul, I bequeath to her the property which has taken me a lifetime to gather, and may heaven bless her in its possession."

All the villagers were jealous of Miss Easterly, and all thought she had been very well repaid for a few kind words and a bunch of pansies. But there was no chance to dispute Old Hallowell's right to do as he chose with his own, and so the poor school-mistress passed peaceably into possession.

Miss Easterly was an orphan, and twenty-three years of age, tall and fine looking, and with more character than is generally given to one individual. Now that she had the power, she asserted herself grandly.

The Hallowell home place was put under a series of valuable improvements which soon changed its entire aspects. Decaying trees were cut down, fresh young ones were planted, a spacious flower garden, with extensive graperies and green-houses, flourished where had been only a stretch of dismal heath, the stock in the stable was overhauled and great changes made, and Hallowell House was rebuilt and remodeled, until it was the finest residence in the country round.

Miss Easterly kept the old servants, who shortly learned to adore her, but she added new ones to the menage and entertained the visitors who hastened to honor her in gracious and liberal style.

As a matter of course the mistress of Hallowell House was not long wanting for lovers. They came thick and fast—some attracted, perhaps, by her beauty and grace, but most of them keen on the scent after Old Hallowell's gold.

But Marian Easterly had sense as well as good looks, and she was not deceived by their pretensions. She remembered the time when a poor schoolmistress might have sat, evening after evening, at parties and sociables, unnoticed and neglected by any of these obsequious fine gentlemen, who now professed to be deeply in love with her, and she treated them all with a coolness which drove them to the verge of distraction.

She had been just a year mistress of Hallowell, when one day old Gilbert came to her with a troubled face and asked an audience.

She bade him sit down and speak without restraint, but the old man made blundering work of it. Marian had to question and encourage him continually, but at last his story was told. In effect, it was this:

When Estelle Hallowell had died, years and years before, in an obscure southern town, she had left a son—George Hallowell's child—born three months after separation from him. This son had hated his father for the wrong he felt he had inflicted upon Estelle, and had never made himself known to him; and Mr. Hallowell had lived and died unconscious of the fact that he was a father.

This son had died two months previous, leaving one son behind him—George Hallowell's grandson and heir-at-law!

Clement Hallowell—that was the young man's name—was now a clerk in a counting-house, and all unconscious of the fact that by right of kin he was the heir of a millionaire!

These facts old Gilbert had just learned through a friend of Estelle's—an old man who had strolled to the village picking up a living by strumming on an ancient harp and singing a few superannuated ballads. He had been a player in company with Estelle's father, and had always, so to speak, kept on the track of the family.

Some women would have doubted the old stroller's story, but Miss Easterly did not. She saw him herself and got out of him every minute particular.

"I thought it my duty to tell you, ma'am," he said to Marian, "but I'd rather have cut my head off. I said to Polly, said I: 'It seems a wicked, burning shame for to go and disturb the dear young lady's peace now that everything is a flowing on so beautiful.' And said Polly to me: 'Gilbert, always do your duty, man, and you'll be happy.'"

"You did perfectly right to tell me, Gilbert," said Miss Easterly, kindly. "I should have been very sorry if you had not. There has been a great wrong done. Thank heaven it is in my power to right it!"

"What will you do, ma'am?" asked the man, though from his knowledge of Miss Easterly's character it was not difficult for him to guess.

"Never you mind, Gilbert," said she; "I will do what is right."

So she made a confidant of Squire Secors and had him set on foot inquiries relative to young Clement Hallowell. The information which he gathered settled the fact beyond the shadow of a doubt that he was George Hallowell's grandson, and also that he was a young man who had led a noble and irreproachable life, and though very poor he was respected and esteemed by all with whom he came in contact.

Then Miss Easterly caused a conveyance of the Hallowell estate to be drawn up, and by it she gave everything into the possession of the heir-at-law. Her commands that he should come on at once and attend to his inheritance were imperative, but it was some time before Clement Hallowell could be induced to take advantage of his good fortune.

It was not until after Miss Easterly had delivered everything into the hands of Squire Secors, as agent, and had herself left for a distant town, where a school was offered her, that young Mr. Hallowell came down from Boston and took possession of his own.

Shortly after Marian's school began in Westlake she became acquainted with a young gentleman named Burke—a poor artist, handsome and cultivated, but without money, friends or influence.

As a natural consequence they fell in love with each other, and Marian was so happy in her choice that it never occurred to her to lament the splendors she had lost in renouncing the Hallowell inheritance.

Young Burke was very eager for the wedding not to be delayed, and one summer morning they were married quietly in the little church at Westlake, and set out together for her husband's home.

About this time he had never told her anything—neither had she inquired; so you may understand she was deeply in love with him—for now-a-days the "establishment" is of infinitely more consequence to the young lady than the man who goes along with it, by the way of incumbrance.

Marian was a little puzzled by one thing. As she had stood in the church and listened to the solemn words of the marriage service, the name of the bridegroom, though uttered by the clergyman in a very low tone of voice, sounded new and strange to her. She had not understood it; nevertheless it had not sounded like plain John Burke.

Seated in the cars by her husband's side, she asked him about it.

"The name is all right, darling," he replied, squeezing her hand under the folds of her shawl—new husbands will do such foolish things, you know; "don't trouble your head about that."

So Marian dismissed it from her mind.

By-and-by she saw that they were nearing Elmsboro, the town where her fortune had been found and lost. She leaned out of the window to get a look at familiar objects. Her husband bent over her.

"Do you like Elmsboro, dear?"

"Very much. I was very happy here."

"I am glad. It is my home—our home," he said quietly.

Surprise made her silent, and the stopping of the train at the depot prevented further conversation. A handsome carriage and pair awaited them, and in a very brief space of time Marian and her husband were driven to Hallowell House.

And there, drawn up in array on the lawn, were old Gilbert and Polly, and all the rest of them, waiting to welcome back their old mistress.

Marian turned to her husband with a puzzled tone.

"Nothing—except that my whole name is Clement Burke Hallowell, and you are my wife! Pardon my deception, Marian, but I fell in love with you before I saw you. I know that no ordinary woman would have sacrificed what you did for a sense of honor, and I resolved to know you. I felt sure it would not prosper my suit if I was known to you as the heir, so I was a poor artist instead, and darling, I am a poor artist, for I never drew a thing in my life. You know you used to tax me last summer with my miserable laziness, but I was on entirely different business from picture-making. And now say you forgive me!"

She could do no better, she said, seeing as he had already settled everything his own way; and she slid gracefully into her own place as mistress and Hallowell House had all its own again.

Didn't Make it Work.

Many old Oregonians remember Jesse Applegate, "the sage of Yoncalla."

In the early days, just for accommodation, he would provide meals and lodgings for such travelers as chanced to travel his way. It was an annoying custom, with a certain class of stock-dealers who went over the road, to offer a $50 slug in payment for a night's entertainment, and if the change could not be given they would settle in full the next time they stopped.

One day a fellow whom Jesse had spotted offered a slug in the usual way, saying he was sorry, but really that was the smallest coin he had about him.

"I'm sorry, too," replied the host, "for I haven't a bit of change in the house."

"Oh, never mind," replied the guest, "I'll hand it to you as soon as I come back."

"But maybe I'll never see you again," suggested Applegate, ignoring the hand outstretched for the eight-cornered coin.

"Yes, you will. I'll be along here in about a week," said the other.

"Oh, well, in this case I'll just keep the slug, and when you come back I'll have the change for you," replied the old gentleman, and putting the piece in his pocket he bade the stranger good-morning, with best wishes for a prosperous journey and a safe return.

That man didn't try to fool with old man Applegate any more.—*Exchange.*

Bird Songs.—It is proposed that a permanent record be made of the songs of birds by means of the phonograph. "This done," says a correspondent, "the song could be reproduced leisurely and 'scored' by a competent musician. Thus art and nature would go hand in hand."

Letters from My Singular Friend Miss Ransom.

THIRD PAPER.

[Contributed to the Rural Press by L. H. S.]

I read Miss Ransome's last letter, that was so full of education at home, to several of my friends, and it was criticised quite freely.

Papa said that people were a great deal smarter after marriage, and after mature years, and that they could improve their minds and learn a great deal if they were not too lazy.

Cousin James, who was lunching with us, said that if his wife tried to *learn* him grammar after he was married, he would turn her over to the Lunacy Commission.

I retorted that she would come to that anyway, if she tried to teach him anything; and if he had not taken it as a pleasantry, we would have had a serious quarrel.

My brother said that if women had any time for anything but dress, it was news to him.

The girls of our set each had different ideas about it. One said when she married she was determined to have an easy time and not try to do hard and impossible things; another one thought that if people saw room for improvement in each other after marriage, they could not be happy.

Dolly Brown, who used to live in the country, said that women in the country had to work so hard that they were too tired for study even when they had time; and that where there were children and no servants, the mother never had time for anything except to clothe and care for the little ones.

So by getting other people's opinions, I was able to make out a very respectable answer to Emily's letter. I wanted her to think that I was at least capable of thinking about these things. This was Emily's next letter, from which I have eliminated all the personal items:

Lone Tree School District,
Fresno county.

My dear Rose: Your letter started so many ideas to pounding in my brain that I will answer you promptly to get rid of them. Your prevailing idea seems to be that farmers' wives have to work so hard that time for reading or systematic study is quite out of the question. From what I have seen since I came here, I think that the average country women are not so overdone as the women I know in the city. They may actually perform more manual labor, but they are not subject to the same interruptions and do not sustain such complex social duties. With the early hours and isolation, the work in itself is not so much of an obstacle as it seems to an outsider.

What the women do suffer from here is lack of knowledge, lack of scientific information and lack of right methods which I must not stop to dilate upon to-day. Then we must not judge the present by the past of even a few years. They tell me that a few years ago here, everybody staid at home and worked hard and ran down the country; now the same people are driving around the country seeming to have a great deal of leisure, and all sorts of social accomplishments crop out among the men, women and children. Improved methods of cultivation and the maturing fruit trees are responsible for these changes. These things cause the home lives to change somewhat, so that we ought not to lift up "lack of time" as the great impediment to culture, for in a few years there may be a great deal of time. God forbid that any of the little mischief-makers should be taken away, but then they grow up so quickly, and the school-teacher has them all day.

I think the Household columns in our papers are doing a great deal to help and alleviate women's labors. All kinds of hints in regard to domestic toil are generally read and fairly tried. Some of them are of real value, and the farm women, who are so much interested in these things, get the benefit. Women are not putting so much unnecessary time on their work as they used to. Houses are built more conveniently and all the culinary wheels are oiled to make them run as swiftly as possible. It is getting to be the fashion to conquer the housework instead of letting the kitchen manage everything. Add to this the fact that the simplest cooking, these days, is considered the best, and that plain food is coming to the front as the national material of which to make our boys and girls.

I find, too, that you need to cause people to really *desire* to do a certain thing, not to convince them that they are *able* to do it. It is desire that moves the world more than opportunity. My thought on this subject is not how will housekeepers get time for mental culture? but how will they get the aspiration for the wisdom that comes with a closer acquaintance with standard books? I made a little test of this matter the other day. One Friday night I called to my desk the eldest girl in my school and showed her a little work on physical culture that I use for reference. I asked her if she would not like to take it home and read it on Saturday. She glanced it over and laid it down with a sigh, saying that she would have to help her mother and she would have no time to read it.

The next Friday I purposely dropped in her way an old novel by the Duchess I had found at my boarding-place. She came and asked me if she could take it home, and she returned it promptly on Monday, saying it was "splendid." The girl comes to school with her waist

laced a little tighter every day; but I do not despair of some time persuading her to read the work on physical culture.

Anyway, Rose, I am preaching the gospel of try, let success be what it may. Let the housewife introduce the Chautauqua course or some other course of standard reading for herself and husband, and if they fail to pursue it continuously, the books are there, a mine of wealth for the children to inherit, and the strangers within the gates will occasionally pick them up to extract grains of gold.

I am sorrowed not to see people reading standard works, works of history, biology, travel and science. They read newspapers, plenty of them, all about the murder in Pennsylvania and the elopement in Virginia; and mothers think more about what their children wear than what they think and know.

I hope you will not call me singular, dear Rose, because I talk about these practical topics in my every-day letters to you. I get these solid thoughts out here in the profound silences of these great fields, and I must talk them out to somebody.

I once heard of a woman, the wife of a farmer, the mother of two children, who began with the rudiments and gave herself a very visible education, doing all her housework in the meanwhile; but she was led and inspired by a devoted woman friend, who knew how to do good in the world, and who evidently knew the broadest and fairest meaning of the sweet word charity.

As her education progressed, she improved in every way; she became more devoted to her husband and children, and gave more taste to the appointments of her home. The husband, who had been abashed on account of her illiteracy, began to hold up his head among men, and became a social, and later on a financial, factor in the community.

Knowledge is power, if it only inculcates pride and ambition.

Let us encourage every one to think that they can improve intellectually, physically and morally, and let the obstacles take care of themselves.

And so you think, my child, that you would not like to be a farmer's wife, because farmers' wives have to "drudge from morning till night," if it happens that they are too poor to hire help.

In my next I will try to give you my impression of what the farmers' wives do, founded on my observations here.

Suppose you write me what the city wives do, and we can compare notes. I hope you will go to see my mother often, for she is not well.

Write me all the news about the girls of our set.

Always yours affectionately.

EMILY RANSOM.

Pulling the Rabbit Out.

The old doctor and the old captain were fast friends, both inveterate jokers, and both, despite their aggregate six-score years, rabid sportsmen. The doctor's frightful stammer did not seem to impede the flow of a joke, nor did the captain's equatorial girth lessen his agility.

One afternoon the old men set out on a rabbit hunt. As they passed through an orchard, something scurried into a burrow.

"A r-r wist—rabbit!" shouted the doctor. "L-l-let's pull him out;" and kneeling at the hole, he thrust his arm in up to the shoulder. "S-s say!" he remarked after a moment's fumbling, "I c-c—wist—can't q quite g-get him Y-y—uh—you t-try it, John; y-y—uh—your arm's l-longer than m-m—wist—mine."

The captain knelt and thrust his arm down. In an instant he was executing a war-dance around the tree, waving a bloody finger.

"B'ankety-blank-blank! That's no rabbit; it's a ground-hog."

"D-d—wist—did he bite you, J John?" queried the doctor anxiously.

"Bite? Blankety-blank! Don't you see he took off the whole end of my finger?"

"Wh-wh—uh—why, that's t-too b-b—wist—bad," said the doctor, taking his hand from behind him and showing a badly lacerated thumb. "H-he b-b—wist—bit me, too!"—*Ex*

Chaff.

A BUGOLOGIST claims to have discovered an insect that can count. It is not strange. Many insects multiply very rapidly.—*Norristown Herald.*

No language can express the feelings of a deaf mute who steps on a tack in a dark room.

THE Chinese carry their devils with them wherever they go. They are great imp-porters. —*Siftings.*

SMITHERS (complacently): What do you think of my new clothes? Bjones (who is fastidious): You seem to be suited, but you are scarcely fitted.—*Boston Post.*

IF SO, A NUISANCE: "He, a pillar of the church? Why, he's a perfect fraud." "Sort of a pillar-sham."

IF Mr. Stanley and his wife ever quarrel, it is quite possible that they will carry the war into Africa.—*Pittsburg Chronicle.*

MEAN BUSINESS MAN: Seems to me you take a good while for lunch. You've been gone an hour and a half, and yet restaurants are thick as hops about here. Poorly Paid Clerk: I was hunting for a place within my means.—*N. Y. Weekly.*

YOUNG FOLKS' COLUMN.

Tangles.

Enigmatic Snarls, Both Hard and Easy, for Young People of all Ages to Untangle.

220.—WHAT.

It dogs your footsteps all the day,
And mimics every motion;
It kneels beside you when you pray,
As mocking your devotion.
'Tis now behind, now before,
With mien grotesque and antic;
Dances on ceiling or on floor,
Like acrobat gone frantic.
A giant or a dwarf in hight,
No weapon wounds or rends it;
Though dark itself, it dwells in light,
And only darkness ends it. M. C. S.

221.—A MARINER'S WARNING.



D. M. H.

222.—ANAGRAM.

What *totol* is I'll try to show,
Though few will guess it I well know.
To say "*it's logic*" is not right,
It has a different meaning quite;
In mathematics is its place—
An honored one, without disgrace.
As calculation gave it birth,
It ought to have intrinsic worth;
It ranks above a decimal,
Because 'tis "sexagesimal." NELSONIAN.

223.—HISTORICAL TRANSFORMATIONS.

1. Transpose a reformer of the Tudor period into one who puts on.
2. One of the Norman kings into favorite fowl.
3. A son of Noah into part of a net.
4. An island visited by Paul into a certain boy's father.
5. A famous garden into necessity. H. J. A.

224.—SYNCOPATION.

Whole.

I am a parson who controls
A charge, and I am care of souls.
In medicine I do my share,
For I am called hygienic care;
I remedy, and please observe,
That meat and fish I may preserve.

Last.

Some intimation I may show;
I am a hint play-actors know;
Billiard players use my name
When they talk about their game;
I am the tail, and in my list
Of meanings is the one to twist.
NELSONIAN.

225.—CHARADE.

First take a fish, not any kind,
But such as you will likely find
On Scotland's coast in water salt,
Add an infusion sweet of malt;
Beer unfermented you may use
Instead of malt if so you choose.
You need not cook the beer and fish,
Nor will you get a dainty dish.
Instead of food you get, alas!
An herb—a kind of long, thin grass. J. M.

ANSWERS

214—Heart's Ease, Jonquils, Peonies, Pansies.
215—Miracle.
216.—Flow, low.
217.—Martha Washington (Mar-thaw ash-ington).
218.—B'and, land, and.
219—Sheep-walk.

The Latest Cat-astrophy.

[Written for the RURAL PRESS.]

It happened one evening in July in a garden in the "Western Addition." The neighbors' cats had occasionally committed depredations on the back porch, helping themselves to Friskey's allowance of scraps and bones. He was named by a little cousin, and was a handsome cat, almost entirely black. He has now deserted his home, and we do not know whether he has departed for an unknown country or met a sad fate in his wanderings. We now have a new black kitty, which will probably grow to be a sober old mother in time if the youngest hopeful of the family does not smother her in the ash-barrel or choke her to death trying to carry her after the manner of cats. This particular evening baby's brother Allan gave chase to a black and white pussy who was searching for something to devour, and she reached the end of the garden and attempted to climb up the fence, expecting to drop over the other side in safety, but her feet becoming entangled in some strings of brown twine which had been fastened along the fence to train the sweet peas on, she scrambled over with difficulty, carrying the twines with her, and so Allan thought she had a fit and came upstairs to tell papa, and seemed so anxious to have him go and see what was the matter with puss that he consented to go out and investigate the case, and found her suspended on the other side of the fence with the twine wound around her neck. She had actually hung herself! It was a case of *unin*tentional suicide. Such was the sad fate of that puss. Cats, young and old, take warning.

San Francisco.

Little Scotch Granite.

Burt and Johnnie Lee were delighted when their Scotch cousin came to live with them. He was little, but bright and full of fun. He could tell curious things about his home in Scotland and his voyage across the ocean. He was as far advanced in his studies as they were, and the first day he went to school they thought him very good. He wasted no time in play when he should have been studying, and he advanced finely. At night, before close of the school, the teacher called the roll, and the boys began to answer "Ten." When Willie understood that he was to say ten if he had not whispered during the day, he replied, "I have whispered."

"More than once?" asked the teacher.

"Yes, sir," answered Willie.

"As many as ten times?"

"Maybe I have," faltered Willie.

"Then I shall mark you zero," said the teacher sternly; "and that is a great disgrace."

"Why, I did not see you whisper once," said Johnnie that night after school.

"Well, I did," said Willie; "I saw others doing it, and so I asked to borrow a book; then I lent a slate-pencil, and asked a boy for a knife, and did several things. I supposed it was allowed."

"Oh, we all do it," said Burt, reddening. "There isn't any sense in the old rule, and nobody could keep it—nobody does."

"I will, or else I will say I have not," said Willie. "Do you suppose I would tell ten lies in one heap?"

"Oh, we don't call them lies," muttered Johnnie. "There wouldn't be a credit among us at night if we were so strict."

"What of that, if you told the truth?" laughed Willie bravely.

In a short time, the boys all saw how it was with him. He studied hard, played with all his might in playtime; but, according to his account, he lost more credits than any of the rest. After some weeks, the boys answered "nine," "eight," oftener than they used to. Yet the schoolroom seemed to have grown quieter. Sometimes when Willie Grant's mark was even lower than usual, the teacher would smile peculiarly, but said no more of disgrace. Willie never preached to them or told tales; but somehow it made the boys ashamed of themselves just the seeing that this sturdy, blue-eyed boy must tell the truth. It was putting the clean cloth by the half-soiled one, you see; and they felt like cheats and story-tellers. They talked him all over, and loved him, if they did nickname him "Scotch Granite," he was so firm about a promise.

Well, at the close of the term, Willie's name was very low down on the credit list. When it was read, he had hard work not to cry; for he was very sensitive, and he had tried hard to be perfect. But the very last thing that day was a speech by the teacher, who told of once seeing a man muffled up in a cloak. He was passing him without a look, when he was told the man was Gen. ——, the great hero.

"The signs of his rank were hidden, but the hero was there just the same," said the teacher. "And now, boys, you will see what I mean when I give the medal to the most faithful boy—the one really the most conscientiously perfect in his deportment among you. Who shall have it?"

"Little Granite!" shouted the forty boys at once; for the child whose name was so "low" on the credit list had made truth noble in their eyes.—*British Evangelist.*

DOMESTIC ECONOMY

The Art of Frying.

[Written for the RURAL PRESS by CLARA S. BROWN.]

One of the lecturers at the recent Long Beach Chautauqua Assembly was Mrs. Sophie Knight, a teacher of cooking. Her hours were very popular ones with the ladies, to say nothing of the gentlemen who listened with interest to her clear directions for preparing various dishes in the most dainty style. I happened to enter the tabernacle while Mrs. Knight was discoursing upon the art of frying, and will repeat, for the benefit of those who could not hear her, some of the statements made after my entrance, regretting that I missed what preceded them. So much of our food is fried, and fried improperly, even by those who consider themselves good cooks, that the subject of the lecture seems an important one.

Mrs. Knight advocated the use of a frying-kettle instead of the frying-pan, found in every house. It is not possible to fry anything perfectly in the pan, and if two women start the first of the week with the same amount of fat, the one using a frying-kettle will have more left on Saturday night than the one using a frying-pan. The kettles are expensive, ranging in price from $2 75 to $3.50, but they are invaluable for fruit-canning and preserving as well as for frying, and better than any other kettle for soups. "I fail to see," said Mrs. Knight, "why my husband should have improved machinery for his work, and I should not make use of the best inventions for my work. I urge you, ladies, to provide yourselves with plenty of the best cooking utensils; the stores are full of them."

An ordinary granite kettle with a wire basket placed in it makes a fair substitute for the frying kettle. The lard or drippings may be used many times over by clarifying it, and both the dark color and food odor will be removed, so that food of all kinds may be fried in the same fat. After using it, remove it to the back of the range, where it will not boil, but will remain fairly hot. When somewhat cooled, "but not cool by any means," the lecturer stipulated, turn in two or three quarts of boiling water, enough to thoroughly permeate the fat, and let it boil until the fat becomes thoroughly cleansed. The lard will turn white and the impurities will sink to the bottom; when cold, you will have a cake of fat that anything may be cooked in.

The fat must be heated to the proper pitch before anything is fried; it must *smoke*, not merely be at boiling-point, and it is not hot enough until it does smoke. Food placed in the wire basket—as much as will lie on the bottom of the basket, or more in the case of potatoes—will brown quickly and fry thoroughly without being penetrated by a particle of the fat, removing the objection made by many persons to fried viands. The fat should be tried with a small piece of bread; if it crisps and browns quickly, the fat is at the right degree of heat.

There are many things which can be deliciously cooked in this kettle. Apples, quartered and fried, are far superior to those cooked in the old-fashioned way, mussed up in a frying-pan, and worse yet, covered over. Veal cutlets breaded, liver dipped in flour or Indian meal, according to taste; oysters, croquettes, slices of tomato, all dipped in bread or cracker crumbs, preferably in cracker, because that resists fat the best; fish, potatoes, bananas, bacon, tripe dipped in egg batter, hominy, cornmeal mush—in fact, anything fryable that will hold together will come out of this kettle tasting far better than if fried in a pan. The lecturer's fried bacon had won her special praise. This method of frying retains all the juices and produces a delicious crispness.

The speaker digressed a little to discuss the broiling of beefsteak. The very best broiler is the common wire one, because it covers the least of the meat's surface. Where the fire is not suitable for broiling, a smoking hot frying-pan will do; in either case, the secret of cooking a steak well is to sear it quickly on both sides and turn it so often that the juices never have time to rise to the top. The time required is from four to ten minutes, according to the thickness of the steak and the rarity desired.

A steak should never have any kind of fat used upon it but the best butter, and that is hardly necessary, salt and pepper being sufficient to make it palatable. These should never be applied while the steak is cooking, as they extract the juices. In frying, also, the food should be salted immediately after it comes out of the kettle, when the heat will absorb the salt, and not while being cooked.

"You can pound your steak if you wish," said Mrs. Knight. "I am not satisfied that it does any good, but it satisfies the public. I use tough steaks some other way."

If the meat is covered with vinegar it will be made more tender, but some people object to that. It is astonishing how many women do not know how to cook steaks. I have myself seen a highly intelligent lady and an excellent housekeeper, sift pepper and salt all over a fine porterhouse steak, place it in a large frying-pan that had been well greased, and slowly cook it 15 or 20 minutes, *covered* part of the time. It came out more like a boiled than a broiled piece of meat, tasting and looking as a steak should not.

Mrs. Knight told a story of a hotel-keeper who was famous for his fish dinners, and commanded high prices for them. People telegraphed that they were coming and that they wanted some of his "fanned fish." It was his custom to stand over the fish while it was frying (it must have been in a frying-pan) and *fan* it constantly to keep the top of the fish cool while the bottom was cooking, thus preventing the juices from rising. "If you want your fish *very* nice, remember and fan it," she advised.

The frying-kettles are superior to anything else for preserving because the fruit may be placed in the wire basket and dipped into the syrup below it without being broken up at all. Since hearing this lecture, I feel that I shall not know contentment until I have one of the kettles. Why can't the manufacturers be philanthropic enough to make them cheaper?

GRAPE JELLY.—Stem ripe grapes and put in a preserve-kettle, let come to a boil, mash and strain. Put the juice on to boil for 20 minutes, then add three-quarters of a pound of sugar to every pint of juice, skim while boiling, let cook 15 minutes. Green-grape jelly may be made the same way, but will require a pound of sugar to a pint of juice.

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SAN FRANCISCO:

Saturday, August 23, 1890.

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Harrow and Seeder—P. P. Mast & Co.
Apple Parer—Weister & Co.
Potato Sorter and Sacker—Colorado Implement Mfg. Co., Eastonville, Colorado
Raffia—Thos. Meehan & Son, Germantown, Phila, Pa.
Saddlery & Harness—C. L. Haskell.
Santa Rosa Nurseries—R. W. Bell, Santa Rosa.
Ventura Nurseries—O P. Cook, Ventura.
Shorthorn Cattle—McEldowney & Hawthorne, Hillsboro, Oregon.
Centrifugal Pump Wanted—H. W. Blaisdell, Ogilby, Cal.
Picket and Wire Fence Machine—K. C. Du senberg.

See Advertising Columns.

The Week.

Agricultural fairs are pursuing an even way, the prices of most articles being well sustained, and the ingathering of some crops proceeding actively. Still, vast quantities of fruit are going East and bringing good prices; the canners and driers are rushing forward, having passed the high point in their season's work, but the prunes, late peaches and grapes will continue the activity for some time. Preparations for planting a vastly increased area of orchard are being made, and the nurserymen are fast booking tree orders.

Political affairs are heated again this week by the assembling of the Democracy at San Jose. As we go to press nominations have not been reached.

The fairs next week will include the displays at Chico, Petaluma and Placerville — all important districts which can show great progress and peerless products. All within reach of these points should make the events occasions both for entertainment and instruction.

Vegetable Fibers.

Shall we ever have the extraction of vegetable fiber by machinery brought to the point of success which will justify a farmer in growing a crop of ramie or other fiber plant? It is interesting to describe how well such plants thrive in this State and what vast sums the civilized world pays the barbaric producer, who works out the product by hand or with rude appliances, and is content with a few cents a day as wages. It is interesting, too, to read of the many fiber extractors and extracting processes which show fine samples and then offer the farmer a machine or a right to use a process for so many hundred or so many thousand dollars. Such offers do not constitute a practicable basis upon which to urge the production of these fibers in this country. The farmer cannot grow a crop of the fiber plant and then assume the labor and expense of manufacturing it into merchantable fiber before he can realize for his labor and the use of his land. To make the enterprise available the capitalist must buy the machines or the processes and carry on the extracting concern, contracting with the farmer to take his crude fiber green or dry at so much per ton, delivered at the factory or put aboard the cars or steamer. Just as soon as the proposition assumes this phase the farmers of the United States, or some of the States, will produce as much ramie or other fiber-yielding plant as can be profitably sold.

These facts must be recited because of the article which we print on page 154 of this issue, calling attention to the New Zealand flax industry and the large purchase of the prepared fiber in the United States. It is needless to send the seed to this country. The plants have been growing in this State for years and have been distributed nearly all over the State by the university. We know from the reports from widely distant experimenters just about in what districts of the State the plant will succeed. The old plants in Berkeley are seeding freely, and thousands of plants can be had by dividing the old clumps. Now, although all these things are so, who can conscientiously advise a farmer to lumber up his land with New Zealand flax, excepting a few plants which will yield him good material for tying vines, plant bundles, etc.? There is a very important step to be put in between the exhortation and the planting of the crop, and that is the work of the manufacturing capitalist who will provide proper machinery and offer the grower so much a pound, bale or ton for his crop as it comes from the field. Will this ever be done?

There is another fiber material which has been paraded for the last score of years as a possible source of great wealth to this State, and that is the wilderness of so-called "wild hemp" on a portion of the Colorado desert. The subject comes forward anew in an article in the Yuma *Sentinel*, from which we quote as follows:

On both sides of the Colorado river, from Yuma nearly to the Gulf of California, the wild hemp grows spontaneously in great abundance. The growth is perfectly wonderful, the stalk reaching a hight of from 20 to 35 feet, but averaging from 12 to 15 feet.

This great fiber product or plant covers an area of not less than 50,000 acres, and the lowest estimate ever made places the annual yield of the clean or prepared fiber at 500 pounds per acre, or 25,000,000 pounds, equal to 12,000 tons, or 1250 carloads of ten tons each.

It is estimated that to cut and prepare this for market will cost three cents per pound, or $750,000. A rate of freight to San Francisco of $7 per ton has been offered. The freight at this rate would amount to $87,500 annually. The harvesting of this amount of hemp would give employment to from 300 to 500 Indians for four or five months each year.

Most of the fiber grows within two to four miles of the Colorado river, although in places it is found back from ten to 20 miles. It is mainly found among the arroyos or natural canals and lower land, which are overflowed or filled with water in the high waters of the Colorado. It can be cut, and the outside or woody matter can be removed by passing it through a brake similar to that used in the manufacture of flax. This can be done on the ground where the hemp grows, and thus save the hauling and freight of the extraneous matter, leaving only the fiber to be packed in bales and shipped.

Using Indian labor, the fiber can be prepared, baled and transported to the Colorado at an expense not to exceed three cents per pound. Even supposing that the freight should reach $10 per ton to San Francisco, this would make the cost of production and delivery 3½ cents per pound.

The lowest price offered for the prepared fiber delivered in San Francisco is five cents per pound, which leaves a profit of $30 per ton, or $375,000 for the crop per year at the lowest estimate of the yield in the poorest years. This offer has been made for the fiber in 10,000 ton lots, by an English company already engaged in the manufacture of rope, cordage-twine, sacks and matting.

A wealthy German, engaged in the same industry, after having experimented with the hemp, made an offer of eight cents per pound in 10,000 ton lots, delivered at the mouth of the Colorado river or in San Francisco, which would leave a profit of $90 per ton, or $1,125,000 per annum. According to these figures, in the good years there would be expended for labor more than $5,000,000, for freight $800,000, with a profit of from $3,750,000 up to $10,000,000 per annum.

This is about the usual wild way in which this fiber industry is generally presented to the public. The tidings comes to the weary mechanic and fills his brains with visions of mechanical triumphs in extraction or to the ears of the poor farmer who longs for some crop which will pay him more money than he can secure by his present rotation. They all discover, after wasting much time and sometimes money as well, that the proposition is not yet upon a working basis, and that the articles are written either to win investment in some land scheme or some process scheme. We believe there will yet be profit in fiber production in this country, but it will not be reached until propositions assume more practicable forms than those in which they now usually appear.

Produce and Silver Prices.

Those who have followed the course of market prices, as given from week to week in our Market Review, have noted the improvement which has visited several important lines of produce, but possibly have not contrasted the figures of to-day with those of a year ago. The following comparative showing, then, will be of interest:

	Aug., 1889	Aug., 1890.
Wheat, buyer season.....	$1 44½ to 1 44½	$1 55 to 1 55½
do spot, shipping.....	1 27½ to 1 33½	1 35 to 1 44½
Barley, buyer season.....	88½	1 40 to 1 41½
do spot, feed.....	62½ @ 75	1 23½ to 1 31½

This shows a notable advance, especially in barley, which has, in the case of spot feed, almost doubled. Wheat has shown an average advance of 10c per ctl., but this is partly offset by the advance in freights, which are 10s to 15s higher than a year ago.

The course of silver since the recent favorable legislation is also of interest as related to produce values. In August, 1889, silver was quotable at 92½c per oz. in New York; now the quotation is $1 19⅞ per oz., an advance of 27⅝c per oz. This means that a miner having an output of 100,000 ozs. would only have received for it last year $92,500, against $119,875 this year, which gives the mine-owners $27,625 more money to spend or loan out. The more money there is, the cheaper the rate of interest and the higher are farm products, and providing the amount of money does not exceed legitimate needs, and has a good basis of value in itself, the more prosperous are our producing interests.

A President for the University.

By the resignation of Hon. Horace Davis, the State University will be without a president on the first of September. We notice that the name of Professor Martin Kellogg has been frequently mentioned in connection with the place, and we desire to say that in our opinion the selection is one eminently fit to be made. Prof. Kellogg has been active in the affairs of the University from its incorporation. He holds as no other man does the loyal esteem and confidence of the alumni and of the friends of the University generally. His long experience has taught him the needs of the institution, and he is thoroughly charged with its spirit. No one can better mark out its immediate future. He is perhaps the better qualified in this direction from the fact that he has passed the last two years in attendance upon European universities and in contact with European educators. Thus he is enabled to bring to the advancement of our Western institution, which he knows and loves so well, the latest results of foreign experience and observation in the line of university progress. Prof. Kellogg, in addition to his ability as an instructor, is a man acquainted with affairs and is skillful in handling men so as to make their best efforts effective for the general purposes involved. For these reasons and many others of like significance, we earnestly advise the election of Prof. Kellogg to the presidency of the University, and sincerely trust that such selection may be made.

American Pork Products in France.

It seems by recently published correspondence that Secretary Blaine and Minister Reid have been busily engaged for the last two years in the attempt, so far vain, to place the American hog upon a fair standing in competition with other hogs for the esteem and patronage of the French people. The French Government excluded the American hog from French circles in 1881 because of alleged sickness of the animal which rendered his flesh unwholesome. American diplomatists succeeded in combating this claim, showed that the American porker was enjoying fairly good health; at least as good as the hogs of other nations, and that his flesh was not only good eating but innocent of dangerous microbes, etc. This claim was approved by the highest health authorities of France, by the French Academy of Medicine itself, and as if to emphasize the inconsistency of the exclusion, the American hog canned, smoked, salted, sausaged and the like was almost smothered with premiums at the recent World's Fair at Paris.

Although these facts have been forcibly urged upon the attention of the French Government by bulky diplomatic correspondence and by the eloquent personal interviews of Minister Reid, the American hog still cannot get his snout through the French fence, while the hogs of all other nations go trooping in by the front gate.

The French Government, having been forced to retire from its claim that the American hog is an unhealthy animal, still maintains its exclusion upon the ground that pending American legislation on the tariff will work unfavorably to French products. In his official correspondence with the French Government, Minister Reid used these words:

The French decree, in spite of argument and remonstrance, in spite even of proof that it does nobody any good, has been tenaciously maintained unchanged for nine years, in spite of demonstrated facts that nothing is thereby gained either for its own consumers or its producers, and the only appreciable effect is to do injustice to a century-old friend and discrimination against that friend in favor of Germany, Italy and England, and after such a record and in advance of the slightest known movement to amend it, how can France have reason to expect, as your Excellency indicates, that its evidence of good-will should now be reciprocated by the United States? He who seeks justice should first do justice.

From our point of view, then, the case stands thus: The French Government has persisted for nine years in an indefensible act, discriminating especially against United States commerce. Meanwhile it complains of new laws by the United States Government far less severe and in no way discriminating against French commerce. Its complaints receive prompt and considerate attention, and the disposition thus shown evokes no recognition.

Now, as heretofore, I make my appeal to French friendliness, French justice, and, may I add, to the enlightened sense of French interests.

All this diplomatic eloquence is a defense of the American hog. A century of history, a world of justice, a cycle of futurity, are invoked to smooth down the rising bristles of this new American national bird. It is a moving thought. Let the youth declaim the burning sentences from the corner-posts of the big corral to the hosts below. Let them understand that they may rise to the giddy hight of the tea-chest among the causes of war. Assure them that the United States proposes to secure justice for the American hog even if the De Lesseps canal has to be stood on end and the French Government impaled upon its vanishing point beneath a burning tropical sun. We are not a nation to be trifled with.

Agricultural Interests in Congress.

In the House of Representatives, on the 19th inst., Cannon of Illinois, from the Committee on Rules, reported a resolution setting apart certain days of this week and next week for the consideration of bills reported from the Committee on Agriculture.

The resolution was adopted, after some discussion, and under its provisions the Senate bill in support of agricultural colleges was at once disposed of satisfactorily—as noted in another paragraph.

The next to be taken up is the bill providing for the inspection of cattle and meats for exportation, which is to be voted upon after two hours' debate. Then the bill defining lard will be taken up and the previous question ordered at 4 o'clock on Saturday. On Tuesday of next week the bill defining options will be taken up and the previous question is to be considered as ordered at 3 o'clock.

Horticultural Use of Copper.

To show how the occupations of different classes are often closely associated to mutual benefit, it may be noted that the consumption of sulphate of copper for the prevention of disease in vines is one of the factors for the increased development of the copper mines of the country. During the last 16 months the famous French syndicate which attempted to corner the copper of the world, and failed, has alone sold 179,000 tons of copper, the value in the meantime advancing $100 per ton, showing that consumers had very short supplies. The large producers also sold all the copper they made. The enormous consumption of copper during this period was largely due to the greatly extended use of copper wire for electrical purposes, and of sulphate of copper for the prevention of disease in vines. As far as can be learned, the manufacture of sulphate of copper will probably absorb 20,000 tons more copper this year than last. This shows an enormously increased demand from the vineyard men of the world which must be met by the miners. Bids for delivery of sulphate of copper for the first six months of next year show an increase of over $5 per ton above present prices.

Petaluma.

The coming week will see Petaluma thronged with people on the occasion of the holding of the Sonoma and Marin District Fair. Petaluma is one of our most enterprising and wide-awake towns, and one of the best situated for growth and progress. The engraving which we give on this page shows the general situation of the town, with its background of low hills and its foreground of moist lands through which a navigable stream gives water transportation to the cities of San Francisco bay and the world's ocean highway. Since our picture was prepared there have been notable improvements in the way of buildings, etc., but the site is of course unchanged in its many advantages, and of these the engraving gives a fair impression.

The Indian Wheat Crop.—Hon. J. R. Dodge, Statistician of the Department of Agriculture, in his August report says that the Government of India has just issued its final report upon the wheat crop of 1889-90. From this it appears that the acreage amounted to 24,983,100 acres, and the product 6,303,900 tons, or 235,345,600 bushels of 60 pounds. The acreage was smaller than for several years, and the crop the smallest reported since statistics of production have been regularly collected.

State Board of Horticulture.

At the meeting of the Executive Committee of the State Board of Horticulture held Aug. 14, 1890, Alexander Craw of Los Angeles was appointed Clerk of the Publishing and Quarantine Bureau. Mr. Craw has accepted the position, for which he is well fitted. Mr. Craw will also act as entomologist to the board. Our readers are already aware that he has for years given particular attention to economic entomology, and during his long foremanship of the Wolfskill orchard did excellent work in this line. We are glad that Mr. Craw will now have an enlarged field of operation.

The State Board Committee ordered the erection of glass houses in which to breed the *Vedalia Cardinalis* (Australian lady-bird) through the winter. These will be built at San Gabriel and at San Jose.

The date for the holding of the convention at Santa Cruz was fixed for Tuesday, November 18th to 21st, inclusive. Mr. Lelong is about to enlarge his offices again to make room for his growing work. He will now have a meeting hall fitted up, to which all meetings of horticulturists will be welcome. This new apartment will be ready about Sept. 10th.

Florida on Wheels.—A dispatch from New York does not give a very high tribute to the rolling exhibit of our sister State, of which it says: Florida's show consists almost entirely of canned goods, supplemented by a live alligator car, and instead of being attended constantly, like the California show, by men competent to advertise the advantages of the State, it is in charge of a colored porter, who hands out printed matter.

Canadian Barley.—Mr. Dodge, in his August report, mentions that nearly the whole Canadian export of barley comes to this country. In 1889 the total export amounted to 9,948,207 bushels, of which this country took 9,934,501, and the proportions are about the same from year to year.

Cyclones.—The conclusions reached by modern meteorologists are that cyclones of great intensity are ascending spiral whirls of wind having a rotary motion in a direction in the northern hemisphere opposite to the movement of the hands of a watch.

Clover Ensilage at the Oregon Station.

[Written for the Rural Press by Prof. H. T. French.]

The silo on the College farm was partially filled last May with white clover and fine grass cut from the College campus. The grass was allowed to wilt thoroughly before placing in the silo. Some of the material became too dry. To overcome this and cause the material to pack well, we sprinkled each layer as it was put in. Some writers have claimed that water was a positive injury; but I believe it was an advantage in this instance. The grass was put in as it came from the field without cutting with the feed-cutter.

By treading thoroughly as each load was placed in the silo, the whole mass became very compact. After the grass was all in, a small load of green rye was run through the feed-cutter and placed on top. This was covered with loose boards and a few sticks of wood to hold the boards in place. The material on top could not be considered in any sense a weight, as that term is understood in weighting silos. No doubt the ensilage would have done equally well had nothing been placed on the loose covering. The silo was opened about the middle of July, showing only a little waste on top and a trifle in the corners. Even a large portion of that which we considered poor was eagerly devoured by the cows as soon as they discovered it in the yard. The milch cows and calves are fed one ration a day of the ensilage as a supplementary food to that obtained in the pasture.

There is usually a shrinkage in the flow of milk during the dry season; but this is not the case when the cows are supplied with good ensilage. There is even a larger flow of milk than when the pasture was green and good hay was being fed. I do not wish to infer that ensilage will produce a better flow of milk than plenty of good grass in the pasture, but that the flow can be kept up when the pasture fails by using this most excellent food. We are feeding a shorter grain ration than we did before opening the silo. In short the ensilage seems to be a complete substitute for green food.

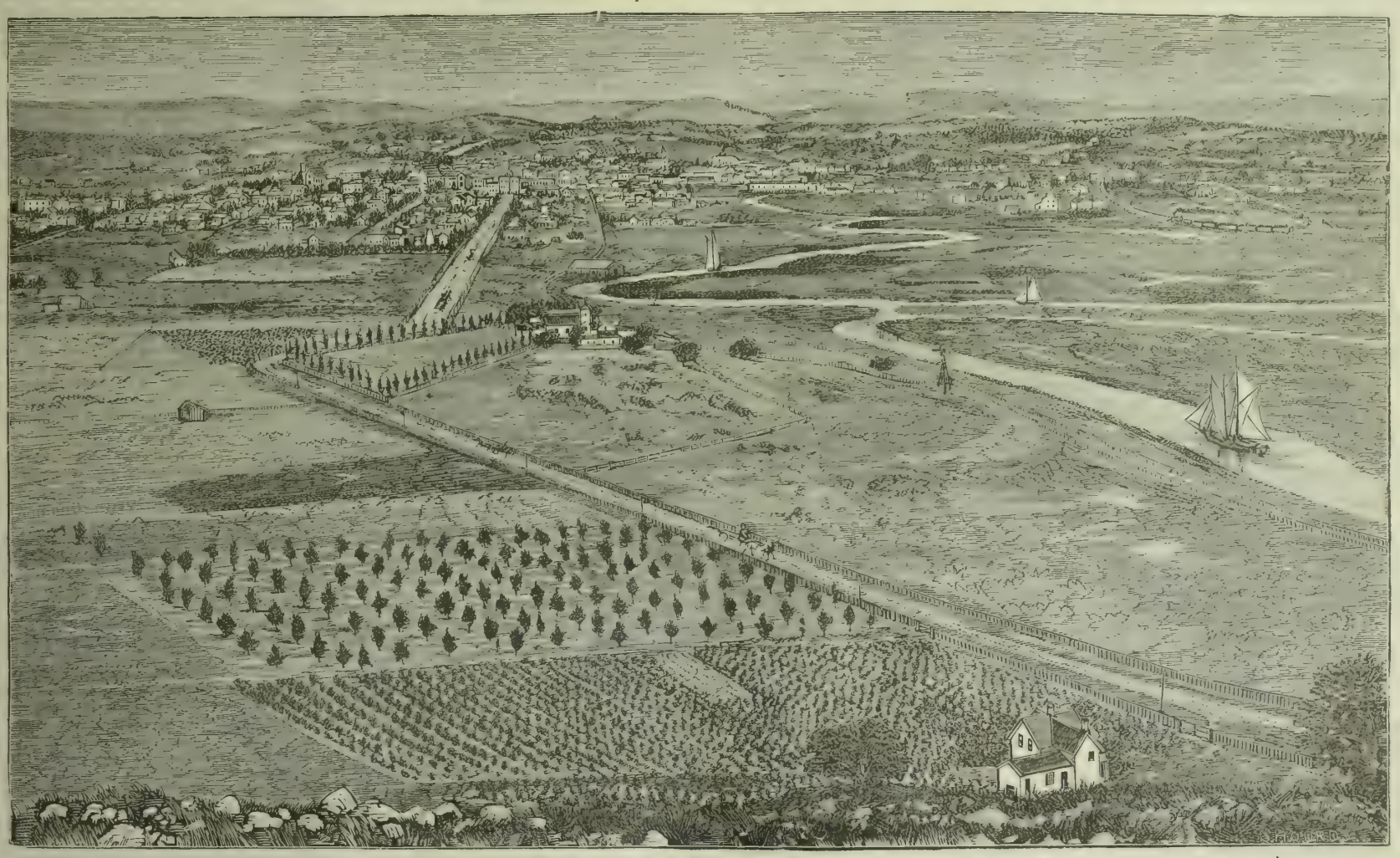
Clover grows early and can be stored in the silo at a season when other work is not pressing. The clover ensilage can be fed out during the dry season and the silo again filled with green corn for winter use, thus making the feeding cycle complete.

There are many advantages in this system, if successful, the most prominent of which are the manufacture of butter during the two seasons, when prices rule high; and, second, butter can be produced cheaper than on other kinds of food. The benefits do not stop here, for if there are young colts or calves to feed, there is nothing better, during times of extreme drouth or cold, than good ensilage. We have three calves in the barn, one six months old and two four weeks old. All of these are very fond of the ensilage and are doing well on it. The work-horses enjoy it as well and would eat quantities of it if we had it to spare.

We shall enlarge the silo this season, hoping to have storage capacity so that we may have ensilage the year through, if desirable.

Our corn crop will yield a fair amount to the acre this year, yet it was materially injured by the drouth during the forepart of the season.

Corvallis, Ogn.



GENERAL VIEW OF THE TOWN OF PETALUMA, SONOMA COUNTY, CAL.

The Veterinarian.

Horse Cough and Garget.

Editors Press:—Will Dr. Buzard kindly tell me what to do for a valuable horse affected with a cough, accompanied with a sonorous sound in the throat, caused probably by dusty hay? Cause is removed and still the coughing continues violently for weeks.

Also, what will prevent and cure garget in cows? What is milk fever, the symptoms and cure?—R. H. B., *Riverside.*

Editors Press:—Your correspondent's horse is suffering from chronic cough. I do not think the dusty hay has anything to do with it. Apply the following liniment to the throat every two days: Croton oil one-half drachm, glycerine two ounces; also give the following powder night and morning: Pulverized digitalis one drachm; nitrate of potash, two drachms; sulphate of iron one drachm. Keep up this treatment for a week or ten days, then let me know the result.

In answer to his second question I would answer that *Mammitis—Garget*—is inflammation of the udder. This is a frequent disease in the cow. The animal is used as a milk-producing machine, and the lactiferous apparatus is very largely developed. The causes are, exposure to cold when heated, injuries of various kinds, or specific disorders. It is most frequently seen in young cattle and those kept in a plethoric state. The treatment must be constitutional and local. Give a large dose of sulphate of magnesia, and allow the animal to have nitrate of potash in the drinking water. Remove all the milk at regular intervals, either by milking or by the aid of the milk-siphon, or by the calf having free access. Bathe with warm water, then apply a poultice of flax-seed containing belladonna to the whole organ; support the udder by a broad bandage passed over the loins. As soon as an abscess has formed it must be freely opened and dressed with carbolic ointment. If mortification sets in, the animal must be supported by stimulants and tonics, and the dead parts excised, or if they slough, dress with a solution of chloride of lime. If the bag becomes indurated, we must use alkaline injections through the teats, and apply to the udder iodine ointments, and give iodide of potassium internally.

I will treat on parturient apoplexy (milk-fever) next week. A. E. Buzard, M. R. C. V. S. *11 Seventh St., S. F.*

A Waterspout formed on the bay off Escanaba, Mich., one day last week, lasting 15 minutes. It was 200 feet in diameter at its base, extending into the clouds, and made a noise audible at a distance of two miles.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

BARLEY.—Hayward's *Journal*, Aug. 8: It is fortunate for the farmers of Alameda county that with the very short crops, their staple product, viz.: barley, commands such a high figure in the San Francisco market. Alameda county barley is known the world over as marketing the best beer and for that reason the farmers are very foolish to sell even what little they have for the present prices. It is predicted by men competent to judge that barley will be worth at least $1.80 per cental this winter, with the probability that it will reach $2.

CROPS.—*Herald*, Aug. 14: A. Hillebrand raised this year on 32 acres of land just west of this place, 420 sacks of wheat, weighing upward of 60,000 pounds or 30 tons. This is nearly a ton to the acre. William Hanna, who farms on W. J. Fallon's ranch on the Dublin road, just west of this place, had a fine crop of wheat on 120 acres of land this season. The piece yielded 1375 sacks, averaging 164 pounds each. John Galway had a stack of Chevalier barley from 25 acres of land on his ranch on the Dublin road this season, from which was thrashed 876 centals of grain, an average of 35 centals per acre.

Butte.

HARDY FRUIT TREE.—*Register*, Aug. 14: On the old Grant place between Oroville and Wyandotte is a fig tree, broken down so that the top touches the ground, yet resting on the long, stout limbs. Enough of the roots are attached so as to feed the tree. It is now fully 15 years since this tree was irrigated or cultivated. It stands upon a high knoll and in one of the driest spots on the road. We examined the tree this week and found it full of figs. But few trees are more hardy and vigorous than the fig and this one shows they will live under the most adverse circumstances.

Contra Costa.

PINOLE STOCKYARDS.—Martinez *Gazette*, Aug. 13: The work on the Pinole stockyard improvements is going ahead steadily. About 60 men are now employed there, which number will be increased in a few days to 200. There will be four railroad tracks run back as far as may be necessary to accommodate the various branches of business to be conducted there, and four sidings likewise for switching. Instead of a mere cut through a hill for the tracks, the entire hill will be taken away and the material used for filling low ground. The improvements are projected on a very large scale, and an immense business is contemplated.

El Dorado.

FRUIT SHIPMENT.—Placerville *Republican*, Aug. 14: A large number of the fruit-growers of El Dorado county met at Diamond Springs to devise ways and means to profitably dispose of the different varieties of fruit raised in the county, and to select the most desirable location for erecting suitable buildings on the line of the Sacramento & Placerville railroad for the fruit-shipping business.

Fresno.

THE FIRST RAISINS.—Fresno *Republican*, Aug. 14: Schacht, Lemoke & Steiner yesterday shipped three boxes of Muscat raisins as samples of Fresno's crop of 1890. The raisins were grown in light soil in the Church colony. The firm will begin packing raisins in about two weeks. This year's crop will be of better quality than that of last year, owing to the slowness with which the grapes matured.

FIGS.—*Republican*, Aug. 14: Fig-growing is destined to become one of the leading horticultural industries of Fresno county next to the production of raisins. The fig thrives well here and there never has been known such a thing as a diseased fig tree. When properly handled, dried or crystallized, it will be a most profitable crop, and the fig-growers have awakened to the necessity of taking action toward establishing a permanent market for this most wholesome and nourishing of all fruits.

CORRECT.—Selma *Irrigator*, Aug. 14: Geo. Heisinger has bought three times as much fruit as he expected to and is still buying large quantities. The fruit is shipped to Chicago under a Sacramento brand. It is to be hoped that another year will see our fruit go out under a Selma brand. We are not ashamed of our fruit and want the Eastern people to know just where it comes from.

Inyo.

CROPS.—Bishop *Register*, Aug. 14: The yield of small grain throughout this valley was probably never any greater than it is this year, nor the quality any better. The unprecedented damp and wet weather of the past and present week, however, may possibly injure the quality of a small portion of it. The wheat acreage is four times greater than last year, barley about one-fourth less, oats and corn full one-fourth larger. Barring untimely frosts, the yield of corn per acre is sure to be quite up to or above average. Potatoes were never of a finer quality nor of a larger yield per acre; the acreage is about double that of last year. There is also a considerable increase in both the acreage and yield of alfalfa. The yield of fruit, especially of apples and peaches, is much lighter generally than last year.

STOCK DYING.—*Register*, Aug. 14: Horses, jacks, cattle and hogs are dying in considerable numbers down the valley around in the vicinity of Independence. No one is able to say what particular disease it is that carries off any of these animals, further than it appears to be a sort of quinsy that affects the hogs, and a sort of farcy with the others. Death follows in a few hours, sometimes in a few minutes, of the first symptoms.

Kern.

BIG PEACHES.—Bakersfield *Echo*, Aug. 14: The peach crop, which year by year is adding to the notoriety of the Kern delta, is again ripening, and promises to do even more for its owners and the community generally than heretofore. If this season does not place this locality in the very front rank as a peach-growing section, it will be a great surprise to those who have made a careful study of this industry. The variety ripening at this time is the Orange cling. It is yellow in color and of good texture, although not so good a shipper as the George cling, which ripens next month. But for size it may be put against anything in the world. Considerable rivalry exists among the different growers as to which can produce the heaviest peach. Lowell Bros. lead off this year with some specimens weighing 16 ounces avoirdupois each. On Friday evening last Charley Maul came in from his ranch with a small box under his arm. Several of them weighed 20 ounces each, and one tipped the beam at 23 ounces. Mr. Maul's orchard is about two miles from Bakersfield and the trees are about five years old.

Lake.

CROPS.—Lower Lake *Press*, Aug. 16: The crops generally turn out better than expected. Hop picking will begin in about two weeks; the prospects are good. The corn crops never looked better.

Los Angeles.

GRAPES.—Pomona *Progress*, Aug 14: In about three weeks the picking of the crop will begin. No one can estimate the extent of the grapes of the valley, because of the heavy bearing. Cook & Langley have already contracted for over 1300 tons of wine grapes. To prepare these for market, over 200 men and boys will be employed for not less than two months, and for a third of the time, about 300 hands will be employed. The grapes will be dried in the vineyards where they are picked, but at the last of the season, if there are early rains, the fruit will be taken to the evaporator at the cannery.

Napa.

FRUIT NOTES.—*Register*, Aug. 15: The French prune is about ready to be picked. The yield is this year not quite up to the average. Many orchardists lost fruit trees this season, due to the excessive moisture of last winter. Perhaps more peach trees suffered than any other variety. The peach crop is this year light, the fruit is small, and in some cases wormy. The yield of apples is not up to the average either in quantity or quality. The fruit is, generally speaking, quite wormy. The pear crop is in many orchards a total failure, and with all growers is small. The fruit set well but has since dropped off alarmingly. The plum crop is also rather short. Of grapes, taking an average throughout the valley, perhaps a two-thirds crop may be looked for. Prices are expected to be a little better than during the past two years. Sun-dried peaches, unpeeled, now command 20 cents per pound. This figure some of our orchardists are now receiving for a good article. All varieties of fruit are marked up, and as a matter of course fruit-growers are jubilant. One orchardist near town, who has about 70 acres in various fruits, will clear about $6000 this year.

DRIED GRAPES.—St. Helena *Star*, Aug. 15: We understand that there are San Francisco parties furnishing the prepared paper for drying grapes on at four cents per pound, which makes the cost of that article for vineyardists only 30 cents for the taking care of a ton. The same parties will contract for the grapes, when dried, at from $75 to $80 per ton. As it is estimated to take only 3½ pounds fresh to make one pound dry, the profit can be easily figured out.

San Benito.

IRRIGATION.—Hollister *Free Press*, Aug. 15: In a few days water will be flowing through the canal of the San Benito Irrigation Co., and thousands of acres of land will be so situated as to be able to be flooded with plenty of water. Land, which until now has only raised hay or grain, and that during "dry years" very sparingly, will be able to produce plentiful crops of alfalfa, vegetables, small fruits, etc., and farmers who have considered themselves fortunate in clearing $10 or $15 an acre yearly from their land will be placed in a condition which will enable them to produce crops which will yield them a handsome profit.

San Diego.

IRRIGATION BONDS.—*San Diegan*, Aug. 11: At the election held in Escondido to decide the question of issuing $450,000 in bonds with which to construct an irrigation system and develop a water supply, the bonds were carried by a vote of 130 to 23.

GOOD PROFIT.—San Jacinto *Register*, Aug. 14: E. Mead, Jr., sowed this year 500 acres to wheat and barley. This was put in with a six-horse team and a four-gang plow. He did all his own work. The entire crop brought $4000. The expenses amounted to $1500, leaving the nice little sum of $2500 net. This was Mr. Mead's first year of farming in California.

HAY.—S. D. *Sun*, Aug. 13: The movement of alfalfa from San Pasqual to San Diego goes steadily on; a constant stream of loaded wagons is going in, yet the demand keeps pace with the supply. The price is stiffening a little lately, and probably $14 or $15 can be had before the season ends.

San Joaquin.

PEACHES—TOMATOES.—Stockton *Independent*, Aug. 16: Joseph Hale of Roberts island is shipping to Chicago several hundred boxes of mammoth peaches of the Crawford and Clingstone varieties. Both for size and flavor these peaches are unexcelled. Ordinarily the fruit is shipped in boxes 4½ inches deep, but this year Mr. Hale is compelled to use boxes six inches in depth. How large the fruit is may be gauged from this fact: The six-inch box admits of only two layers of the fruit in depth and three layers in width fill the box. Mr. Hale next season intends to put out 30 acres more of peach trees....Mr. Hale raises tomatoes, and from two acres he states that he will reap a harvest that will yield him $500. His sales of tomatoes one day amounted to $100, another day $35 35, and a third day $52. The vines will continue to bear until nipped by the frost.

San Luis Obispo.

PAWPAW TREES.—San Miguel *Courier*, Aug. 14: Some time since, Mrs. Nancy Traver of Adelaide sent to Indiana for some trees and shrubs. She received 44 pawpaw trees, some dates and other trees and some shrubs, which are doing well and making a good growth.

Santa Clara.

SUGAR BEETS.—Gilroy *Advocate*, Aug. 16: The beet crop on the Moro Cojo ranch, as in this valley, has vastly improved in the past two or three weeks, and the company now feels confident that the beet yield of the ranch will exceed the estimates that have been given.

Solano.

THE WHEAT CROP.—Dixon *Tribune*, Aug. 16: From information gleaned from the owners of warehouses, we are able to form some estimate of the wheat crop of northern Solano. The season is about closed at Tremont, and Judge Dosk estimates that the amount of grain stored in the warehouses and piled in the yards is not more than one-third the crop of last year. At Batavia, wheat is still coming in from the McMahan and McCune & Garnett farms, and G. M. Coulter estimates that there will be half as much stored this year as last. George Ulsteen, who has charge of all the Dixon warehouses, says the crop of this year is about half as large as that of last year.

FARMERS FERTILIZING.—Vacaville *Reporter*, Aug. 14: The farmers are acting wisely in their efforts to improve their soil. There is increased interest in this work this year. They have cleaned out their corrals and barn lots and scattered the manure in their orchards and on their fields. They have visited the livery stables and private stables in town, and cleaned them up and hauled many wagon-loads out on their ranches. The soil will soon be exhausted without this replenishing process.

Sonoma

HOP TARE.—*Democrat*, Aug. 16: The Sonoma County Hop-Growers' Association adopted the following: That the members of the Sonoma County Hop-Growers' Association fully indorse the new tare established and adopted by the State Hop Growers' Association, and that we will not, from and after the passage of this resolution, sell or contract any hops only under the tare of 3½ pounds per bale. That any member violating the new tare rule shall be subject to a fine of $100 and expulsion from the association.

HOPS.—*Dispatch & Democrat*, Aug. 15: Judge McGarvey sold 60 bales of hops last Monday for 20 cents a pound. D. Pitner also sold 60 bales at the same time for 20 cents a pound.

FRUIT SALES.—*Dispatch & Democrat*, Aug. 15: Last Monday Judge McGarvey sold to the Star Dried Fruit Co. of Healdsburg the entire crop of prunes in his orchard for 2½ cents a pound, delivered on board the cars at Ukiah. J. H. Donohoe sold the fruit crop in the Wagonseller orchard. Wm. Van Allen of Healdsburg purchased the Bartlett pears at $45 a ton for first-class and $30 a ton for second class; the prunes at $40 a ton, choice plums at $20 a ton, and mixed plums at $10 a ton, delivered at Healdsburg, purchaser to furnish the boxes. T. S. Merchant of the Magnolia cannery, Healdsburg, purchased the mixed pears at $16 a ton. We understand that Dr. King was offered a good price for the fruit in his orchard across the river. It is principally prunes, and he intends to dry them himself.

ENCOURAGING.—S. R. *Republican*, Aug. 14: The fruit crop, though not so large as in seasons past, is more than half a crop. The prices now being realized more than compensate for the deficiency in quantity. Grapes promise well and without any unforeseen drawback will turn out as good if not a better crop than last year. Grape-men are confident that a better price will be obtained than last year; some are of the opinion that as high as $15 per ton will be paid ere the crop is fully disposed of. The hop crop is fully up to the best expectation, and like the fruit crop, the price is largely in excess of that obtained for last year's product. The lateness of the season prevented many from sowing grain, yet there has been considerable grain and hay harvested in the county. While money has been close among the farmers for some time, the indications from the causes above stated are very promising for easier times in that respect for the next few months. Many of the wine-cellars are empty or nearly so, the product of former years having been shipped to market. This will cause a more than usual demand for wine grapes.

HOP PRICES.—Healdsburg *Enterprise*, Aug. 16: Twenty-two cents per pound has been offered for 1890 hops grown in this locality. The price will probably run to 25 cents.

Sutter.

LEVEE WORK.—Y. C. *Farmer*, Aug. 15: The work of repairing the levees in District No. 70 will begin in a few weeks and will be pushed as rapidly as possible. As the work will be done by the residents of the district, and they expect to all work together, it will take about six weeks to finish filling in the various breaks and otherwise repairing and raising the levees. About 50 four-horse Stockton scrapers, 20 wheel scrapers and some smaller scrapers have been ordered, and every convenience secured for those who will do the work. The directors are talking of getting a patent grader or ditcher to be used in raising the back levee. On this machine the dirt is taken direct from the plows on a carrier to the levee.

Tehama.

NO EXHIBIT.—Red Bluff *People's Cause*, Aug. 16: The Directors of the Agricultural Association have decided not to have a pavilion exhibit during the fair. There has been so much work in connection with the race-track that the directors have not had time to gather such an exhibit as is desired—one that will be of lasting benefit to the county—and will wait till next year, when the association will be in condition to devote time and money toward this important adjunct, without which no country fair can be wholly successful.

Ventura.

RETURNS FROM APRICOTS.—EDITORS PRESS: Mr. Sexton harvested, weighed and sold 61 tons Royal apricots from 290 trees for $1525—a shade over $500 per acre—and as with all orchards here, much of the crop wasted.—A. D. BARNARD, *Ventura, Aug. 9, '90.*

BEAN CROP.—*Free Press*, Aug. 16: A gentleman, well posted in such matters, and a conservative man, yesterday estimated that there would be shipped from Ventura county this season, 900 carloads of beans. The estimate was based on a yield of 1000 pounds of beans to the acre, the acreage planted being 18 000 (this is 624 acres less than is given in the Assessor's agricultural report for the year). If the estimate of the yield to the acre be correct, the crop will be 9000 tons. A few lots have been sold at less than 3½ cents per pound, but the bulk of the crop will be sold at higher rates.

Yolo.

LARGE DRIER.—Woodland *Mail*, Aug. 14: D. A. Jackson has begun the erection of a first-class drier on his property east of Woodland. Mr. Jackson has his own crop of grapes and has purchased largely of others, and is determined that he will not risk his grapes to such a misfortune as occurred last fall when the early rains destroyed the splendid second crop and brought disaster on grape-growers. Mr. Jackson has under way a drier of quite large dimensions, 55x57 feet. It will be constructed on the plan of the driers on the Byron Jackson vineyard with important improvements.

HOPS.—Woodland *Four Corners*, Aug. 16: The first car of Pacific Coast hops was shipped from M. H. Durst's hophouse yesterday, consigned to New York through Horst Bros. A special engine took the car from here to make connections at Lathrop with the overland passenger train. This car will go through on mail time, and will be the first car of new hops to reach the Atlantic seaboard.

SMALL FRUIT FARMS.—Woodland *Mail*, Aug. 16: There has been a good inquiry during the past few days for 10 and 20 acre tracts for planting to fruit and vines. From the present indications there will be more land planted to fruit this year than ever before.

Yuba.

PUMP IRRIGATION.—Marysville *Appeal*, Aug. 15: Mr. Peacock says that the irrigation plant on his tract at Colmena is working perfectly. He uses a naphtha or kerosene engine for pumping purposes. His berry vines have made a splendid growth under the influence of the water, and have been highly productive this season. Wherever a good supply of water can be struck, and will rise in a well to within 20 or 30 feet of the surface, as at Colmena, the success of irrigation by pumping is assured. Water can be had in this way at a small cost, and is completely under the control of the owner of the land, with no chance of dispute over water rights or failure of supply; nor does he have to take any chances of excessive charges for use of water.

NEVADA.

LAST WINTER'S STOCK LOSSES.—Carson *Cor. Chronicle*, Aug. 16: T. B. Rickey says: I have been riding since June 15th over the ranges and we have lost 30,000 head of cattle in Humboldt county. In one ravine I saw heaps of cattle for three miles, and they were piled up as many as 300 to 400 in a bunch. A herd which sought shelter from a storm were covered with snow and died. Another herd went in on top of them, dying as the snow sifted over them. They must have trampled each other under foot, for the bones of many of them were broken. The sun has dried out the top, but the effluvia from those underneath is sickening. Everywhere you go you find the same state of affairs. No one escaped except those who had stock in the western and southern parts of the State.

Track and Farm.

The State Fair Races.

The State Board of Agriculture met Thursday, August 6th, to make preliminary arrangements for the State Fair, which begins on September 8th and continues two weeks. The entries were opened, and it was found that all the events had filled except two, and for one of these a free-for-all race was substituted. The entries indicate that the races—which begin on Thursday, September 11th—will be equal to anything ever seen at the State Fair. The entries are as follows:

First Day—Thursday, September 11th

No. 1. Trotting (The Occident Stake)—A trotting stake for foals of 1887. Entries closed January 1, 1888. Entrance, $100, of which $10 must accompany nomination; $15 to be paid January 1, 1889; $25 January 1, 1890, and $50 thirty days before the race. The Occident Gold Cup, of the value of $400, to be added by the society. First colt, cup and six-tenths; second colt, three-tenths; and third colt, one-tenth of stake. Five to enter, three to start; otherwise National Trotting Association rules. Mile heats, three in five, to harness. Closed in 1888 with 53 nominations. Value of stake January 1, 1890, $1835.

The following have made third payments:

1. Palo Alto Stock Farm, b f Wild May, by Electioneer, dam May by Wildidle.
2. Palo Alto Stock Farm, b f Coval, by Electioneer, dam Columbine by A. W. Richmond.
3. Palo Alto Stock Farm, br f Clarion, by Ansel, dam Consolation by Dictator.
4. Palo Alto Stock Farm, ch c Norris, by Ansel, dam Norma by Alexander's Norman.
5. Palo Alto Stock Farm, b f Wildmont, by Piedmont, dam Wildflower by Electioneer.
6. Jos. Cairn Simpson, b f A., by Antevolo, dam Lady Del Sur by Del Sur.
7. B. E. Harris, br or blk f Lorena, by Jim Mulvaney, dam Elmorene by Elmo.
8. Lot D. Slocum, b f Moss Rose, by Anteeo, dam Luella by Nutwood.
9. H. H. Helman, gr g Richmond Chief, by Monroe Chief, dam Eta by A. W. Richmond.
10. G. Valensin, blk f Fleet, by Sydney, dam Flight by Buccaneer.
11. P. Fitzgerald, br c Kill Ross, by Killarney, dam by Cal. Dexter.

No. 2.—Trotting—Purse $1200; 2:22 class.

1. J. L. McCord, ch m Mary Lou, by Tom Benton, dam Brown Jennie by Dave Hill Jr.
2. La Siesta Ranch, b m Wanda, by Eros, dam Accident by Elmo.
3. San Mateo Stock Farm, b m Sister V., by Sydney, dam Nettie Lambert by John Nelson.
4. G. A. Doherty, br s Victor, by Echo, dam by Woodburn.

No. 3.—Pacing—Purse, $800; 2:30 class.

1. C. W. Godard, ch Pinto g C. W. G., by Adonis, dam inbred to St. Clair.
2. John Garrity, ch g Hummer, by Sidney, dam Humming Bird.
3. Napa Stock Farm, b g Gold Medal, by Nephew, dam unknown.
4. H. Willis, b g Our Dick, by Gibraltar, dam Mattie W.
5. S. C. Tryon, blk s Costillo, by Echo, dam Bessie Turner by Fred Low.
6. John Patterson, blk m Princess Alice, by Dexter Prince, dam Mollie by General McClellan.
7. Owen Bros., ch g T. B., by Juanito, dam unknown.
8. San Mateo Stock Farm, ch h Rupee, by Guy Wilkes, dam Sible Hayward by Poscora Hayward.
9. J. G Moran, b g McGinty, by Daniel Lambert, dam by Davy Crockett.

Second Day—Friday, September 12th.

No. 4.—Running. Opening scramble for two-year-olds. A sweepstake of $25 each; $25 forfeit, or only $10 if declared on or before September 1st; with $350 added, of which $50 to second. Winners at this distance in 1890 once to carry three pounds; twice, five pounds extra. Maidens allowed five pounds. Three-quarters of a mile.

1. Palo Alto Stock Farm, b c Nero, by Flood, dam imp. Queen Bess by Strathconan.
2. Palo Alto Stock Farm, ch f Rosebud, by Wildidle, dam imp. Rosette by Struan.
3. Undine Stables, Quena, by Kyrle Daly, dam Rachel.
4. H. I. Thornton, br f Bessie Barnes, by Darebin, dam Carrie C.
5. H. I. Thornton, ch g Arcade, by Milner, dam Nannie Hubbard by Hubbard.
6. L. U. Shippee, b c Lodowic, by Longfellow, dam Carrie Phillips, by Pat Malloy.
7. L. U. Shippee, b f May H., by Falsetto, dam Glenluine by Glenelg.
8. L. U. Shippee, b f False Queen, by Falsetto, dam Queen Victoria by Lexington.
9. William H. Frye, b f Lady Franklin, by Joe Hooker, dam by Odd Fellow.
10. M. T. Walters, b c Altus, by Billy Bolinger, dam Della Walker.
11. Dennison Bros., ch f Minnie B., by Prince of Norfolk, dam Lizzie Idle.
12. John Reavey, ch c by Joe Hooker, dam Lady Stacy.
13. O. Harrison, b c Hy Lo, by Cyrus, dam Katharine.
14. Elmwood Stables, b c Duke of Milpitas, by Duke of Norfolk, dam Gypsy.
15. Owen Bros., b s Hero, by Wildidle, dam Precious by Lever.
16. W. M. Murry, blk c Power, by Powhattan, dam Lawn Tennis.
17. W. M. Murry, b c Aristocrat, by Flood, dam Cuba.
18. L. J. Rose, b f Fairy, by Argyle, dam imp. Fairy Rose by Kisber.
19. L. J. Rose, b h Conrad, by Flood, dam imp. Goula by Exminster.

No. 5.—Running — The California Breeders' Stake—A sweepstake for three-year-olds (foals of 1887); $100 each, h f, or only $10 if declared January 1st; $15 May 1st; or $25 August 1, 1890; declaration void unless accompanied by the money; with $600 added; of which $150 to second; $100 to third. Winner of any stake race in 1890 of the value of $1000 to carry five pounds; of two or more, ten pounds extra. Maidens allowed five pounds. One mile and a quarter. Closed in 1888 with 39 nominations.

No. 6.—Running—The Rosemeade Handicap, for all ages; of $50 each, h f; $15 declaration; with $400 added; second to receive $100, and third $50 for the stakes. Weights announced by 10 A. M., and declarations due by 6 P. M. September 11th. One mile and one-eighth.

1. Palo Alto Stock Farm, b c (5) Peel, by Monday, dam Precious by Lever.
2. Palo Alto Stock Farm, ch f (3) Muta, by Wildidle, dam imp. Mutiny by Adventurer.
3. Undine Stables, ch g (5) Tycoon, by Reveille, dam Margery by Error.
4. P. Siebenthaler, ch c (3) Sheridan, by Young Bazaar, dam Lost Girl by Leinster.
5. H. I. Thornton, br m (6) Abi, by Red Boy, dam Abi by Woodburn.
6. L. U. Shippee, br m (4) Picnic, by imp. Mr. Pickwick, dam Countess by Theobald.
7. Charles Kerr, ch s (5) Jackson, by Luke Blackburn, dam Ivy Leaf.
8. J. J. Dolan, b g (4) Revolver, by Joe Daniels, dam by Partisan.
9. Captain A. B. Anderson, ch s (4) Four Aces, by Hock Hocking, dam Maid of the Mist.
10. Santa Barbara Stables, b s (4) Othello, by Hock Hocking, dam Sunday.
11. Elmwood Stables, b g (5) Nabeau, by Nathan Coombs, dam Beauty.
12. W. L. Appleby ch m (5) Carmen, by Wildidle, dam Nettie Brown.
13. W. L. Appleby, b m (3) Raindrop, by Wildidle, dam imp. Teardrop.
14. Wesley George. b g (7) Applause, by Three Cheers, dam Alice N.
15. O. Appleby, br m (4) Alfarata, by Wildidle, dam Monday Filly.
16. Matt. Storn, ch m (4) Lurline, by Longfield, dam Katy Pease by Planet.
17. Matt. Storn, ch m (4) Marigold, by Milner, dam Katy Pease by Planet.
18. N. A. Covarrubias, b s (4) Dan M. Murphy, by imp. Speculator, dam Leona

No. 7.—Running—Selling purse, $300, of which $50 to second; for all ages; horses entered to be sold for $1500 to carry rule weights; two pounds allowed for each $100 less, down to $1000; then one pound for each $100 less, down to $500. Horses entered not to be sold to carry five pounds above the scale. Valuation to be placed on starters only by 6 P. M. the day preceding the race. Mile heats.

1. M. T. Walters, b g (4) Albatross, by Pill Box, dam Della Walker.
2. Dennison Bros., b g (a) Dave Douglas, by Leinster, dam Lilly Simpson by Newry.
3. H. D. Miller ch m (a) Ida Glenn, by Glen Ellen, dam Queen.
4. J. N. Van Winkle, b g Silverbow, by imp. Fechter, dam Belle of the Mead.
5. Albert Hiller, b g (3) Achilles, by Norfolk, dam Thetis by Ten Broeck.
6. Elmwood Stables, br m (4) Installation, by Inauguration, dam Brown Maria.
7. W. L. Appleby, b g (4) Wild Oats, by Wildidle, dam Mary Givens by Owen Dale.
8. Wesley George, b g (a) Applause, by Three Cheers, dam Alice N by Norfolk.
9. Matt. Storn, ch s (3) Larghetta, by Jils Johnson, dam Leveret by Lever.
10. C. Holloway, ch g (5) Forester, by Joe Hooker, dam Mattie C. by Specter.
11. L. J. Rose, s g (a) Mikado, by Shiloh, dam Margery by Error.

Third Day—Saturday, September 13th.

No. 8.—Trotting, Two-year-old stake—Entrance, $50, of which $10 must accompany nomination; $15 payable July 1st, and remaining $25 August 10, 1890; $300 added by the society. Closed March 15, 1890, with 14 nominations. Mile heats.

The following have made second payments:

1. San Mateo Stock Farm, ch f Vida Wilkes, by Guy Wilkes, dam Vixen by Nutwood.
2. Souther Stock Farm, b c El Benton, by Electioneer, dam Nellie Benton by Gen. Benton.
3. Souther Stock Farm, blk c Jim Sinfoot, by Figaro, dam Fanny Sinfoot by Irwin Davis.
4. Palo Alto Stock Farm, br c Almoneer, by Alban, dam America by Hambletonian 10.
5. Palo Alto Stock Farm, b f Elleneer, by Electioneer, dam Lady Ellen.
6. B. E. Harris, ch f Starlight, by Dawn, dam Lena Bowles by Ethan Allen.

No. 9. (Failed to fill.)

No. 10.—Trotting—Trotting purse, $1000; 2:30 class.

1. Palo Alto Stock Farm. rn m Hilliard, by General Benton, dam Daisy Miller by Electioneer.
2. Phillips Bros., b g Prince B., by Brilliant, dam Maud,
3. T. E. Keating, ch g Frank M., by Priam, dam by General Bena.
4. Matt. Earp, b g Jim Leach, by Inca, dam by Sacramento.
5. B. C. Holly, br m Flora G., by Altoona, dam by Conway's Patchen.
6. George Theuerkauf, ch g Lee, by General Lee, dam by George M. Patchen.
7. L. U. Shippee, b h Moses S., by Hawthorne, dam by McCracken's Black Hawk.
8. San Miguel Stock Farm, br h Balkan, by Mambrino Wilkes, dam Fanny Fern.
9. DeTurk & McGraw, blk s Silas Skinner, by Aleona, dam Fontana by Almont.
10. H. I. Thornton, b s James Madison, by Anteeo, dam Lady Patchen.
11. Hermit Stable, g s Larco, by A. W. Richmond, dam Maud Smith by Overland.
12. Owen Bros., g g Bar Barbara, by Len Rose, dam Barbara.
13. J. C. Moran, b g Wallie, by Geo. Wilkes, dam by Mambrino Patchen.

Fourth Day—Monday, September 15th.

No. 11.—Running—The Daisy D. Stake for all ages; of $50 each, h f, or only $15 if declared on or before Sept. 1st; with $350 added; of which $75 to second; third to save stake. Maidens, if three years old, allowed five pounds; if four or more, seven pounds. Three-quarters of a mile.

1. Undine Stables, ch f (3) Retta B., by Joe Hooker, dam Kate Carson by Joe Daniels.
2. P. Siebenthaler, ch c (3) King Hooker, by Joe Hooker, dam Violet by Leinster.
3. H. I. Thornton, br m (a) Abi, by Red Boy, dam Abi by Woodburn.
4. L. U. Shippee, br m (4) Picnic, by imp. Mr. Pickwick, dam Countess by Theobald.
5. Dennison Bros., ch c (3) Princes' First, by Prince of Norfolk, dam Lizzie Idle.
6. John G. Sohn, ch s (4) Wild Robin, by Keystone, dam Rifleman Gladiator.
7. O. Appleby, b f (3) Juniata, by Wildidle, dam Monday Filly.
8. Charles Kerr, b s (5) Jackson, by Luke Blackburn, dam Ivy Leaf.
9. J. J. Dolan, b g (4) Revolver, by Joe Daniels, dam by Partisan.
10. E. Pickett, ch c (5) Peregrine, by Jumbo or Joe Hooker, dam Irene Harding.
11. Santa Barbara Stables, b s (7) Consuelo, by Grinstead, dam Nina R.
12. W. L. Appleby, ch m (5) Carmen, by Wildidle, dam Nettie Brown.
13. W. L. Appleby, ch m (4) Odette, by Shiloh, dam Margery by Error.
14. Wesley George, b g (a) Applause, by Three Cheers, dam Aline N. by Norfolk.
15. O. Appleby, br m (4) Alfarata, by Wildidle, dam Monday filly.
16. Owen Bros., b m (a) Daisy D., by Wheatly, dam Black Maria by Belmont.
17. George Hearst, ch f (3) Minneola, by Warwick, dam Belle S.
18. N. A. Covarrubias, b s (4) Dan. M. Murphy by imp. Speculator, dam Leona.
19. G. H. Kennedy, b f (2) Acclaim, by Three Cheers, dam Rosette.
20. L. J. Rose, b g (3) Rico, by Shannon, dam Fannie Lewis by imp. Buckden.

No. 12 —Running—The Capital City Stake, a handicap for three-year-olds; of $100 each, h f; $20 declaration; with $400 added; second horse, $100. Weights announced by 10 o'clock A. M. Saturday, Sept. 13th. Declarations due by 6 P. M. same day. One mile and a sixteenth.

1. Palo Alto Stock Farm, ch f Muta, by Wildidle, dam imp. Mutiny by Adventurer.
2. P. Siebenthaler, ch c Sheridan, by Young Bazaar, dam Lost Girl by Leinster.
3. L. U. Shippee, b m Mabell F., by Longfellow, dam Carrie Phillips by Pat Malloy.
4. L. U. Shippee, b c Take Notice, by Prince Charlie, dam Nota Bene by Gleneig.
5. Elmwood Stable, b f Initiation, by Inauguration, dam Brown Maria.
6. W. L. Appleby, b f Raindrop, by Wildidle, dam imp. Teardrop.
7. Owen Brothers, br s Captain Al, by Kingston, dam Black Maria by Belmont.
8. Matt Storn, ch f Marigold, by Milner, dam Katy Pease by Planet.
9. W. M. Murry, b c Leland, by Flood, dam Amelia by Lowlander.
10. L. J. Rose, b g Rico, by Shannon, dam Fannie Lewis by imp. Buckden.

No. 13.—The Sunny Slope Stake, a sweepstake for two-year old fillies (foals of 1888); of $50 each, h f, or only $10 if declared on or before Jan. 1st, or $15 by May 1, 1890; declarations without money are void; with $350 added, of which $50 to second. Non-winners allowed five pounds. Five-eighths of a mile. Closed in 1889 with 20 nominations.

No. 14.—Running—Selling purse, $350, of which $50 to second; for all ages. Horses entered to be sold for $2000 to carry rule weights; one pound off for each $100 down to $1000; then two pounds for each $100 down to $500. Horses entered not to be sold to carry five pounds above the scale. Valuation to be placed on starters only by 6 P. M. Saturday, Sept. 13th. One and one-eighth miles.

1. Undine Stable, ch g (5) Tycoon, by Reveille, dam Margery, by Error.
2. P. Siebenthaler, ch c (2) Sheridan, by Young Bazaar, dam Lost Girl, by Leinster.
3. M. T. Walters, b g (4) Albatross, by Pill Box, dam Della Walker.
4. Dennison Bros. b s (3) Mohawk, by Norfolk, dam Irene Harding, by Jack Malone
5. H. D Miller, ch m (a) Ida Glenn, by Glen Ellen, dam Queen.
6. Captain A. B. Anderson, ch s (4) Four Aces, by Hock-Hocking, dam Maid of the Mist.
7. A. Hiller, b g (3) Achilles, by Norfolk, dam Thetis, by Ten Broeck.
8. Elmwood Stables, ch m (7) Nerva, by Bob Wooding, dam Lizzie Marshall.
9. W. L. Appleby, b g (4) Wild Oats, by Wildidle, dam Mary Givens.
10. Wesley George, b g (a) Applause, by Three Cheers, dam Alice N. by Norfolk.
11. Matt. Storn, ch g (5) Kildare, by Kyrle Daly, dam Mistake by Wildidle.
12. Matt. Storn, ch s (3) Larghetta, by Jils Johnson, dam Leveret by Lever.
13. N. A. Covarrubias, b s (4) Dan M. Murphy, by imp. Speculator, dam Leona.
14. W. M. Murry, br g (3) Oakdale, by Partisan, dam by Specter.
15. L. J. Rose, s g (6) Mikado, by Shiloh, dam Margery by Error.

Fifth Day—Tuesday, September 16th.

No. 15.—Trotting—Trotting purse, $600; for three-year olds eligible to 2:40 class.

1. Palo Alto Stock Farm, ch c Langton by Alfred, dam Laura C. by Electioneer.
2. Tietjens & Watson, b s Frank B. by Coligny, dam Casserly mare.
3. U. S. Gregory, b m Lynette by Lynwood, dam Lady Belle.
4. L. Funk, b s by Dexter Prince, dam by Nutwood.
5. L. M. Morse, br m Jessie by Dexter Prince, dam unknown.
6. San Mateo Stock Farm, b m Millie Wilkes by Guy Wilkes, dam Rosetta by The Moor.

No. 16.—Trotting—Trotting purse, $800; for four-year olds eligible to 2:30 class.

1. Palo Alto Stock Farm, b m Laureola by Benefit, dam Laura C. by Electioneer.
2. L. H. Boggs, b s Keepsake by Black Ralph, dam Bett B.
3. Thomas Smith, b s George Washington by Mamb Chief, dam Fannie Rose by Vick's Ethan Allen.
4. C. W. Woodward, b c Alexander Button, Jr. by Alexander Button, dam by John Nelson.
5. L. U. Shippee, b h Kilrain by Hawthorne, dam by Whipple's Hamb.
6. San Mateo Stock Farm, br m Chantilly by Nutwood, dam Coupon by Princeps.
7. George Hearst, ch s Clearmont by McGinnis, dam Carrie C.
8. John P. Sweeny, b s Gibber by Gibral dam Soonner by Breckenridge.

No. 17.—Trotting—Trotting purse, $1000; 3 class.

1. Palo Alto Stock Farm, b m Ariana by Ansel, dam Rebecca by General Benton.
2. B. C. Holly, br s Charles Derby by Steinway, dam Katy G.
3. D. M. Reavis, br m Vic H by Blackbird, dam Ella Sweigert.
4. F. B. Gifford, b s Bob Mason by Echo, dam Bell Mason.
5. San Mateo Stock Farm, b m Una Wilkes by Guy Wilkes, dam Blanche by Arthurton.
6. J. C. Moran, b g Ed Fay by Christian Patchen, dam by Whipple's Hamb.
7. Pete Brandow, b g Free Coinage by Abbotsford, dam Agnes.

Sixth Day—Wednesday, September 17th.

No. 18.—Running — The California Autumn Stake—A sweepstake for two-year-olds (foals of 1888); of $50 each, h f, or only $10 if declared on or before January 1st, or $15 by May 1, 1890; declarations void unless accompanied by the money; with $500 added, of which $100 to second; third to save stake. Winner of any stake race to carry three pounds; or of two or more, five pounds extra. Maidens allowed five pounds. Three-quarters of a mile. Closed in 1889 with 33 nominations.

No. 19.—Running—The Fall Stake, a handicap sweepstake for all ages; of $50 each, h f; $15 declaration; with $50 added; second to receive $100 and third $50 from the stakes. Weights announced by 10 A. M. Tuesday, September 16th. Declarations due by 6 P. M. same day. One mile and a quarter.

1. Palo Alto Stock Farm, b c (5) Peel, by Monday, dam Precious by Lever.
2. Palo Alto Stock Farm, ch f (3) Muta, by Wildidle, dam imp. Mutiny by Adventurer.
3. Undine Stables, ch g (5) Tycoon, by Reveille, dam Margery by Error.
4. P. Siebenthaler, ch c (3) Sheridan, by Young Bazaar, dam Lost Girl by Leinster.
5. H. I. Thornton, br m (a) Abi, by Red Boy, dam Abi by Woodburn.
6. L. U. Shippee, br m (4) Picnic, by imp. Mr. Pickwick, dam Countess by Theobald.
7. Dennison Bros., b s (4) Hotspur, by Joe Daniels, dam sister to Jim Douglas.
8. Captain A. B. Anderson, ch s (4) Four Aces, by Hock Hocking, dam Maid of the Mist.
9. Santa Barbara Stable, b s (4) Othello, by Hock Hocking, dam Sunday.
10. Elmwood Stable, b g (5) Nabeau, by Nathan Coombs, dam Beauty.
11. Elmwood Stable, blk g (aged) Index, by Thad Stevens, dam Gypsy.
12. W. L. Appleby, b m (3) Raindrop, by Wildidle, dam imp. Teardrop by Scottish Chief.
13. W. L. Appleby, ch m (5) Carmen, by Wildidle, dam imp. Nettie Brown.
14. Wesley George, b g (a) Applause, by Three Cheers, dam Alice N. by Norfolk.
15. Matt. Storn, ch m (4) Lurline, by Longfield, dam Katy Pease by Planet.
16. Matt. Storn, ch m (3) Marigold, by Milner, dam Katy Pease by Planet.

No. 20.—Running—The Palo Alto Stake, a handicap for two-year-olds; of $50 each, h f, or $10 declaration; with $350 added; second to save stake. Weights announced Tuesday, September 16th, at 10 o'clock A. M. Declarations due by 6 o'clock P. M. same day. Three-quarters of a mile.

1. Palo Alto Stock Farm, b c Nero, by Flood, dam imp. Queen Bess by Strathconan.
2. Palo Alto Stock Farm, ch f Rosebud, by Wildidle, dam imp. Rosetta by Struan.
3. Palo Alto Stock Farm, ch c Mosby, by Wildidle, dam Mozelle by Monday
4. Undine Stable, Quena, by Kyrle Daly, dam Rachel.
5. H. I. Thornton, br f Bessie Barnes, by Darebin, dam Carrie C.
6. H. I. Thornton, br c Peralta, by John Happy, dam Bertha W. by Leamington.
7. L. U. Shippee, b f False Queen, by Falsetto, dam Queen Victoria by Wildidle.
8. L. U. Shippee, b f May H., by Falsetto, dam Glenluine by Glenelg.
9. L. U. Shippee, b c Lodowic, by Longfellow, dam Carrie Phillips by Pat Malloy.
10. Dennison Bros., ch f Minnie B., by Prince of Norfolk, dam Lizzie Idle.
11. G. Harrison, b c Hy Lo, by Cyrus, dam Katharene.
12. Elmwood Stable, b c Duke of Milpitas, by Duke of Norfolk, dam Gypsy.
13. W. M. Murry, blk c Power, by Powhattan, dam Lawn Tennis.
14. W. M. Murry, b c Iquacio, by Three Cheers, dam Dairy Maid.
15. W. M. Murry, b c Aristocrat, by Flood, dam Cuba.
16. L. J. Rose, b c Conrad, by Flood, dam imp. Goula by Exminster.
17. L. J. Rose, b f Fairy, by Argyle, dam imp. Fairy Rose by Kisber.

No. 21.—Running—Running purse, $400, for three-year-olds and upward; $15 from starters to go to second horse. Winners at this distance in 1890 to carry, if once, three pounds; twice, five pounds extra. Horses that have started twice in a race, one mile or over, and not won, in 1890, allowed five pounds. Maidens allowed, if three years old, seven pounds; if four, ten pounds; if five years or upward, fifteen pounds. One mile.

1. Palo Alto Stock Farm, ch f (3) Muta, by Wildidle, dam imp. Mutiny by Adventurer.
2. P. Siebenthaler, ch c (3) King Hooker, by Joe Hooker, dam Violet by Leinster.
3. L. U. Shippee, br m (4) Picnic, by imp. Mr. Pickwick, dam imp. Countess by Theobald.
4. L. U. Shippee, b c (3) Take Notice, by Prince Charlie, dam Nota Bene by Glenelg.
5. M. T. Walters, b g (4) Albatross, by Pill Box, dam Della Walker by Jimmy Green.
6. Dennison Bros., ch c (3) Prince's First, by Prince of Norfolk, dam Lizzie Idle by Wildidle.
7. O. Appleby, b f (3) Junita, by Wildidle, dam Monday filly.
8. Charles Kerr, b s (5) Jackson, by Luke Blackburn, dam Ivy Leaf.
9. Charles Kerr, br m (5) Ona, by Onondaga, dam Virgie.
10. J. N. Van Winkle, b g Silver Bow, by imp. Fechter, dam Belle of the Mead.
11. Santa Barbara Stables, b s (aged) Consuelo, by Grinstead, dam Nina R.

12. Elmwood Stable, b f (3) Initiation, by Inauguration, dam Brown Maria.
13. O. Appleby, br m (3) Alfarata, by Wildidle, dam Mary Givens by Owen Dale.
14. Owen Bros., br s (3) Captain Al., by Kingston, dam Black Maria by Belmont.
15. Matt. Storn, ch s (3) Larghetta, by Jils Johnson, dam Leveret by Lever.
16. Matt. Storn, ch m (4) Lurline, by Longfield, dam Kitty Pease by Planet.
17. George Hearst, b g (aged) Long Tom, by Longfellow, dam unknown.
18. W. M. Murry, b c (3) Leland, by Flood, dam Amelia by Lowlander.
19. W. M. Murry, br g (3) Oakdale, by Partisan, dam by Specter.

No. 22.—Running—Free purse, $300, of which $50 to second; for all ages; to close at 6 o'clock P. M. the day before. One mile.

No. 23.—(Failed to fill.) Free for all purse, $1500 substituted. Entries to close September 8th.

Seventh Day—Thureday, September 18th

No. 24.—Trotting—Trotting purse, $1200; 2:24 class.

1. J. L. McCord, ch m Mary Lou, by Tom Benton, dam Brown Jennie by Dave Hill Jr.
2. H. W. Cooper, b s Ira, by Piedmont, dam Irene by Mohawk Chief.
3. B. C. Holly, ch m Pink, by Inca, dam by Echo.
4. Napa Stock Farm, b m Nona Y., by Admiral, dam Black Flora.
5. R. T. Carroll, blk m Moro, by Pasha, dam by Messenger Duroc.
6. San Miguel Stock Farm, br h Balkan, by Mamb. Wilkes, dam Fanny Fern.
7. La Siesta Ranch, b m Wanda, by Eros, dam Accident by Elmo.
8. R. H. Wallou, b s Argent, by Stirling, dam Madam Buckner.
9. Hermit Stable, gr s Larco, by A. W. Richmond, dam Maud Smith by Overland.
10. San Mateo Stock Farm, b m Sister V., by Sidney, dam Nettie Lambert by John Nelson.

No. 25.—Pacing—Pacing purse, $1000; free for all.

1. J. L. McCord, blk g Ned Winslow, by Tom Benton, dam Brown Jennie by Dave Hill.
2. Corey & Hawks, br s Amont Patchen, by Juanito, dam Glidey.
3. B. C. Holly, b s St. Patrick, by Volunteer, dam by Guy Miller.
4. G. W. Woodard, br m Belle Button, by Alex. Button, dam Flora.
5. Pleasanton Stock Farm, b m Cricket, by Steinway, dam by Dolphin.

Eighth Day—Friday, September 19th.

No. 26.—Running—The California Annual Stake, a sweepstake for two-year-olds (foals of 1888); of $100 each, h f, or only $10 if declared on or before January 1st; $15 May 1st; or $25 August 1, 1890; declarations void unless accompanied by the money; with $600 added, of which $150 to second; third to save stake. Winner of autumn stake to carry seven pounds extra; winner of any other stake to carry three pounds; of two or more, seven pounds extra; maidens allowed five pounds. One mile. Closed in 1889 with 29 nominations.

No. 27.—The President Stake—A sweepstake for three-year-olds (foals of 1887); $100 each, of which $5 must accompany nominations; $10 payable January 1, 1889; $15 January 1, 1890; $20 May 1, 1890; the remaining $50 the day of race. Payments not made as they become due forfeits money paid in and declares entry out; $700 added. The entire stakes and $500 of the added money to winner; $150 to second; $100 to third. Winner of breeders' stake to carry seven pounds; of any other three-year-old stake of the value of $1000, five pounds; or two or more, seven pounds extra. Maidens allowed five pounds. One mile and a half. Closed in 1888 with 23 nominations.

The following have made fourth payment:

1. P. Herzog, b c Mohawk, by Norfolk, dam Irene Harding by Jack Malone.
2. L. U. Shippee, b c Take Notice, by Prince Charlie, dam Nota Bene by Glenelg.
3. L. U. Shippee, b f Mabel F., by Longfellow, dam Carrie Phillips by Pat Malloy.
4. George Hearst, b c Sacramento, by Joe Hooker, dam Ada C.

No. 28.—Running—The Rico Stake, for all ages; of $50 each; $15 forfeit; $300 added; of which $100 to second; third to save stake; $200 additional if 1:41¼ is beaten. Stake to be named after the winner if Rico's time (1:42) is beaten. One mile.

1. Palo Alto Stock Farm, b c (2) Nero, by Flood, dam Queen Bess by Stratheonan.
2. H. I. Thornton, br m (a) Abi, by Red Boy, dam Abi by Woodburn.
3. John G. Sohn, ch s (4) Wild Robin, by Keystone, dam Rifleman Gladiator.
4. Charles Kerr, b s (5) Jackson, by Luke Blackburn, dam Ivy Leaf.
5. G. Harrison, b c (2) Hy Lo, by Cyrus, dam Katharine.
6. Santa Barbara Stables, b s (4) Othello, by Hock-Hocking, dam Sunday.
7. Elmwood Stable, b f (3) Initiation, by Inauguration, dam Brown Maria.
8. Owen Bros., b m (a) Daisy D., by Wheatly, dam Black Maria by Belmont.
9. Matt. Storn, ch f (3) Marigold, by Milner, dam Katy Pease by Planet.
10. W. M. Murry, b c (2) Aristocrat, by Flood, dam Cuba.
11. W. M. Murry, blk c (2) Power, by Powhattan, dam Lawn Tennis by Ten Broeck.
12. L. J. Rose, b f (2) Fairy, by Argyle, dam imp. Fairy Rose by Kisber.

No. 29.—Running—The La Rue Stake, a handicap for all ages; of $100 each, h f; $20 declaration; with $500 added; of which $100 to second; $50 to third. Weights announced by 10 o'clock A. M. on Thursday, Sept. 18th. Declarations due by 6 o'clock P. M. same day. One mile and a half.

1. Palo Alto Stock Farm, b c (5) Peel, by Monday, dam Precious by Lever.
2. Palo Alto Stock Farm, ch f (3) Muta, by Wildidle, dam imp. Mutiny by Adventurer.
3. L. U. Shippee, br m (4) Picnic, by imp. Mr. Pickwick, dam imp. Countess by Theobald.
4. Dunnison Bros., b s (4) Hotspur, by Joe Daniels, dam Sister to Jim Douglas.
5. Captain A. B. Anderson, ch s (4) Four Aces, by Hock-Hocking, dam Maid o' the Mist.
6. Elmwood Stable, b g (5) Nabeau, by Nathan Coombs, dam Beauty by imp. Hercules.
7. Elmwood Stable, bl g (a) Index, by Thad Stevens, dam Gypsy.
8. W. L. Appleby, b g (4) Wild Oats, by Wildidle, dam Mary Givens by Owen Dale.
9. W. L. Appleby, ch m (5) Carmen, by Wildidle, dam Nettie Brown.
10. Matt. Storn, ch m (4) Lurline, by Longfield, dam Katy Pease by Planet.

No. 30.—Running—Free purse, $300, of which $50 to second; for all ages. Horses that have started at this meeting and beaten once, allowed five pounds; twice, seven pounds; three times, ten pounds. To name and close at 6 P. M. the day before. One and one-sixteenth miles.

Ninth Day—Saturday, September 20th.

No. 31.—Trotting—Trotting purse, $1500; 2:20 class.

1. Palo Alto Stock Farm, b g Express, by Electioneer, dam Esther by Express.
2. The Agnew Stock Farm, b m Emma Temple by Jackson Temple, dam Emigrant.
3. San Mateo Stock Farm, ch m Hazel Wilkes by Guy Wilkes, dam Blanche by Arthurton.
4. G. A. Doherty, br s Victor by Echo, dam by Woodburn.

No. 32.—Trotting—Trotting purse, $1000; 2:35 class.

1. Palo Alto Stock Farm, bl m Ladywell, by Electioneer, dam Lady Lowell by Schultz's St. Clair.
2. L. H. Boogs, b s Keepsake, by Black Ralph, dam Bent B.
3. T. E. Keating, ch g Frank M. by Priam, dam by General Bena.
4. Thomas Smith, b s Mambrino Chief Jr., by McDonald Chief, dam Venus by Mamb. Patchen.
5. D. M. Reavis, bl m Mattie Solomon, by Director, dam Maria Solomon by Blackbird.
6. Walter Scott, b g Iran, by Anteeo, dam by Captain Webster.
7. T. C. Snider, b m Vidette, by Dave Hill Jr., dam ur known.
8. De Turk & McGraw, blk s Silas Skinner, by Alcona Jr., dam Fontana by Almont.
9. H. I. Thornton, b s James Madison, by Anteeo, dam Lucy Patchen.
10. J. Hastings, gr m Clara Z., by Capri, dam by A. W. Richmond.
11. E. B. Gifford, b s Bob Mason, by Echo, dam Bell Mason.
12. San Mateo Stock Farm, b m Una Wilkes, by Guy Wilkes, dam Blanche by Arthurton.
13. George Hearst, ch s Clearmont by McGinnis, dam Carrie C.
14. J. C. Moran, b g Ed. Fay, by Christian Patchen, dam by Whipple's Hambletonian.
15. P. Brandow, blk m Foxy V., by Meredith, dam Black Bess.

No. 33.—Four-year-old stake, $100 entrance, of which $25 must accompany nomination; $25 payable July 1st, and remaining $50 payable Aug. 10, 1890; $400 added by the society. Closed March 15th with six nominations.

The following have made second payment:

1. San Mateo Stock Farm, br m Lillian Wilkes, by Guy Wilkes, dam Flora Langford by Langford.
2. Pleasanton Stock Farm Co., b m Margaret S., by Director, dam May Day by Cassius M. Clay, Jr.
3. Palo Alto Stock Farm, blk f Ladywell, by Electioneer, dam Lady Lowell by Schultz's St. Clair.
4. Palo Alto Stock Farm, b f Ariana, by Ariana, by Ansel, dam Rebecca by General Benton.

No. 34.—Three-year-old stake—$100 entrance, of which $25 must accompany nomination; $25 payable July 1st, and remaining $50 payable Aug. 10, 1890; $400 added by the society. Closed March 15th, with six nominations.

The following have made second payment:

1. San Mateo Stock Farm, b c Regal Wilkes, by Guy Wilkes, dam Margaret by Sultan.
2. San Mateo Stock Farm, b f Millie Wilkes, by Guy Wilkes, dam Rosetta by The Moor.
3. Palo Alto Stock Farm, br f Alzira, by Ansel, dam American Girl by Toronto Sontag.

California's Stallions.

I beg to announce that, with a view of perpetuating the forms and characteristics of the leading stallions of California, I am issuing a series of lithographic likenesses. Each portrait issued will be an acknowledged likeness, the result of a close study of the horse and an artistic treatment of the subject. In order to secure for the series an immense advertising value, from a breeder's point of view, 4000 copies, at least, of each portrait will be issued.

Terms, $100 for first issue of 100 copies. In quantity, for advertising purposes, copies will be furnished at low rates.

H. BOYD, Artist.

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Should this paper be received by any subscriber who does not want it, *or beyond the time he intends to pay for it*, let him not fail to write us *direct* to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

ROAD CARTS in great variety, also our $35 Phaeton Body Cart. Write for Circulars, Frank Brothers, San Francisco.

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Opens September 12, 1890.

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"ECLIPSE" TRACTION ENGINE,

Manufactured by the "FRICK" CO., WAYNESBORO, PA.

New and in Perfect Condition.

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Thirtieth Annual Exhibition

Under the management of the Oregon State Board of Agriculture, will be held on the State Fair grounds near Salem, commencing on

MONDAY, SEPTEMBER 15, 1890,

And Lasting One Week.

OVER $15,000.00

CASH PREMIUMS

Offered for Agricultural, Stock and Mechanical Exhibits, for Works of Art and Fancy Work, and for Trials of Speed.

Reduced rates for fare and freight on all transportation lines to and from the fair. Important improvements have been made upon the grounds and increased facilities are offered exhibitors.

The Pavilion will be open four nights during the week.

A splendid field of horses entered in the speed department, and fine exhibitions of racing will be given each day.

Entries for premiums close Monday at 7:30 P. M. Exhibitors are urged to make as many of their entries on Saturday before the fair as possible. Goods, animals and articles for exhibition must be in their places by 10 P. M. on Monday.

PRICES OF ADMISSION:

Man's Day Ticket	50c
Woman's Day Ticket	25c
Man's Season Ticket	$2 50
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Send to the Secretary at Portland, Oregon, for a premium list.

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Including list of SECOND-HAND GUNS and other articles that have accumulated.

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California Inventors Should consult DEWEY & CO. AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and large practice as Patent attorneys enables them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 340 Market St., San Francisco. Elevator, 19 Front St.

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FARMER'S VINEYARD CART.

Side-boards can be taken off. Wheels high. Tires wide. Strong, serviceable and extremely low in price. Tires 3 to 4 inches wide. Hollow iron axles and solid iron axles. Especially adapted to vineyard and farm work, *with wide tires, narrow track.* Light, strong, and made of the best material. Measures 4 feet 6 inches from point of hub to point of hub, which enables it to be used in any place on a vineyard or farm where an ordinary cart or wagon cannot; and the side-boards being high, it carries a larger load than a cart. Write for prices.

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Warehouse, Nos. 122 to 128 Michigan St., Nos. 45 to 53 La Salle Avenue.

Commissions one cent per pound, which includes all charges after wool is received in store until sold. Sacks furnished free to shippers. Cash advances arranged for when desired. Write for circulars. Information furnished promptly by mail or telegraph when desired.

A Great Sale of Holsteins and Standard Bred Horses.

We call attention to the sale of Mr. J. H. White of Lakeville, to be held in this city on September 4th, consisting of his entire herd of thoroughbred Holsteins and a number of standard-bred horses.

The herd of Holsteins was made up from a noted herd imported from the north of Holland, in 1884, the animals being selected by Theodore Koch from such noted strains as the Jacobus, Leegwater, Pieter and Simon herds. The head of his herd, Oro Blanco, was bred by C. Rus, Haarlemmermeer, North Holland. A good cut of him appeared in the RURAL PRESS of December, 1888, as also two of his noted cows—Winfridala No. 8032 (Holstein Herd-Book), who has been a famous prize-winner, and Annemie No. 8026 (Holstein Herd-Book), bred by P. Koppes, Haarlemmermeer, North Holland. Mr. White's cattle are registered and have been pronounced by experts among the best on the Pacific Coast. This sale will give our breeders a good opportunity to procure some of the most noted cattle and horses in this State.

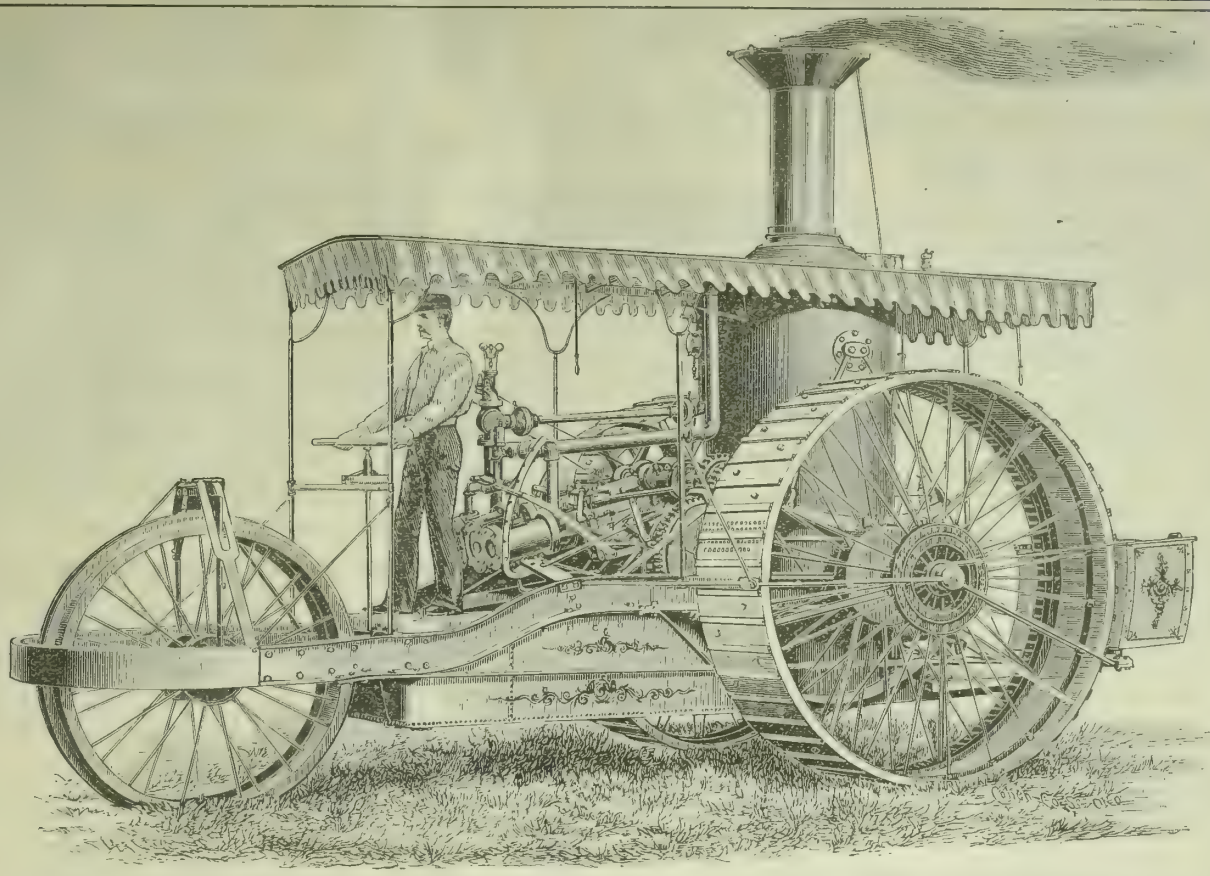
CITY FLOWER THIEVES.—The Board of Directors of the State Floral Society have presented a communication to Chief of Police Crowley, calling attention to the stealing of plants, shrubbery and flowers from private grounds and the various cemeteries, and asking that he instruct the officers of the department to exercise as much vigilance over this kind of thievery as over other classes of crime.

Stockton Combined Harvester and Agricultural Works.

An important industry for Stockton during the last 18 months has grown into large proportions, and is a feature of no little interest to our State. The increased demand for street cars, and especially for cable and electric street cars, induced this company during the interim of manufacturing agricultural machinery and implements to build a small number of street cars for local use. These cars were in merit, durability, lightness of draft and attractive appearance much superior to any that had been in use in this section, and soon brought orders from adjacent cities for duplicates. This business has steadily grown in volume until it has become a leading branch of this great plant. The superintendent, Mr. Elliott, made this department an especial study, and it is but a proper tribute to his skill and handiwork to say that he has brought out a car that has been pronounced by experts the best street railroad car on the Pacific Coast, if not the best in the United States.

A RURAL reporter visited these works last week and saw the foundation-work for 25—mostly electric street cars—and was informed by Mr. Elliott that there were orders on their books for 60 more. The destination of these cars is largely for Oregon and Washington, with some few for the southern portion of our State.

Mr. M. Laufenburg, a very skillful and experienced inventor, has designed and built a new combined harvester that is claimed to have lightness of draft and other qualities which adapt it to the wants of small farmers and those who desire only to harvest their own crops. A cut and full description of this new harvester will appear in our columns.



JACOB PRICE'S FIELD LOCOMOTIVE—EXACT REPRODUCTION FROM PHOTOGRAPH.

Jacob Price's New Field Locomotive.

[Patented Jan. 14th, 1890.]

A full-page advertisement appeared in last week's RURAL in the form of a communication from D. L. Remington, accompanied by a cut of his traction engine. In Mr. Remington's article he takes Mr. Price to task for failing to give him (Remington) proper credit for what he has done for steam plowing, in an article relative to Price's machine published in an Eastern trade paper a few weeks ago.

We know nothing of the merits of the controversy between these two gentlemen, but it would seem that Mr. Remington could hardly expect Mr. Price to advertise a competitor.

However, be these things as they may, the RURAL, in pursuance of its usual custom in illustrating and describing new inventions, presents on this page an excellent picture of Mr. Price's new machine, which can be seen any time between now and September 10th, plowing near San Leandro, California, in a firm, dry soil, with twelve 11-inch plows (four gangs of three plows each).

It is said to walk along with them with the utmost ease as fast as a man can walk, and appears to be capable of hauling as many more.

The cut shows its construction so clearly that little is left for the written

DESCRIPTION.

It is of about 100 horse-power—as horse-power is commonly figured—or, to express it in another manner, it will pull as much as 40 or 50 horses, besides propelling itself. Its weight is only 8½ tons. The carrying wheels are about 8 feet high and 26 inches wide. The steering wheel is 5 feet high and 14 inches wide. The boiler is an enlarged fire-engine boiler of the most approved type and is made strong enough to carry 200 pounds working pressure with safety. Its *fire* surface is 200 feet and its other heating surface (flues) 200 more, making a total heating surface of 400 feet. The main gears *are steel rollers working on oiled steel pins*, and the remainder are made from metal patterns cut by the celebrated gear-makers, Brown & Sharp, of Providence, Rhode Island. The entire machine is mounted on long, easy, elliptic springs, in a manner that utterly obviates any interference with the working of the gears, a result, according to Mr. Price, never accomplished before. The machine has twin engines, piston valves and link motion. It is adapted for plowing, running combined harvesters, freighting with wagons, hauling saw logs, or pulling of almost any kind, and is suitable for any stationary work such as running threshing machines, sawmills, etc. It is made in two sizes, the larger one being as shown and described above, and the smaller of about half its weight and power. Its appearance, as is evident from the cut, is much in its favor, being very compact and neat as well as convenient in the matter of throttle and reversing levers and steering gear. It is almost wholly of forged steel, and was made at the works of the J. I. Case Threshing Machine Company, Racine, Wisconsin, by Jacob Price of San Leandro, California, and also of Racine, Wisconsin.

Large, illustrated circulars, giving prices and full particulars, may be had by addressing Mr. Price at San Leandro.

J. M. WELSH, President. M. D. BAKER, Secretary.

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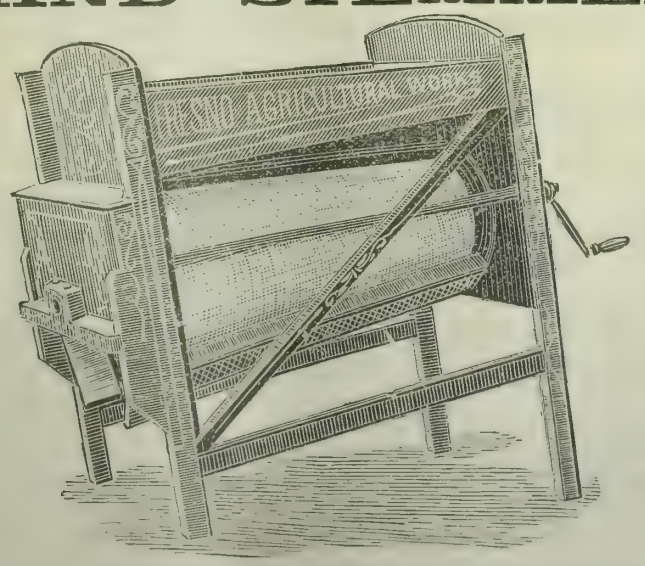
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GREAT REDUCTION IN PRICES TO CLOSE BUSINESS!

We now offer our Entire Stock of

Carriages, Buggies, Phaetons, 4-Spring Wagons, Carts, Harness and Lap Robes.

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Real Estate Directory.

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Railroad Track Scales.



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HENRY HAMILTON, Westley, Cal., breeder of Kentucky Jacks and Jennies, Draft Horses and Holstein Cattle. Jacks, Horses and Mules for sale.

JERSEY BULL No. 468 P. C. J. C. C. for sale cheap. A fine four-year-old animal. Address Dellwood Poultry Yards, Napa, Cal.

IMPORTED REGISTERED CLYDESDALE Horses and Holstein-Friesian Cattle from the most noted families. H. P. Mohr, Mt. Eden, Alameda Co., Cal. Visitors welcome. Correspondence solicited.

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JOHN LYNCH, Petaluma, breeder of thoroughbred Shorthorns. Young stock for sale.

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CHAS. R. HARKER, Santa Clara, Calif. White Plymouth Rocks, exclusively. None better anywhere, East or West. If you want the latest and best improvement in poultry, get *genuine* White Plymouth Rocks. Write for prices. Eggs, $3 per 13; packed to go safely any distance.

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E. W. WOOLSEY & SON, Fulton, Cal., importers & breeders Spanish Merino Sheep; ewes & rams for sale.

ANDREW SMITH, Redwood City, Cal.; see adv't.

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JOSEPH MELVIN, Davisville, Cal., Breeder of Poland-China Hogs.

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TYLER BEACH, San Jose, Cal., breeder of thoroughbred Berkshire and Essex Hogs.

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Short Horn Cattle and Draft Horses.

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Standard and High-Bred Trotting Horses

— AND —

THOROUGHBRED HOLSTEIN CATTLE.

Property of J. H. WHITE, Esq., Lakeville, Sonoma County, Cal.

On Thursday and Friday, September 4th & 5th, 1890.

At RAILROAD STABLES, Cor. Turk and Steiner Sts., San Francisco.

On account of a contemplated change in business, we are authorized by Mr. White to dispose of all the high-bred stock upon his noted breeding farm at Lakeville, Sonoma County. This comprises over forty head of high-bred Trotting Stallions, Brood Mares, Colts and Fillies, most of them standard and all exceptionally fine individuals. They consist of the get of Stallions by Electioneer, Director, Antevolo and other noted horses. Most of the brood mares are with foal by Hernani, one of Electioneer's most prominent sons. Several have been bred to Director. Taken collectively they are, in size and form, the finest looking lot of trotters yet offered in California, and their breeding is upon the most approved speed lines.

The Cattle comprise over one hundred head of thoroughbred registered Holstein Cattle. The progenitors of this herd were selected of the choicest strains upon the famous breeding establishments East, and have been judiciously crossed with a view to develop to the fullest extent the milking strains. Mr. White has expended a large sum of money and great care in perfecting this band of cattle, and can justly claim it as one of the superior herds of the United States.

Catalogues are being prepared and will be sent on application only. Horses and cattle may be seen at ranch, six miles from Petaluma.

KILLIP & CO., Auctioneers, 22 Montgomery St., San Francisco.

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HOLSTEIN-FRIESIAN CATTLE

At SACRAMENTO, September 13, 1890.

By order of **FRANK H. BURKE of Menlo Park** we will sell, without reserve, Bulls, Cows and Heifers. Included in this sale will be all of the celebrated PRIZE-WINNING ANIMALS, and the winners of Sweepstakes and Gold Medals during the past year, about 30 head in all.

These animals are ALL THOROUGHBRED AND REGISTERED and from the choicest families, including the AAGGIES, NETHERLANDS, JACOBS, MENLOS and TWISKS. It is the only offering ever made on this Coast of these extra fine butter and milk tribes.

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BREEDER AND RAISER OF THOROUGHBRED

Jersey and Holstein Cattle. Also, Poland China and Berkshire Pigs.

Address, WILLIAM NILES, Los Angeles, Cal.



Little's Chemical Fluid Non-Poisonous SHEEP DIP.



One gallon, mixed with 60 gallons of cold water, will dip thoroughly 180 sheep, at a cost of one cent each. Easily applied; a nourisher of wool; a certain cure for SCAB. Also

Little's Patent Powder Dip.

(POISONOUS.)

Mixes instantly with water. Prevents the fly from striking. In a two-pound package there is sufficient to dip 20 sheep, and in a seven-pound package there is sufficient to dip 100 sheep.

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—IMPORTERS AND BREEDERS OF—

Red Polled Cattle.

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Young Bulls and Crossbreds on Devons for sale.



H. MECHAM,

Importer and Breeder of Shropshire Sheep

They were all imported from England in '88, or bred direct from Imported Stock, and all registered.



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—BREEDER OF—

American Merino Sheep Without Horns.

The only flock in the United States. When we bought our sheep East 20 years ago, among them was a ram without horns. He grew to be a large fine sheep, shearing at 2 years old, a 12 months' fleece, 35 lbs. of long white wool.



I have bred from him and his get ever since and have never made an out-cross and never used the same ram but one year on the same flock. My rams at 2 years old will weigh from 160 to 180 lbs.; have a strong constitution, without wrinkles, and will shear on an average about 25 lbs., a 12 months' fleece, of long white wool. Rams and Ewes for sale. **P. O. Address:**

Stony Point, Sonoma Co., Cal.

R. R. Station, Petaluma.

SALE OF

Pure-Bred Shorthorn Cattle.

A sale will be held under the management of the

PACIFIC COAST

Shorthorn Breeders' Association

—AT—

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—ON—

FRIDAY, SEPTEMBER 19, 1890.

Sale to begin at 1 o'clock P. M.

This Society is composed of the best Breeders of Shorthorns of the Pacific Coast and is organized upon a permanent basis Nothing but Pure-Bred Registered Cattle will be offered for sale.

Catalogues can be had by addressing J. F. CHILES, Secretary, Davisville, Cal.

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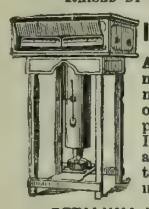
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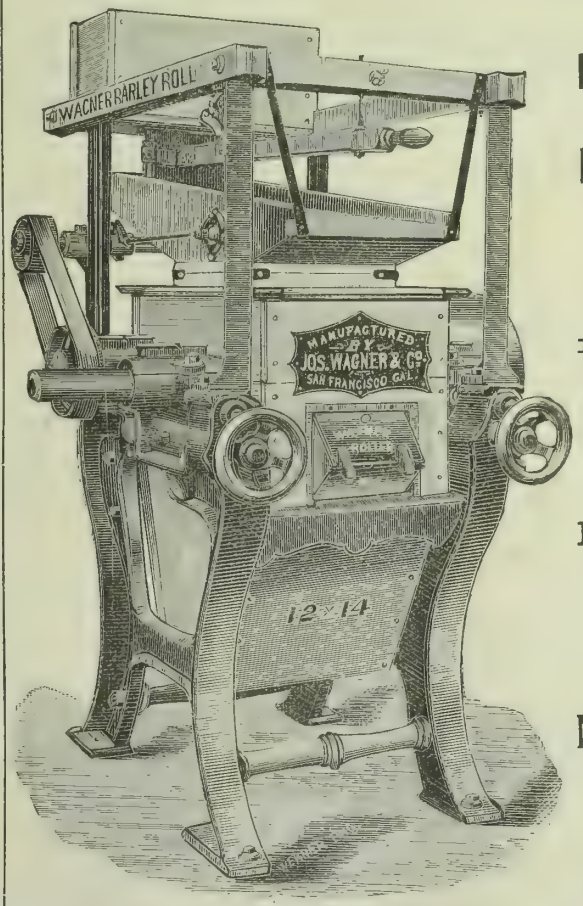
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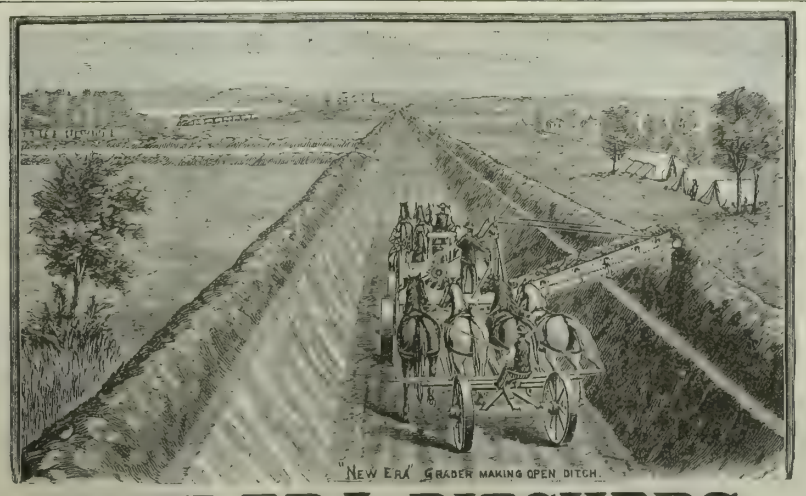


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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Aug. 20, 1890.

General trade in farm products has been fairly active at good prices. Fruits have held firm, while hay, hops, wheat and barley have advanced. The Eastern and European markets for wheat show quite an appreciation in values. The following is to-day's cablegram:

LIVERPOOL, Aug. 20.—Wheat — Moderate demand, California spot lots, 7s 2½d to 7s 6d; cargoes off coast, 38s 9d; just shipped, 38s 6d; nearly due, 38s 9d; cargoes off coast, improving; on passage, firm; Mark Lane wheat, firmer; wheat and flour in Paris, turn dearer; weather in England, fine after rain.

Foreign Grain Review.

LONDON, Aug. 18.—The *Mark Lane Express*, in its review of the British grain trade during the past week, says: Harvest is making active progress. The wheat crop varies greatly, according to localities. The crop is full in heaviest growing counties. New wheat shown in London and provincial markets samples well. Supplies of old are almost exhausted. So low are farmers' reserves that the total supply of old corn in the country, whether as wheat or flour, does not exceed 4,000,000 quarters. Foreign wheats are hardening, and prices show an average advance of 6d. Flour firm. Corn strong on advices concerning American crop, combined with cable dispatches from Buenos Ayres, stating that supplies there are exhausted. To-day the market closed decidedly dearer.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday	7s6½d	7s5½d	7s5½d	7s5d	7s8d
Friday	7s6½d	7s6½d	7s6½d	7s5½d	7s7½d
Saturday	7s5½d	7s6d	7s6½d	7s5½d	7s8½d
Monday	7s6½d	7s6½d	7s6½d	7s5d	7s8½d
Tuesday	7s6d	7s6½d	7s6½d	7s5d	7s8½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	38s3d	38 6d	38s6d	Firmer.
Friday	38s6d	38s6d	38s6d	Strong.
Saturday	38s6d	38s6d	38s6d	Strong.
Monday	38s6d	38s6d	38s6d	Firmer.
Tuesday	38s9d	38s6d	38s9d	Strong.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York for the past week:

Day.	Aug.	Sept.	Oct.	Nov.	Dec.	May.
Thursday	103⅝	104	104⅜	104⅝	105⅝	...
Friday	104⅛	105½	106⅜	106⅝	106⅞	...
Saturday	106⅜	107½	107⅞	108⅛	109½	...
Monday	106⅛	107	107⅝	108⅛	109	114
Tuesday	109⅜	110½	111⅜	111⅝	112½	115⅝

The closing prices for wheat have been as follows at Chicago for the past week:

Day.	Aug.	Sept.	Dec.	May.
Thursday	98¾	100	105⅞	107⅞
Friday	100⅝	101⅝	104⅝	108⅝
Saturday	102	103⅛	106⅛	110
Monday	101	102	105¼	109⅛
Tuesday	105	105½	109⅜	113⅜

CHICAGO, Aug. 20. — Wheat — $1.04½ for August, $1.05 for September, $1.08¾ for December and $1.13 for May.

NEW YORK, Aug. 20.—Wheat—$1.11⅛ for cash, $1.09⅞ for September, $1.12⅜ for December and $1.16¼ for May.

Hops.

NEW YORK, Aug. 17.—Hops closed with a strong market, helped by the English crop estimates. Choice on spot is firm, 20@25c; other useful old, 10@15c; poorest, 5@7½c; 200 Washington, contracted for at 27½c, landed here.

CHICAGO, Aug. 17.—Hops are held firmly on account of the strength prevailing elsewhere. There is said to be a very fair demand, with good prospects for continuing. Brewers are only sparingly supplied, and are in a position which obliges them to remain on the market as buyers. Sales are at the following figures: Washington and Oregon prime, 23@24c; do. low grades, 18@22c; California choice, 23c; do. prime, 20@21c.

The *Mark Lane Gazette*, July 28th, reports as follows: From a personal inspection of the principal hop districts of England, we should estimate the coming crop to yield, with everything in its favor from to-day, 300,000 cwt., and it may, with adverse weather, fall very far short of this. England's consumption is now 700,000 cwt. of hops per annum. It will not be possible to import our deficiency. Every cwt. of old hops will be wanted to keep the brewers going until the 1891 crop is secured. To-day there has been a demand for them; they are very good and selling at ridiculously low prices. Eighteen hundred and eighty-nine hops have a further rise to-day; the lowest are now making five pounds and the finest eight pounds. The position of the market is now much more serious than it was at this time in 1882, and October may see much higher prices than ruled then.

Eastern Wool Markets

PHILADELPHIA, Aug. 15.—Wool is nominal.

BOSTON, Aug. 15.—Wool is steady. The largest transactions were in Territorial and Texas at 16@24c, or on a scoured basis of 57@60c.

NEW YORK, Aug. 15.—*Bradstreet's* says: The wool markets are unchanged and uninteresting. Enough material is going into consumption to hold prices steady, but too little to present any appearance of activity. There is a general disposition on the part of buyers and sellers alike to await developments with respect to the pending tariff legislation. In the Boston market fine fleeces are quiet, the bulk of the week's business having been done in Territory and Texas wool. Fewer worsted manufacturers than a week ago have been on hand. At Philadelphia the inquiry for fleece wool is rather better. In the New York market, and indeed elsewhere, quotations are in great measure nominal. The fall clip in California, it is reported, will be unusually small, partly because of large losses of sheep last winter and partly by reason of increased demand for mutton.

Fruit Prospect.

SPRINGFIELD, Mass., Aug. 14.—The *New England Homestead* says: Apples will be scarcer and more costly this season than for many years. There is but half a crop of winter fruit in the famous Annapolis valley, Nova Scotia, and still greater reductions in the apple belt of Southern and Western Ontario and Michigan. In Maine and limited sections of Vermont and New Hampshire there is a fair yield. Throughout Southern New England, New York, Pennsylvania, New Jersey and the interior States generally the promise of winter fruit is worse than ever before known. The great apple belt of Western New York has almost no crop whatever. Curiously enough, there is an area in Missouri and Kansas within a radius of 100 miles of Kansas City in which there is a phenomenal crop of winter apples of fine quality. Eastern buyers are already gobbling it up at good prices. Summer and fall apples are also short and command good prices. Peaches are a practical failure in Southern Ontario and Michigan, as well as in the Southern States and Connecticut. Pears and plums yield unevenly, but far below the average crop. Grapes, however, are an immense crop, save in sections of New Jersey and the South, where the black rot is playing havoc with this fruit. The scarcity of other fruits will sustain the market for grapes.

The *Homestead's* preliminary report of the potato crop indicates a disastrous shortage in the South and West, curtailed in New York, and a fair average in New England, if spared by the rot, which is now making its appearance.

WASHINGTON, Aug. 18.—The August crop bulletin, just issued, says: The prospect for both apples and peaches is poorer than it was one month ago. The intimation in previous reports that the condition in New England and along our northern territory, returned high in the early reports, would decline as the season advanced, has been proven correct. The decline in those sections has been heavy, although their prospect is slightly better than that of the adjoining States. The causes which have operated to bring about the present low prospect have been noted in previous reports—unfavorable weather during the winter and spring and the frosts of March. The present returns show that the results of the cold weather are still apparent in the blasting and dropping of immature fruit. The Pacific Coast alone reports a medium prospect, California standing at 78, Oregon at 83 and Washington at 90. The peaches on the slope are in poorer condition than the apples, the California average being but 65. As compared with other fruit, the condition of grapes is comparatively light, especially so on the Pacific Coast. In the States on the Atlantic Coast the present prospects point to a crop of medium proportions, though the conditions vary locally in some of the States.

Local Markets.

BARLEY.

	Buyer Season. H.	L.	Seller 1890. H.	L.	Buyer 1890. H.	L.
Thursday	137	136	125½	124½	130½	130
Friday	136½	136½	...	...	130½	129½
Saturday	138½	138½	...	...	132	132
Monday	139	138½	...	...	134½	133
Tuesday	141½	140½	130	129¾	136½	135

WHEAT.

		S. S.	Nov.	B. '90.	B S.	S. '90.
Thursday	h.	....	....	145½	154½	....
	l.	....	....	144¾	154	....
Friday	h.	....	....	145½	154	....
	l.	....	....	144¾	153¾	....
Saturday	h.	....	....	146½	155½	....
	l.	....	....	146½	155	....
Monday	h.	....	....	145¾	154½	....
	l.	....	....	144¾	153½	....
Tuesday	h.	....	....	146½	155¾	....
	l.	....	....	145¾	155	....

BAGS—The market is strong at another advance. Calcuttas standard-sized are quoted at 8c. The higher price of silver is in favor of holders.

BARLEY—The market has been quite active at steadily advancing prices. In futures, trading has been fair. The bear contingency has been so badly crippled that they do not venture to sell much short; the principal sellers are the bulls, having a profit in sight. The following are to-day's reported sales:

Morning Session: Buyer 1890 — 100 tons, $1.37½; 200, $1.37¾; 300, $1.37½; 200, $1.36⅞; 100, $1.37; 100, $1.36⅝; 200, $1.36½. Buyer season—200 tons, $1.41¼; 400, $1.41⅜; 600, $1.41½; 200, $1.41 ₩ ctl. May—100 tons, $1.35 ₩ ctl. Afternoon Session: Buyer 1890—100 tons, $1.37; 500, $1.36¾; 100, $1.36½. Buyer season—100 tons, $1.40½; 100, $1.40⅜; 300, $1.40¾ ₩ ctl.

BUTTER—The market is barely steady under freer receipts and more attention given to pickled. The latter is in heavy supply.

CHEESE—The market appears to have a steadier tone under a slightly increased demand.

EGGS—The market is strong and higher. About all the surplus held in cold storage has gone into consumption.

FLOUR—The market is strong, but not quotable higher.

WHEAT—The sample market continues strong, with buyers paying in the country an advance on city quotations. Charters are higher, 47s. 6d. being bid for a handy-sized iron vessel. The advance in silver, now $1.20 an ounce against 92¼c on August 20, 1889, is in favor of holders of wheat. In futures, trading has been fair. Frosts at the East, wet weather in England and high price of silver make the bears cautious. The following are to-day's reported sales on Call:

Morning Session: Buyer 1890—200 tons, $1.46½; 900, $1.46¾; 100, $1.45⅞; 100, $1.45¾. Afternoon Session: Buyer 1890—100 tons, $1.45¾; 100, $1.45⅞; 400, $1.45½; 1500, $1.45⅝. Buyer season—500 tons, $1.54½; 100, $1.54¾ ₩ ctl.

[COMMUNICATED.]

Market Information.

Cereals.

The *Mark Lane Express*, Aug. 4, in reporting the meeting of the National Association of Millers, says that James W. Rush read a paper on "The World's Wheat Crop and Wheat Values." In the course of his remarks he said that in the United States the population was estimated to exceed 65,000,000, and the requirements of wheat amounted to 375,000,000 bushels, while the average production in the ten years since 1880 did not exceed 442,000,000 bushels, the production in the present year being only about 430,000,000 bushels. It was notorious that our requirements in this country were much larger, while the acreage under wheat was much smaller than in 1880. France, Germany, Belgium and Holland had stood practically still in the matter of wheat production, while in Spain and Italy the increase in the home requirements had largely exceeded that in the home production of wheat. But in Russia, Roumania, Austria and Hungary there had been a decided increase in the production of wheat. He was of opinion that America was approaching the time when she must considerably increase her wheat acreage or fall out of the ranks of wheat-exporting countries. The ensuing season was not going to be one of undue abundance, nor of any serious scarcity as far as wheat was concerned.

The talk is that the United States corn crop will probably be short 1,600,000 bushels, owing to the amount of ground abandoned. In the short crop of 1887 there were 5,000,000 acres of corn so badly damaged that it was left ungathered, and the estimate is that there will be 4,000,000 acres abandoned this year. Norton & Worthington of Chicago say of the position: "It is a question if at the advanced prices for both corn and oats the deficiency in supplies has not been fully discounted. In this connection we will remind our friends that the crop of 1887 was 1,456,000,000 bushels after a crop of 1,665,000,000 bushels in 1886; and the price of corn here ranged 54c to 60c during May, 1888; 46¼c to 35⅝c during June; 45⅜c to 50½c during July."

The wheat crop indicated this year by the State reports so far received compared with the Government report of last year as follows:

Wheat.	1890.	1889.
Indiana	26,700,000	41,187,000
Ohio	27,700,000	36,865,000
Kentucky	3,500,000	10,812,000
Kansas	28,000,000	30,942,000
Illinois	14,500,000	38,014,000
Totals	95,000,000	157,790,000

In spring wheat the Minneapolis *Market Record's* estimate gives the crop of Dakota and Minnesota 90,000,000 bushels, against 87,000,000 last year.

The wheat market has ruled fairly strong throughout the week, although an attempt was made to break prices but without success, owing to holders' firm views. The light tonnage here is used by buyers against the market for immediate delivery. Speculators and exporters are taking all the choice parcels offering, paying in the interior a slight advance on city quotations. The advance in silver will tell largely in favor of wheat, owing to the higher cost of Indian and Russian wheat delivered in England, France and Germany.

Barley has held strong at slightly higher prices. Receipts have been large, but not in excess of the demand, which keeps stocks well in hand. The prevailing opinion is that still higher ranges will obtain. This opinion is grounded upon the small crop and large demand.

Notwithstanding receipts have been free, the market holds strong. Much of the strength is due to the light crop in the Central States and the well-grounded belief that prices will rule higher in 1891.

Rye moves slightly freer at full quotations. Some holders ask an advance on quotations.

Feedstuff.

Ground feed, bran, middlings and ground barley are higher with the market strong. The demand is good. Feedmeal is firm.

Receipts of hay are large, but stocks light, owing to a good shipping and home demand. The yield in this State is not up to the average, and as the consumption is large, the market, it is claimed, will rule strong throughout the season. The yield in Oregon and Nevada is said to show quite an increase over last year.

Fruits.

Under heavy receipts and forced sales, owing to many overripe fruits coming in, the market for pears and peaches broke, and remained low up to Monday, when an improvement set in, resulting in better prices at the close. Canners are again in the market, having worked up their surplus. At the close, canning plums, gages, peaches and pears are quite strong.

Nectarines and figs are in lighter receipt, but no higher.

Table grapes show more strength, with the more choice fetching an advance. The quality is improving. There is a good home and shipping demand. For wine grapes correct quotations in this city are hard to get. Interior prices are unchanged.

For dried fruits the market is essentially unchanged, except for apples, which show more strength, owing to unfavorable crop reports received from the East. As near as we can learn, orchardists are free sellers, not caring to hold too long. For fruits in sacks the following is the range, with something extra going a shade above our outside quotations: Evaporated apples, 11½@13c ₩ lb.; sliced, 8@9c; quartered, 7½@8c; pitted plums, 7½@9½c ₩ lb.; evaporated peaches, 18@20c; bleached apricots, sacks, 13@16½c; boxes, 16½@18c; white nectarines, 14@16c; red nectarines, 12½@13½c; prunes, 7½@10¾c; grapes, 3½@4c ₩ lb.

Buyers are trying to get lower prices on raisins, but so far without success. The market for well-known brands is reported firm. It is claimed that the shipments by sea will show a large increase, while the East will call for more. For September-October delivery, buyers quote layers at $2@2.25, according to brand, with some quoted even lower. Loose Muscatels are quoted at from $1.75@2, with still lower figures named for common to fair. In the sweat, 5@6c is quoted.

Vegetables.

In garden truck the market does not show any material change.

Onions, under light receipts and a good demand, have advanced, closing strong. Since Jan. 1, 1890, the overland shipments aggregate 132 tons.

Notwithstanding the heavy receipts, potatoes have strengthened, closing very strong under a good demand. The overland shipments since Jan. 1st aggregate 2494 tons. Of this, 1320 tons were shipped from Los Angeles.

The shipments of vegetables overland aggregate 1657 tons since Jan. 1, 1890.

Live-stock.

Bullocks and mutton sheep are offering free, causing a weak market. The stock in Arizona and Nevada is in most excellent condition. Many cattlemen are driving their stock to Nevada, owing to the good pasturage in that State. Hogs are steady at full prices. In milch cows there is nothing new to report. Common to fair work horses are offering quite freely. General utility horses and matched teams are inquired for.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4¾@4¾c ₩ lb; dressed, 7¼@8½c ₩ lb.; heavy, 3⅞@4¼c ₩ lb.; dressed, 5¾@6¼c ₩ lb. Stock hogs, 4¼@4½c ₩ lb

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¼@5½c ₩ lb.; second quality 4¾@5c ₩ lb.; third quality, 4c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6@8c ₩ lb.; large, 4@6c.

MUTTON—Wethers, 6½@7c ₩ lb.; ewes, 6@6½c ₩ lb.; lamb, spring, 7@8c.

Miscellaneous.

From the *Commercial News* of Aug. 20th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	288,350	237,800
On the way to neighboring ports	21,250	20,500
In port, disengaged	5 215	17,325
In port, engaged for wheat	37.454	59.238
Totals	352,269	344,863

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Aug. 13, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	1,045.439	1,162,753
Flour, bbls	136,514	158,142
Barley	35,106	127,286

Poultry has held strong throughout the week. Receipts overland are only fair.

For future delivery, nuts continue in good demand, with full prices secured quite readily.

Hops are in good demand at advancing prices. It is stated that 22½c was paid on yesterday for a choice article.

Wool is in fair demand at steady prices.

Hay products are firm, but no higher.

Honey continues barely steady. Receipts are lighter. The following are to-day's quotations: Choice white comb, 8@9c; do, in 1-lb. frames, 10@11c; ordinary comb, 7@7½c; white extracted, 5½@5¾c; amber, 4½@5c ₩ lb.

The overland shipments in last month aggregate as follows: Beans, 3315 ctls.; brandy, gals., 11,826; canned goods, 4,839,980 lbs.; dried fruits, 2,869,140 lbs.; deciduous fruits, 13,095,510 lbs.; citrus fruits, 98,750 lbs.; honey, 23,900 lbs.; wine, gals., 303,539; wool, lbs., grease, 1,777,810; pulled, 40,680; scoured, 342,190; potatoes, 28,887 ctls.; onions, 21,673 ctls.; hops, 80,370 lbs.; vegetables, 129,850 lbs.

The exports by sea in last month aggregated as follows: Flour, bbls., Central America, 2681; South America, 515; Mexico, 344; Panama, 300; Honolulu, 1039. Wheat, ctls., Cork, 175,587; Liverpool, 67,689. Corn, ctls., Central America, 1646; Honolulu, 150. Barley, ctls., Victoria, 281; Honolulu, 3797. Beans, lbs., New York, 23,758; Central America, 1037; Victoria, 2898; Apia, 2362; Honolulu, 20,857. Hay, bls., Honolulu, 1180. Brandy, gals., New York, 360. Wine, gals., New York, 76,556; Central America, 825; Honolulu, 6323. Potatoes, sks., Central America, 281; Mexico, 261; Honolulu, 1166. Hops, lbs., Victoria, 941; Honolulu, 204. Bran, sks., Honolulu, 1263. Onions, sks., Mexico, 135; Honolulu, 519. Oats, ctls., Honolulu, 519. Dried fruits, lbs., Victoria, 1375; Mexico, 624; Apia, 478; Honolulu, 2705.

Produce Receipts.

Receipts of produce at this port for the week ending Aug. 19th, were as follows:

Flour, qr. sks	53,192	Buckwheat, sks	....
Wheat, ctls	446,647	Middlings, sks	1,148
Barley, "	44,267	Alfalfa, "	....
Rye, "	2,121	Chicory, bbls	50
Oats, "	4,302	Broomcorn, bdls	216
Corn, "	3 743	Hops, bls	....
*Butter, "	1,036	Wool, "	1,148
do bxs	821	Hay, tons	3,416
do bbls	84	Straw, "	102
do kegs	178	Wine, gals	213,510
do ½ do	267	Brandy, "	970
†Cheese, ctls	767	Raisins, bxs	4
do bxs	19	Honey, cs	89
Eggs, doz	53,210	Walnuts, sks	11
do " Eastern.	45,600	Flaxseed, sks	....
Beans, ctls	8,212	Mustard, sks	386
Potatoes, sks	26,386	Almonds, sks	....
Onions, "	2,717	Peanuts, sks	16
Bran, sks	14,468	Popcorn sks	....

*Overland 99 ctls. †Overland 768 ctls.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Aug. 20, 1890.

Bananas, bunch	1 00	@ 2 50	do Malvoise		40 @	70
Cranberries	—	@ —	Green Gages lb		1@	2
Limes, Mex	5 50	@ 6 00	Watermelons	8 00	@12	00
Lemons, Cal., bx	3 50	@ 4 00	Cantaloupes crt	35	@ 1	00
do Sicily, bx	9 00	@10 50	Nutmeg melons	75	@	—
do Malaga	9 00	@10 00	Crabapples, box	60	@ 1	00
do do Seedling	4 50	@ 5 00	**VEGETABLES.**			
Pineapples, doz	3 00	@ 5 00	Okra, dry, lb		6 @	10
Strawberries			do green		4 @	6
fair, chest	4 25	@ 6 00	Parsnips, ctl	1 25	@ 1	50
Apricots, lb		2@@ 3½	Peppers, dry, lb		12 @	—
Raspberries	do. 10 00	@12 00	do green, bx		35 @	50
Blkberries, do	3 50	@ 5 00	do Bell		60 @	75
Huckleberries lb	9	@ 12½	Turnips, ctl		75 @ 1	00
Figs, box, black	75	@ 1 00	Beets, sk		75 @ 1	00
do white		75 @@ —	Cabbage, 100 lbs		60 @@	75
do Smyrna		— @@ —	Carrots, sk		50 @	60
Plums, lb		1½@ 2½	Mushrooms, Cultivated, lb		— @	—
Egg plums		1½@ 2½	Wild, lb		— @	—
Pears, bx		50 @ 1 00	Cucumbers box		25 @	45
do Bartlett lb		2 @ 3	Tomatoes, bx		75 @ 1	25
Peaches box		50 @ 75	Garden peas, lb		2 @	3
do choice		90 @ 1 00	Sweet do do		1½@	2
do canning, lb		2½@ 3½	String Beans		1 @	2
Apples com box		50 @ —	Lima do		2½@	3
do choice	1 00	@ —	Fountain do		1½@	2½
Nectarines, Red		75 @ 90	Squash, summer, bx		25 @	50
do White		60 @ —	Grapes, box		40 @	50
do Muscats		50 @ 1 00	Marrowfat, ton	20	@25	00
do Rose of Peru		50 @ 70	Garlic, lb		5 @	6
do Tokay		75 @ 1 25	Green corn doz		18 @	22½
do wine Zinfandel	14 00	@16 00	do do corn sk	1 00	@ 1	50
			Egg Plant, bx		50 @	75

Rope.

Baling, Duplex, lb	
" Manilla, lb	
Twine, for hops, balls, tarred, lb, Manilla	
" " grape vine, balls, lb	"
" " " coils, lb	"
" spring, lb	" 18
" binder (600 ft. to lb), lb	

Duplex twine 3c per lb less.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations; while very poor grades sell less than the lower

WEDNESDAY, Aug. 20, 1890.

BEANS AND PEAS.			
Bayo, ctl	2 60	@	3 00
Butter	2 10	@	2 30
Pea	2 60	@	2 80
Red	4 00	@	4 25
Pink	2 75	@	3 50
Large White	—	@	—
Small White	2 60	@	2 90
Lima	4 50	@	4 75
Fld Peas, blk eye	—	@	—
do green	—	@	—
do Niles	2 00	@	2 25
Split	6¼	@	—
BROOM CORN.			
Choice to Extra	75 00	@	85 00
Fair to Good	65 00	@	70 00
Poor	45 00	@	60 00
CHICORY.			
California	6	@	6½
German	6½	@	7
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair, ₱ lb	17¼	@	22½
do good to choice	23	@	25
do Giltedged	26	@	—
do pickled	17	@	20
do in kegs	14	@	16
do Creamery in rolls	27	@	—
Eastern do	19	@	20
do do, in tubs	17	@	18½
CHEESE.			
Cal. choice mild	10	@	11
do fair to good	8	@	9½
Young America	10	@	11
N. York Cream.	13	@	14½
Western	8	@	11
EGGS.			
Cal. ranch, doz.	30	@	—
do do sel'cted	32½	@	—
do, store	20	@	27½
Eastrn, old storage	—	@	—
do fresh	17½	@	25
do selected	27½	@	—
do to arrive	25	@	—
FEED.			
Bran, ton	16 00	@	19 00
Feedmeal	27 00	@	28 00
Gr'd Barley	27 50	@	29 00
Middlings	26 00	@	27 50
Oil Cake Meal	25 00	@	—
Manhattan Food Per 100 lbs	7 50	@	—
HAY.			
Compressed	11 00	@	15 00
Wheat, per ton	10 00	@	13 00
do choice	14 00	@	15 00
Wheat and Oat	10 00	@	14 00
Wild Oats	8 00	@	11 00
Tame do	8 00	@	10 00
Clover	8 00	@	10 00
do ch'ce red top	—	@	—
Barley	7 00	@	10 50
Barley and Oats	—	@	—
Alfalfa	—	@	—
Stock Hay	—	@	—
Alfalfa C'mpr'd	—	@	—
Straw bale	45	@	55
FLOUR.			
Extra, City Mills	4 25	@	4 50
do Co'try Mills	4 25	@	4 50
Superfine	3 25	@	4 00
GRAIN, ETC.			
Barley, feed, ctl	1 25	@	1 28½
do Choice	1 30	@	1 32½
do Brewing	1 32½	@	—
do do Choice	1 35	@	—
do do giltedg'd	1 40	@	—
Chevalier cuce	1 50	@	—
do com to good	1 30	@	1 40
Buckwheat	—	@	—
Corn, White	1 25	@	1 31½
Yellow	1 22½	@	1 30
Oats, milling	1 65	@	1 75
Surprise	1 70	@	1 75
Choice feed	1 60	@	1 65
do good	1 55	@	—
do fair	1 50	@	—
do Gray	1 45	@	—
do Black	1 30	@	1 40
Rye	1 30	@	1 50
Wheat, milling, Gilt edged	1 45	@	—
do Choice	1 42½	@	—
do fair to good	1 40	@	—
Shipping, cho'ce	1 40	@	—
do good	1 37½	@	—
do fair	1 35	@	—
Sonora	1 35	@	1 38½
HIDES.			
Dry Ight to h'vy	10	@	11
Salted	5	@	8½
HOPS.			
Oregon, 1890	19	@	23
Cal 1890 Choice	21	@	23
do Fair to G'd	19	@	—
ONIONS.			
Silver Skin	2 00	@	2 35
Pickling	75	@	85
NUTS—JOBBING.			
Walnuts, Cal. ₱ lb	9	@	10
do Ch'ce	11	@	12
Almonds, hd shl.	5	@	6½
Softshell	12	@	14
Paper shell	15	@	—
Brazil	11½	@	13
Pecans	9	@	14
Peanuts	6	@	8
Filberts	11½	@	12½
Hickory	6	@	9
Chestnuts	14	@	—
Pine nuts	7	@	8
POTATOES.			
Early Rose, sks.	80	@	90
Chile	80	@	90
Peerless	80	@	1 00
River Reds	—	@	—
Humboldt	—	@	—
Petaluma	—	@	—
Burbanks	75	@	25
Sweet	1½	@	2
POULTRY AND GAME.			
Hens, doz	5 50	@	8 00
Roosters, old	5 50	@	7 00
do young	7 00	@	8 00
Broilers, small	2 00	@	3 00
do large	3 50	@	4 00
Fryers	4 00	@	5 00
Ducks, tame	3 50	@	4 50
do young	4 50	@	5 50
Geese, pair	1 50	@	2 00
Gos'lings	1 50	@	1 75
Turkeys, Gobl'r.	20	@	23
Turkeys, Hens	16	@	19
Pigeons	2 50	@	3 00
Rabbits, doz	75	@	1 25
Hare	1 25	@	1 75
Venison	10	@	14
Dove	50	@	75
EGG FOOD.			
Manhattan, ₱ lb	12	@	—
PROVISIONS.			
Cal. Bacon. Heavy, lb	10½	@	11
Medium	12	@	—
Light	13	@	13½
Extra Light	—	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11	@	12
Hams, Cal	12½	@	13½
do Eastern	13	@	14½
SEEDS.			
Alfalfa	9½	@	10
Canary	4	@	4½
Clover, Red	12	@	13
White	20	@	22
Cotton	20	@	—
Flaxseed	2	@	2½
Hemp	3	@	3½
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German	5	@	6½
do Common	5	@	6
Mustard, yellow	1½	@	2
do Brown	2½	@	3
Rape	1½	@	2
Ky. Blue Grass	14	@	16
2d quality	13	@	14
Sweet V. Grass	75	@	—
Orchard	12	@	14
Hungarian	7½	@	8
Lawn	27½	@	40
Mesquit	6	@	—
Timothy	6	@	6½
TALLOW.			
Crude, lb	3	@	5
Refined	6	@	—
WOOL, ETC.			
SPRING—1890.			
Humboldt and Mendocino	19	@	24
Sac'to valley	15	@	22
Free Mountain	18	@	24
S Joaquin valley	12½	@	17
do mountain	17	@	22
Cala'v & F'th'll	15	@	24
Oregon Eastern	13	@	22
do valley	20	@	25
So'n Coast, def	10	@	14
So'n Coast, free	12½	@	19

California Fruits East.

NEW YORK, Aug. 17.—California fruit-growers are helping this side of the continent out of its comparative fruit famine most commendably. Last week 41 carloads, chiefly of pears and peaches, with a good assortment of plums, arrived. The early prices of the week were satisfactory. Two thousand five hundred boxes of Bartlett pears from one shippet sold at a range of $3 to $5.35 a box, mostly over $4. Peaches did well, selling from $1.80 to $3.05 a box of 18 to 20 pounds. A good many were damaged on the cars and had to be sacrificed at low prices. Plums are still desirable, but they begin to arrive. From all local accounts, California will rule the grape situation also this fall. Dried-fruit merchants are industriously trying to introduce dried grapes into this market to help them piece out the needs of next winter. There is an unusually heavy crop on the coast, and they sell freely in the East. Their cheapness—5¼ cents per pound; wholesale—will probably give them a place after consumers learn how to remove their somewhat objectionable seeds.

NEW YORK, Aug. 17.—Dried peaches will work up to California prices. This would be a good experimental season for dried peaches. Canned fruits rule high. Extra peaches, $3.20; Standard, $2.75 apricots, $2.25; white cherries, $2.40. Prunes hold their own, regardless of some disparaging comments that have been published here. Sellers of raisins at the moment seek buyers who, with the menace of low values in view, are in no hurry to contract. A few orders are named at $1.75@2 free on board. There is an industrious endeavor to widen the introduction of dried grapes. The cheapness leads to good results. Dried apricots steady, 18½@19c.

CHICAGO, Aug. 18.—Porter Bros. Co. sold ten carloads of California fruit to-day at the following prices: Beurre d'Anjou pears, $2.95@3; overripe, $1.50@2 20; Beurre Hardy pears, $1.85@2 25; Beurre Clairgeau, $2; Susquehannas, $1.75@2.10; Early Crawford peaches, $1.40@1.90; poor order, 90c@$1.20; Gros prunes, $1.25@1.30; Foster plums, $1 65; Muscat grapes, per half-crate, $1.65@1.75; Tokays, $1 80.

NEW YORK, Aug. 18.—Sgobel & Day sold six cars of California fruit to-day as follows: Bartlett pears, $2.80@3.55; Early Crawford peaches, $1.60@2.25; Gros prunes, $1.90@2 40; Egg plums, $2.05@2.15; Columbia plums, $1.80; Victorias, $1.70@1.95.

CHICAGO, Aug. 19.—Porter Bros. Co. sold to-day ten cars of California fruit: Bartlett pears, green, brought from $3 to $3.35; overripe stock, $1.40@2.50; Gros prunes, $1.10@1.35; Early Crawford peaches, $1.25@1.85; Susquehannas, $1.70@1.85; Orange Clings, $1.45@1.75; Quackenboss plums, $1.25; Muscat grapes, full crates, $3.10@3.20; half crates, $1.30@1.75; nectarines, $1.75.

The Montgomery Auction Co, sold to-day for account of Gregory Bros. Co. and others three cars of California fruit. Bartlett pears brought from $2.55 @2.50; late Crawford peaches, $1.55@1.50; Clings, $1.25@1; red nectarines, $1.40@90c; Bradshaw plums, $1.40; Egg plums, $1.15; Columbias, $1.40; Gros prunes, $1.60@1.25.

NEW YORK, Aug. 19.—The agents of the California Fruit Union auctioned to-day two carloads of Bartlett pears at $275@260 per ton. Prices on Bartlett pears are lower than last week. The demand is increasing.

CHICAGO, Aug. 14.—The Montgomery Auction Co, sold to-day for the account of the Earl Fruit Co. and the W. R. Strong Co. five cars of California fruit. Early Crawford, $1.50; Susquehanna, $1.45@1.35; Lemon Cling, Orange Cling, $1.35; Bartlett, $2.90; Gros, $1.45@1.40; Columbia, $1.45@1.20; Bradshaw, $1 20; half-crates Muscats and plums, $1.75@1.50; half-crates Tokay grapes, $2.55@2.20; half-crates Rose de Peru, $1.40; half-crates Fontainebleau, $1.20.

NEW YORK, Aug. 14.—The California Fruit Union auctioned off to-day two carloads of fruit. Gros prunes sold at $2.30@2 10 per box; Columbia and Bradshaw plums, $1.75; Yellow Eggs, $1.85; Bartlett pears, $4.40@3.50. The market on Bartletts is lower, the late high prices having checked the consumption. There is a strong demand for peaches, and supplies are moderate.

CHICAGO, Aug. 20.—California green fruits have fair demand, with ample receipts and offerings. Nectarines, bxs, 20 lbs, $'@1.26; peaches, Crawfords, bxs, 20 lbs, $1.75@2; do Orange Clings, $1.50@1.75; pears, bxs, Bartlett, green, $3@3.50; do ripe, $2@2 50; do Duchess, $2@2.25; Gros prunes, 20-lb bxs, $1.25@1.50; Purple Duane plums, 20-lb bxs, $1@1.25; Washington plums, 20-lb bxs, $1@1.25; Egg plums, 20-lb bxs, $1@1.25; Columbia plums, 20-lb bxs, $1@1.25; German prunes, 20-lb bxs; $1.50 @1.75; grapes, half-cases, 4 baskets, Fontainebleau, $1@1.25; do Muscat, $1.50@1.75; do Tokay, $1.50 @1.75; do Rose of Peru, $1@1.25. California dried fruits rule firm, with apricots quoted at 17½@18½c ₱ lb. The demand is fair and previous arrivals are about all taken. The crop is said to have been pretty well absorbed and dealers do not look for receipts to be anything more than very moderate. Peaches have hardly started to move. Samples of new goods are shown and for choice unpeeled the market is quoted at 22@24c ₱ lb. Dealers are afraid to accept bids for goods to arrive, as holders on the coast are so firm that they are liable to raise their views, and dealers do not want to sell unless they know they can place goods.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE, Aug. 13-19.	Olympia. Rain	Temp.	Wind	Weather.	Portland. Rain	Temp.	Wind	Weather.	Eureka. Rain	Temp.	Wind	Weather.	Red Bluff. Rain	Temp.	Wind	Weather.	Sacramento. Rain	Temp	Wind	Weather.	S. Francisco. Rain	Temp	Wind	Weather.	Fresno. Rain	Temp.	Wind	Weather.	Keeler. Rain	Temp.	Wind	Weather.	Los Angeles. Rain	Temp	Wind	Weather.	San Diego. Rain	Temp	Wild	Weather.
W.	.00	88	N	Cl.	.00	94	N	Fr.	.00	58	W	Cy.	.00	96	SE	Cl.	.00	78	SW	Cl	00	64	SW	Cl.	.00	96	Nw	Cl.	.00	84	SW	Fr.	.00	70	N	Cl.	.00	72	Nw	Cl.
T.	.00	78	W	Cl.	.00	82	SW	Cl.	.00	58	Nw	Cy.	.00	94	SE	Cl.	00	86	SW	Cl	.00	64	W	Cl.	.00	96	W	Cl.	.00	86	SE	Cy.	.00	72	W	Cy.	.00	70	W	Cy.
F.	.00	74	Nw	Cl.	.00	80	Nw	Cl.	.00	56	Nw	Cy.	.00	92	SE	Cl.	.00	82	SW	Cl.	00	64	SW	Cl.	.00	98	Nw	Cl.	.00	82	S	Cl.	.T	80	W	Cl.	.T	78	Nw	Cl.
S.	.00	74	N	Cl.	.00	76	W	Cl.	.00	58	Nw	Cy.	.00	96	SE	Cl.	.00	90	SW	Cl	00	66	W	Cl.	.00	100	Nw	Cl.	.00	90	Nw	Cl.	.00	80	W	Cl.	.00	82	W	Cl.
S.					.00	80	N E	Cl.	.00	60	Nw	Cl.	.00	92	S	Cl.	.00	88	SW	Cl	00	62	W	Cl.	.00	96	W	Cl.	.00	92	Nw	Cl.	.00	90	W	Cl.	.00	82	W	Cl.
M.	.00	66	N	Cl.	.00	68	Nw	Cl.	.00	60	Nw	Fr.	.00	86	S	Fr.	.00	78	SW	Cl.	.00	60	W	Cl.	.00	92	W	Cl.	.00	94	W	Cl.	.00	80	W	Cl.	.00	78	W	Cl.
T.	.00	66	N	Cl.	.00	64	SE	Cy.	.01	58	N	Cy.	.00	92	S	Cl.	.00	80	S	Cl.	00	62	W	Cl	.00	92	Nw	Cl	.00	92	Nw	Cl.	.00	70	SW	Cl.	.00	72	W	Cl.
	.00				.00				.01				.00				00				00				.00				.00				T				T			

EXPLANATION.—Cl. for clear; Cy, cloudy; Fr., fair; Cm., calm; — indicates too small to measure. Temperature, wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

FEARLESS.



This Threshing-machine received the two last **Gold Medals** given by the New York State Agricultural Society; and has been selected, over all others, and illustrated and described in that great work, "Appleton's Cyclopedia of Applied Mechanics;" thus, establishing it as the **standard** machine of America. **Straw-preserving Rye-Threshers, Clover-hullers, Ensilage-cutters, Feed-mills, Fanning-mills, and Wood Saw-machines;** all of the **best** in market. The **Fearless Horse-powers** are the most **economical** and **best** Powers built for the running of Ensilage cutters, Cotton gins, and general farm and plantation use. For free Catalogues, address

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Has superseded all other material for tying buds, grafts, etc. We deliver it in California at these prices: 100 lbs., $24; 25 lbs. and over, 22 cts. per lb; 1 lb. and over, 25 cts. per lb. Sample free. Prices of FRUIT STOCKS and SEEDS ready Sept. 1st. **THOS. MEEHAN & SON, Germantown, Phila., Pa.**

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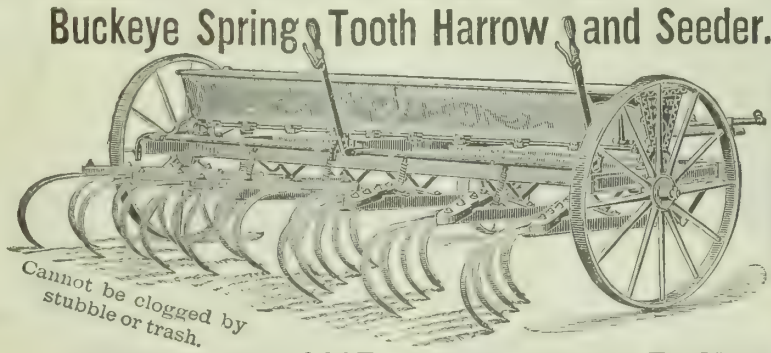
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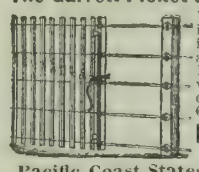
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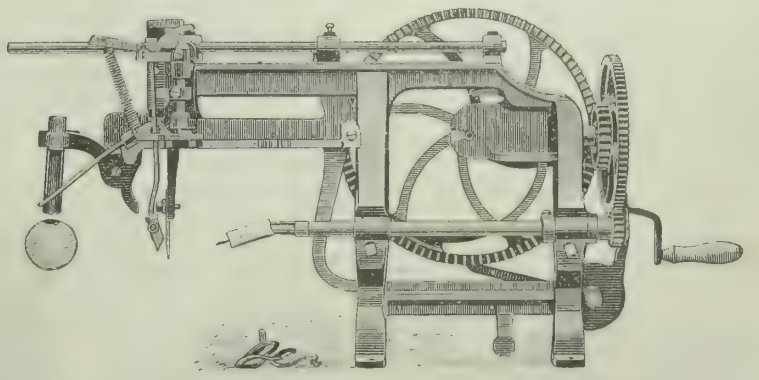
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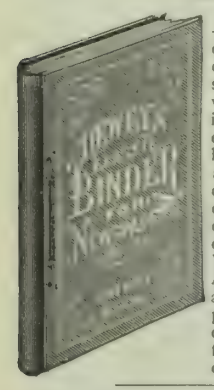
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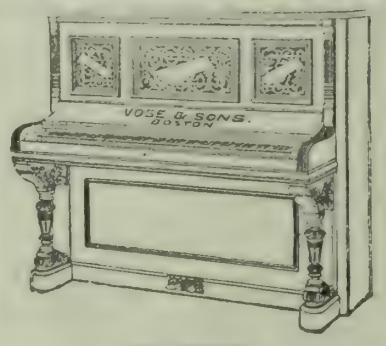


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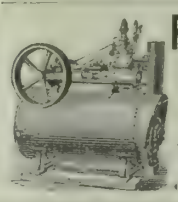
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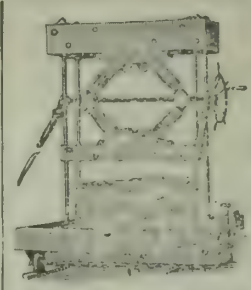
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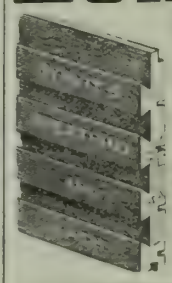
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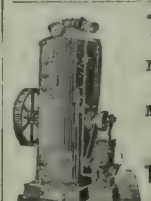
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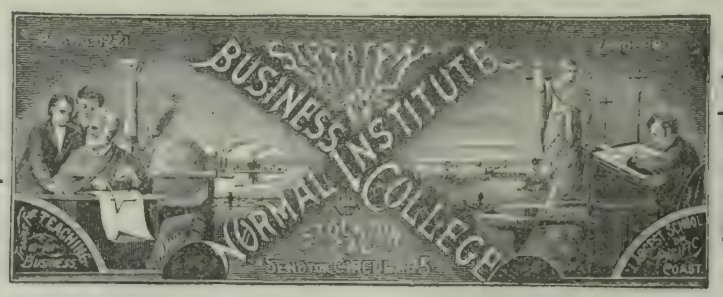
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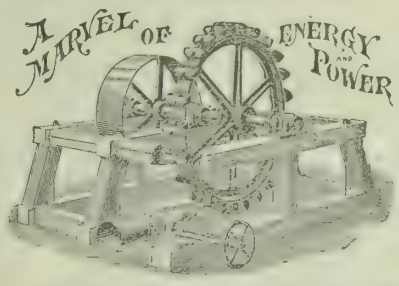
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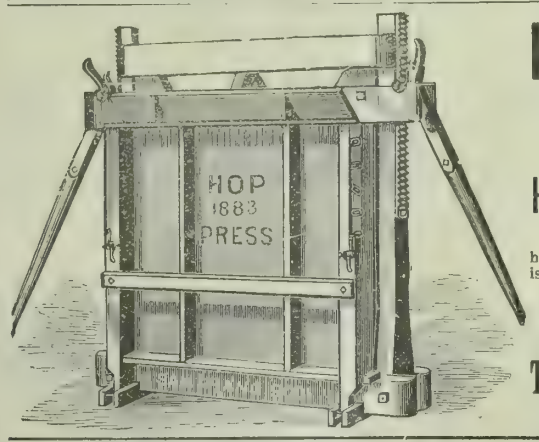
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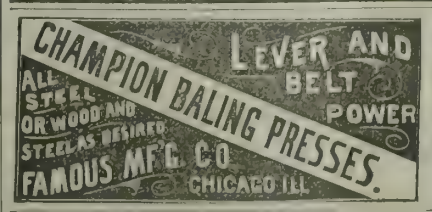
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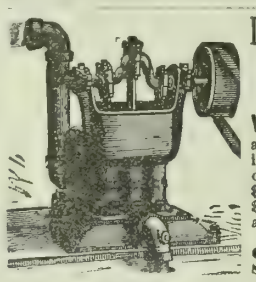
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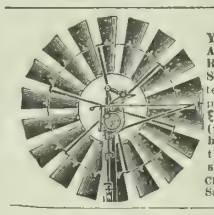
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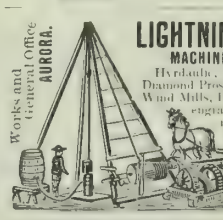
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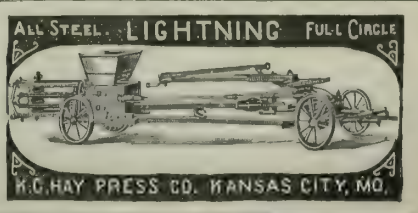
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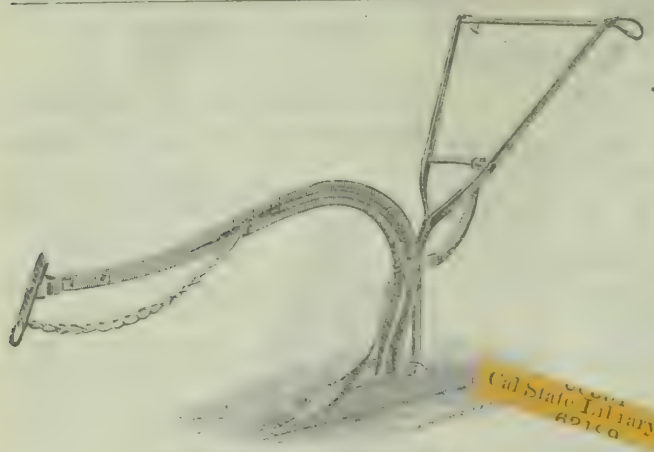
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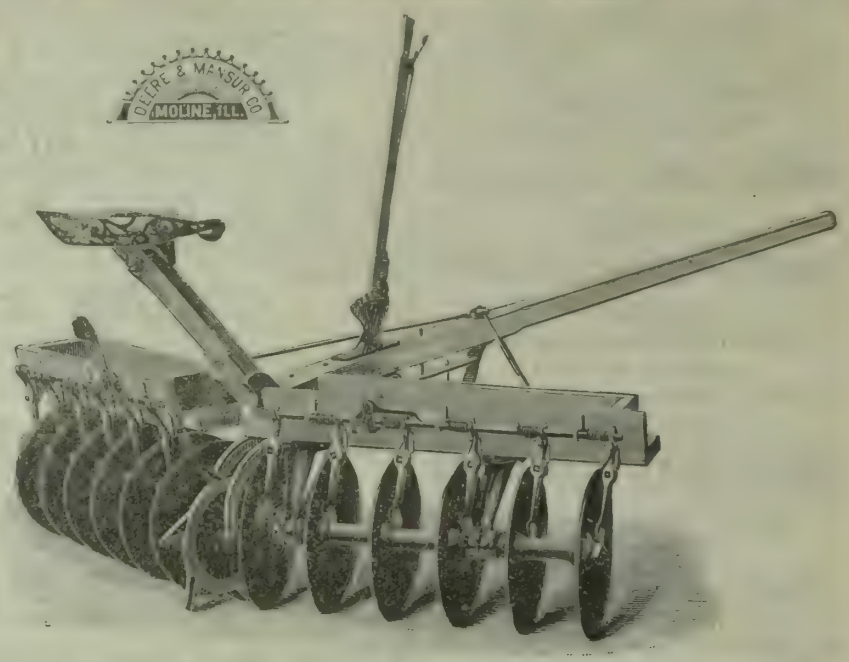
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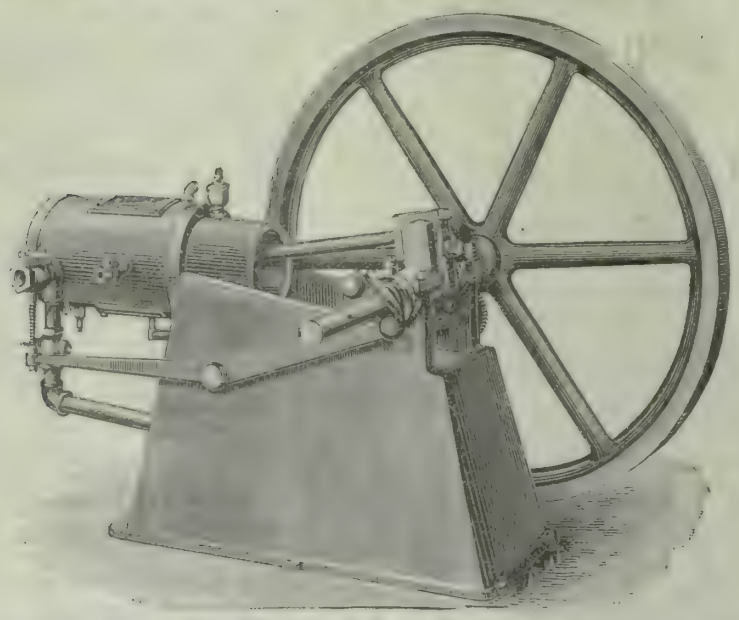
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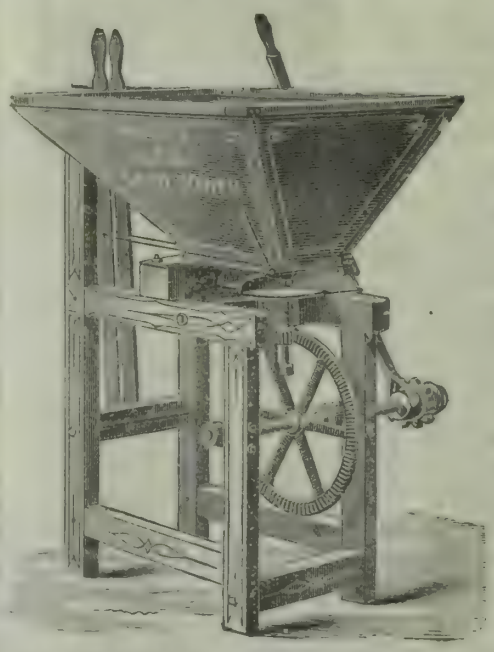
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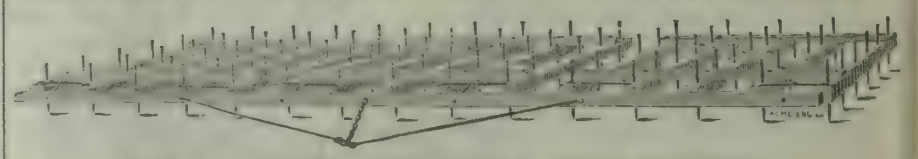


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TWENTY-PAGE EDITION.

Vol. XL.—No. 9. SAN FRANCISCO, SATURDAY, AUGUST 30, 1890. DEWEY & CO., Publishers, Office, 220 Market St.



GRAPE ARBOR AT GREENFIELDS COTTAGE, KERN VALLEY, CAL.

Grapes on Trellises.

Visitors who see our thousands of acres of grapevines short-pruned so that they are but low, forked stumps in winter and low mounds of verdure in summer, may form the idea that the grapevine on arbor or trellis is unknown in California. Such is, however, far from the fact, for California, in addition to her large and rapidly extending area of short-pruned vineyard, has probably as notable long-trained vines as the world can show. The famous vines of the Santa Barbara region, which were so famous in word and picture 15 or 20 years ago, were spread over trellises or arbors of immense area. In most of our grape regions there may be seen vines similarly grown, either trained over high or long artificial supports or, of their own accord, covering large outbuildings or renewing the verdure of old, dead oaks with the foliage of the grape. Besides these notable instances of vine extension there are frequently seen vines grown on arbors or trellises, either for shade or landscape effect or because the behavior of the variety seems to demand long canes rather than the short-pruning system.

The engraving on this page shows one of our best specimens of grape arbors. It is on the Greenfields ranch, in Kern county. It extends 100 feet from the piazza of the superintendent's cottage to the yard, where stands the building in which the farm hands are fed and lodged. Our picture is from the cottage looking southward the entire length of the arbor. There are 25 vines planted on each side of the arbor, which have grown in 12 years trunks of three to four inches in diameter, and the canes so trained that the sides down to about five feet from the ground are thickly inclosed and are interwoven overhead into a dense mat of foliage. The picture, which is a direct reproduction from a photograph, may be trusted to tell its own story of the fruiting of these vines. The framework of the arbor needs to be well made to sustain such a burden. It is nine feet in width and ten feet to the arch overhead.

Old Folks' Day.—Here is a hint from Indiana for fair managers. One of the features which draws a crowd at the Gibson county fair is "Old Folks' Day," when all over 70 years of age are admitted free and treated to a dinner. Over 225 old citizens took their places and listened happily to an address from two prominent speakers on Ye Olden Times. This day is spoken of as one of the best, and the attendance large.

The farmers of Orange county made money enough to wipe out $181,000 in mortgages last year.

Horticultural Progress.—To increase the practical value of the census returns in the interests of agriculture, a number of inquiries never before made in a census were included this year; for instance, in the Horticultural Section, in addition to giving the number of "acres" planted in fruits and "bearing trees," apples, peaches, vines, etc., the new census has additional columns for "young trees not bearing," "young vines not bearing," and thus the progress in any given kind of fruit will be indicated for each county and State in the Union. When the returns show an increase in "young trees not bearing" and "young vines not bearing," those sections of the country where fruit-growing is prosperous and is being extended will be plainly pointed out. California should astonish the country in this line of progress. We trust that the census of 1890 may supply data which has not been available hitherto.

Correspondence

Correspondents are alone responsible for their opinions.

From Creston to Carpinteria.

An Itinerary.

Editors Press:—I left Creston Tuesday morning, August 12th, with team for San Luis Obispo, 25 miles southerly. The first four miles lay through the Huer Huero rancho, subdivided and sold to settlers within the last five years at rates ranging from $10 to $20 per acre, part valley and part rolling hills, friable soil, white and blue oak timbered. Thence six miles to the Salinas river, through canyons, over heavy grades and a rocky, brushy country. Thence five miles through the Atascadero and Santa Margarita ranches, over pine, oak and brush ridges, friable soil, to

Santa Margarita,

The present terminus of the railroad. The town is situated in a beautiful valley, 3000 or 4000 acres in extent, studded with heavy white oak timber. Several thousand acres have been subdivided recently and offered for sale at rates ranging from $20 to $100 per acre; soil, deep and rich; hills surrounding; light soil; good fruit land. Thence ten miles to San Luis Obispo, over rolling lands to the "Questra grade," two miles; thence eight miles over the mountains, good grade, to

San Luis Obispo,

With its 3000 inhabitants, situated in a cove at the base of the mountains, opening out to the west and south by a valley averaging two miles wide and 30 miles long, reaching from Cambria on the coast north to a point seven miles south of San Luis. Land worth from $20 to $100 per acre.

From San Luis we take the narrow-gauge railroad to Los Olivos, 60 miles south. Port Harford is on a branch of the same line nine miles from San Luis, our chief shipping point and the best harbor between San Francisco and San Diego.

Twelve miles south of San Luis is Arroyo Grande, a valley about one mile wide and five or six miles long, sedimentary soil of the richest kind. Squashes grow large enough for pig-pens. Beets and carrots push each other out of the ground, 30 tons of onions to the acre, with corn jumble thicker than canebrakes. Land worth from $250 to $300 per acre.

Thence eight miles to Nipomo, a new town of the boom order, some good land, mostly heavy adobe, surrounded with sandy hills covered with scrub oak; land values unsettled. Thence ten miles to

Santa Maria,

A town in a valley of the same name, and a river likewise, desolate and uncontrollable, a sand waste a mile wide and continually encroaching on its friable banks; some good land from $20 to $50 per acre; considerable town, with possibilities limited.

Thence 20 miles to Los Alamos over an indifferent country, mostly sand and hills. Los Alamos is situated in a nice little valley half a mile wide and three or four miles long. Land worth from $20 to $40 per acre.

Thence over rolling ridges covered with scrub oak 13 miles to Los Olivos, the present terminus of the narrow-gauge railroad. The valley surrounding the town is a beautiful one, half a mile wide and several miles long; deep and rather heavy soil, chiefly settled in small farms. Land worth from $20 to $80 per acre.

Thence by stage three miles over a rich undulating country, oak-timbered, to Santa Ynez, better known as the "College Ranch," owned by a syndicate; 30,000 or 40,000 acres, hill and vale, generally deep loam soil, claimed to be a good fruit and olive country, the only apparent drawback being prevailing northwest winds. Land, from $10 to $40 per acre.

Thence 15 miles over rollers, indifferently cultivated fields, then mesa lands, glades, hills, around bluffs, across streams, through gates, over big cattle ranches and lands of varying quality to a little red house under the great hill, where dinner was served with trout from the adjacent streams.

Thence six miles over rocks, around sharp curves, up narrow grades, through thickets, under live-oak shades, half-way up the mountain to

"The Hermits,"

A little house at a turn in the road—dense forests of live oak and witch hazel surrounding, filled with the murmurings of a dashing stream of pure water; a tall figure with woolen skirt and slouch hat in the foreground; bearded face, a high, broad forehead, with sad, expressive eyes that appeared to look backward on the past rather than to the future. "What shadows we are and what shadows we pursue."

Thence three miles to the top of the mountain, up-grade continually, narrow, rugged and rocky. Near the summit there is a great dawn of desolation; below, around, and to the northwest and southeast a hundred miles of

Rock-Ribbed Hills,

Brush and burning sands—emblematic of human life; the desolation that precedes the dawn of some new hope. Over the brow—then looking down, down 3000 feet we beheld the vale of Santa Barbara; beyond, the "gray and melancholy waste" of old ocean, with the large islands of Santa Clara and Santa Cruz sleeping on his bosom, 40 miles away.

Down, down, through gulch and canyon to the "Robin's Nest," a little wood-colored house on the hillside, with a garden and a few fruit trees below. Out of every door and window, and from around every corner, peeped a timid little olive-colored face—all girls of one Spanish couple, so numerous, it is said, that no one but their parents has ever been able to count them.

A drink to the weary horses and passengers, tendered by half-a-dozen of the larger of the multitude of little misses, having been received with thanks and a few nickels, the stage moved on down the steep grade, three miles farther, to the valley, averaging two or three miles wide and 15 miles long—with the ocean on the west and the precipitous mountain range upon the east—cut up into small farms, neat houses, well-tilled fields, chiefly set in fruit and nut trees, with Lima beans invariably intervening.

Santa Barbara.

Thence southeasterly, over two miles of low rolling hills, and Santa Barbara appears to us from the northerly end of State street, running through the heart of the city, 80 feet wide, paved with bituminous rock for three miles at a cost of $100,000 per mile. Its appearance reminds one of a dude with a long, wide, spotless shirt-bosom and his extremities indifferently clothed. Nevertheless it is a very attractive town of some 6000 inhabitants, and owing to the low hills to the northwest, the heavy mountains on the east and the high ridge on the west, coupled with the influence of Santa Clara and Santa Cruz islands, the climate all the year round can hardly be excelled anywhere under the sun. Boom prices for town and country property no longer prevail, but there is certainly nothing here in that line to give away unless it be the chunks of climate thrown in with your hotel bills. Twelve miles southeast of Santa Barbara is Carpinteria, a village of perhaps two dozen houses. The railroad runs near the ocean shore all the way, passing Summerland, where a big flow of gas has been struck recently.

J. V. Webster.

From Santa Maria.

Editors Press:—I see in my last week's Rural that the San Luis Obispo Fair managers offer a pipe organ to any couple who will get married in the Pavilion during the fair. This may be so, but I find no mention of it in their fair catalogue.

S. M. V. A. & S. A. Fair.

I send you by to-day's mail a catalogue of the Santa Maria Valley Agricultural & Stock Association's Fair, which does contain an account of such an offer made our society by the "Day & Fisher Music Co." of Los Angeles, and they also agree to give two musical concerts in the Pavilion during the fair. The star singers of the Angels City will be here. We consider this a very generous offer on the part of the Music Company, and worthy of public notice.

Our fruit, vegetable and grain display last year was pronounced equal to that of our county fair by all who saw it. (We were awarded a silver medal as a special premium on apples at the county fair.) Fruit culture is in its infancy here, yet it is thoroughly demonstrated that our valley is second to none on the coast for general horticulture; hence a great interest in tree-planting is everywhere manifest. Manufacturers and agents for farm and orchard machinery would do well to place samples of their stock on exhibition at our coming fair. The farm machinery now in general use is not suited to tree culture and will be in a measure displaced another season by sulky plows, orchard cultivators, etc. We have quite a number of young orchards just coming into bearing which will require fruit-graders, cutters, etc.

We also have fruit pests, and would like to know the best remedies and see methods of application demonstrated.

In other words, bring or send in your spray pumps, evaporators, cultivators and other devices for handling ground, tree or fruit, and I, as Superintendent of Pavilion, will guarantee that all will receive impartial attention.

One of the main features of our fair will be the races, and we boast of some pretty good horses. The running horses Comet and Moses B., of late Los Angeles fame, are owned here; also the trotters Electro, Saxton and others. A two-year old filly from Topsy is making rapid strides to the front. If you want to attend a first class fair and at the same time visit the coming fruit center, don't fail to come to our fair, Sept. 10th to 13th.

The Republicans hold their county convention here Sept. 9th. This will bring us quite a crowd and will take some of Santa Barbara's good citizens 90 miles from home. That isn't far for a Republican to go to serve his country, but it is quite a distance for a poor man to go to pay taxes.

Fruit Pests and Commissioners.

Our fruit-growers have recently organized a horticultural society here, with substantially the same objects in view as those of the Southern California Pomological Society mentioned in your issue of Aug. 16th. One of these objects especially interests us now; that is, "Efforts to secure proper legislation touching fruit pests." One year ago Aug. 1st our Board of Horticultural Commissioners was organized, and up to June 1, 1890, over 100,000 trees had been inspected in this district, and several old and badly diseased orchards were dug up and burned. The majority of our orchards were sprayed during the winter and spring, and badly infected trees disinfected or destroyed.

In the Lompoc district there were more than 25,000 trees inspected and much disinfecting done. In the Santa Barbara district they were simply eaten up with pests, but as the *Icerya purchasi* seemed to be the worst, having virtually killed the citrus industry, the commissioner devoted his time principally to propagating and distributing the *Vedalia*, and in six months had completely wiped out the cottony scale. Our Board of Supervisors had been commended by the press and the State Horticultural Society for their wise choice of commissioners and hearty co-operation generally, but they became weary of well-doing, and at their meeting in June decided to allow the commissioners but five days' work in each month. I had often heard it said that when men become tired of well-doing, we must look out for a brilliant spurt in the opposite direction; and we have it verified here! Just when the commission had got in good working order, with fair prospects of wiping out the pests entirely, they were told to devote no more than five days' time in each month to inspecting, which ends their usefulness. They can no longer inspect trees, clons, cuttings, plants, etc., which are being shipped in constantly; neither can they keep watch of fruit-stands, wagons, boxes, peddlers, and other avenues by which pests are brought in and scattered through the country. The whole kick seems to come from the southern district and from members who think more of the profits derived from selling climate than from products of the soil.

The truth is, the County Horticultural Commissioners are not under the proper authorities; they are supposed to be the working tools of the State Board and should be under its direct control. The destruction of fruit pests and guarding against their introduction is absolutely necessary in every county where trees are grown, and it is unfair for one county to go to the expense and trouble of disinfecting while another county is propagating a new supply. The State Board knows, or should know, the exact condition of things in every county, and with the power in its hands to appoint the necessary inspectors and quarantine guardians for each county, district or locality, it could soon materially better the existing conditions in most places by holding in check, if not entirely wiping out, the pests, which are fast gaining ground where neglected. The State Board could keep competent men in the field by paying them liberally and for their whole time. Then an inspector could afford to prepare himself for a life-work in entomology, but he will hardly do it for five days' work in a month at $3 per day and pay his own expenses! The fruit-grower cannot afford the time to post himself and keep posted on all the pests and diseases we have and are liable to have, owing to our climatic conditions. A competent inspector, who can warn him of the approach of danger, is a necessity and will be more and more appreciated as our country grows older.

Members of the Farmers' Alliance are talking this matter over. The next meeting of our County Alliance will be held here Oct. 7th, and I think they will have some demands to make of those who hope to gain their votes at the coming election.

O. W. Maulsby.

Santa Maria, Aug. 20, 1890.

Ventura Notes.

Editors Press:—I have thought perhaps a few lines from this portion of the State might be acceptable.

The fruit crop of Ventura county is very bountiful this season. Apricots have yielded from $50 to $300 per acre direct from the orchards. The nurserymen say there is again a demand for these trees. Prunes on the coast are shy bearers; but inland 16 to 20 miles, the trees produce heavily. This fruit has not had a just trial here, as all of the trees are comparatively young.

As far as we can learn, there has only been a small amount of honey gathered this season. Bee-culture is not given so much attention as a few years ago. Many have kept bees as a source of income until orchards or vineyards came into bearing. The orchardist finds that bees and fruit are not yoke-fellows.

Some inquiries are being made by Eastern capitalists about our available oil territory. Negotiations are pending for large tracts here, we understand. The oil interest is a source of income of which our county has but just begun to see the magnitude.

Improvements of all kinds are steadily going on in all sections in dwellings, roads, bridges, etc. The town of Ventura boasts a new electric-light plant. She takes her evening enjoyment within its ghastly glare. Her citizens are trying to secure a street-car line, which will be a much to be desired improvement. Glanders has made its appearance here; so far the inspector has ordered several animals shot.

The hot weather and lack of fogs will cause the Lima-bean crop to be short this season. In riding over the county one does not feel satisfied with the thin, sickly appearance of the bean-fields.

We have some lovely drives in this county. One of the finest is from Ventura to the Ojai. If you take the creek road you have a tortuous rippling stream beside, beneath or around you nearly all the way. The steep, high sides of the canyon through which you wind are a tangle of wild roses, and over the tall forest trees are hanging canopies of soft green grapevines through which even a vertical sun may not penetrate.

And then Camp Comfort, what a magnificent natural tent one finds—a tent of perpetual green. Those stately live-oaks have sheltered many a weary head in the past centuries. If one returns by the grade-road, how sublime the view of the wooded slopes and of many a yawning chasm and rocky gorge.

If the sun sets before you reach the valley, how you enjoy watching the sunshine creeping up the mountain-sides, pausing a moment on the top to throw a farewell to the purple mist below. The altitude and the shadows make the air chilly and you reach for the discarded hat and wrap. Later, you reach The Avenue—Ventura's boast—and bowl along for five miles on a level road which is kept sprinkled during the summer months and is lined with trees and pleasant homes. Straight before you is the sea, glinting in the moonlight; over all the shadowed drive is moonlight. When at last you reach home, how much you have to brighten the next day.

M. E. Dudley.

Ventura.

The Stock Yard.

A California Trail From Arizona.

E. L. Vail writes to the *Southwestern Stockman* of Willcox, Arizona, concerning a permanent trail from that Territory to this State, for which arrangements have been made among several of the leading stockmen of the Territory. He says:

"It is proposed to build a ferry-boat to cross the Colorado river; the plans for the same are now under consideration and the money subscribed to build it. Thousands of cattle have been driven over this trail, and though many years have passed since the Texas drovers traveled it, their old 'bed grounds' are to be seen everywhere after leaving the Colorado river. John Lang crossed the desert successfully with a herd of steers in January last, on the upper trail. We took the lower trail in March, as we were told there was more feed and water that way."

Mr. Vail also gives an interesting account of his recent experience in driving a band of cattle over the proposed trail, which we quote:

From Tucson as a starting point, the distance to the next watering-place (Charqua Yuma) is 18 miles, where water can be had at Molina's ranch; thence along the old stage-road to the Florence Canal is about 30 miles; at times water can be found in tanks near the road, and I have since been told by Charles Proctor that there is a better trail by passing to the southwest of Picacho Peak. We followed the Florence Canal to Casa Grande and the old stage-road to Maricopa. Here we watered our cattle in tanks along the railroad, which had been left by recent rains. If we had found no water there we should have gone to the Gila river, about 10 miles north. Before leaving Old Maricopa, which is four miles west of the present station, we watered all our horses and filled up our water barrels at a Mexican ranch. The distance from here to Gila Bend is about 50 miles, and there was no water on the way for our stock, but we made the drive in two days and one night, our cattle grazing well, and did not suffer much for water. The best place to water stock at Gila Bend is just above the ferry.

From Gila Bend we followed the old stage-road along the Gila to Yuma, swimming the Colorado river about five miles below Yuma. We found very poor feed on the Gila, as last summer was a dry one, and up to the time we passed the winter had been no better.

After crossing the Colorado river, we followed the river on the west side for about 18 miles, thence went south and westerly through some Indian villages to Willow lake, which is supposed to be in the bed of New river and the last water by the lower trail on this side of the desert. We could find no one who knew whether there was any water on our road this side of Carriso creek, and Mr. Turner and your correspondent, after an unsuccessful hunt for water ahead, returned to camp inclined to believe the Colorado desert as bad as it was generally reported. We were therefore greatly pleased to find that Col. D. K. Allen's surveying party had camped at Willow lake during our absence. The colonel gave us some valuable and accurate information regarding our route and the distances to the various lagunas on the desert, and reported feed good nearly all the way to Carriso creek. Colonel Allen is in the employ of the International Company of Mexico, having been about eight months on the Colorado desert exploring it in the interest of his company, and I doubt if there is a man living who knows the country better.

From Willow lake to New River Station is about 25 miles, the road running nearly northwest. Here we found water for all our cattle and good pasture. Our horses and part of the cattle had had water in a small tank about nine miles back.

Resting our stock one day here, we next drove to the Mesquite laguna, two miles north-

east of Indian Wells Station, thence to a large laguna which was discovered about seven miles northwest of Indian Wells. This lake was nearly half a mile long, and we saw a large flock of ducks on it. We left this lake about 5 o'clock in the afternoon and drove until 10 P. M; starting again at daylight next morning, arrived at Carriso about sundown.

Our cattle improved in condition from the time we left the Colorado river, as the feed on the desert was better than we found after leaving Red Rock. The lagunas found on the desert are the rain-water which collects in the lowest places, and is held for many months by the clay soil. In former years, during the high water in the Colorado, New river was filled with water which ran back into the desert as far as Indian Wells, but the great floods which occurred in 1882 (I think) left a bar in the mouth of New river, which has prevented the water of the Colorado from entering New river as it formerly did, and in consequence the old laguna at Indian Wells was dry when we crossed the desert.

Inclosed extracts are from a letter received from Colonel Allen, informing me that the bar in New River has been broken or a new channel opened by the floods of last month.

"Glad to know that you succeeded so well in your work with the cattle. We saw your dust for two or three days—at least my men did. I did not believe that you would have any trouble in finding water. You ought to see that same country now. From Haul Hanlon's, just below El Rio, the first station west of Yuma, for 40 miles, the whole country is under water from two inches to 3½ feet. Right where you watered your cattle near our camp, I came over the land with a boat last week. Animals have to swim all the streams (arroyos) to Indian Wells. The whole country will be a lake—in fact, it is all a lake.

"Probably for the next two years there will not be much difficulty as to feed and water on either of the roads or trails from Yuma west across the Colorado desert. As a general thing, I believe the supply can be depended on for 1000 head of cattle from November till April. The two best and surest places to dig wells, if necessary to do so on the road between Algodones and Carriso creek, would be at Seven Wells and Indian Wells, provided the feed is as good as I think it will be after this flood. This is on the north trail. On the south I should try the mesquite lowlands nine miles west of where you camped near us, and Alimo is 15 miles northwest of there, where I think water can be had without digging very deep."

Fruit Preservation.

The Use of Sulphur and Zinc in Fruit-Drying.

EDITORS PRESS:—I inclose herewith a letter lately received, which has been called out by the Bulletin treating of the sulphuring of dried fruits issued not long ago by this department.

The writer treats of a phase of the subject that I left untouched, partly because the use of "galvanized," that is, zinc-covered drying-trays, is not as common with us as it is in the East, where the evaporation of fruit juices in zinc-covered evaporators has already caused much comment and animadversion. Many years ago I had occasion to battle against the use of zinc churns and churn-dashers, which were specially recommended for making the butter come quickly; it *was* gathered more quickly by the zinc salt dissolved in the buttermilk. It may not be amiss to call attention to the fact that fruit-trays made of "galvanized" *wire netting* stand on precisely the same plane as the evaporators made of zinc-covered sheet-iron, and that preserve kettles made of that material are nothing less than poison pots. Many so-called dispensations of providence in the way of dyspepsia and other disorders of the digestive organs may be traced to this pernicious practice of imbuing fruits and other edibles with solutions of metallic salts. I think the warning given in this direction by Dr. Smith's letter is well-timed in this State as well.

Permit me right here to answer a criticism, reproduced by several papers, of a statement made in Bulletin 86 of this Station. It was asked how, when objecting so strenuously to the use of burning sulphur for bleaching fruit, I could consistently recommend a solution of sulphide of soda, which contains the same compound—sulphurous gas—which is set free promptly by the acid of the fruit and so exerts its bleaching action.

To this I reply that the strength of the solution recommended is a definite figure, not easily exceeded by any tolerably reliable workman, and is totally insignificant when compared with the varied and often extravagant amounts used in the sulphur-box. If it were true in practice that the sulphuring is done only to "set the color," as my objector says, it would be a very safe thing, but once light the sulphur-pan and there is no telling how far the caprice or neglect of the workman may let it go. Nothing of the kind can happen if the fruit is dipped once, before drying, into a solution of definite strength; that also "sets the color" to a somewhat darker shade than sulphuring in the box, but satisfactory to any reasonable purchaser, and with no perceptible injury to the flavor of the fruit. The reason for this advice is therefore a thoroughly practical one, even if given by a "professor."

E. W. HILGARD.

Dr. Smith's Letter.

Prof. Hilgard—DEAR SIR: To-day I have read in "Popular Gardening" your views as there given about "sulphuring," or the bleaching of dried fruits. It is a subject to which I, as a medical man chiefly, have given no little research, and think I called attention to the objections to it before any one else—at least, so far as I know—several years since.

Your paper seems a good one, yet not so clear or full and explicit in some things as I could wish. I have not time to write very much. Evaporated fruit is better than most sun-dried, but it should never be bleached or tampered with. The God-given flavor and color of honest drying is all that is ever safe or proper.

Sulphate of zinc is the most common poison found in the bleached or sulphured fruit, and now nearly all large evaporators sulphur all the fruits they dry. The most of them use zinc-coated or "galvanized" trays to hold the fruit. Burning sulphur forms sulphurous acid, and the air and moisture in the evaporator, and perhaps aided by the heat, changes that into a weak sulphuric acid; and that, acting on the zinc, produces the sulphate found in all fruit thus evaporated. Dr. Peter Collier of Geneva, N. Y., Experiment Station, found it present to the amount of 2½ ounces to each 100 pounds of fruit, or 12 grains of "white vitriol" to each pound of fruit. That is enough to impair the flavor and prove injurious, as he says, if used in considerable quantity.

Better not tamper with a practice that is so dangerous and likely to make intelligent people afraid of dried fruits. The fruit industry—and a large one, too, is in great danger if the bleaching and all other sophistication of the most healthful of foods—preserved fruits—is not soon stopped.

JOEL W. SMITH, M. D.

Charles City, Iowa.

In a City Cannery.

A *Chronicle* reporter was conducted through the Lusk cannery on Brannan street recently by Mr. Sewall, the superintendent. Here, as in the other packing-houses, more fruit is being put up than in any previous year, some 750 women being employed in peeling, coring and canning. Very little talking was being indulged in, the women and even young children down to 10 or 12 years old all being too busily employed to stop to talk. The children easily make 50 cents day, Mr. Sewall says, if they stick to their work. The fruit is pared and cored and then washed in large troughs of clean water. Then each can is crowded full and marked with the grade of fruit. The can until this point has the large circular opening in the top, through which it is filled. The cans are placed in racks holding several dozens, the racks being mounted on cars which bring them to the right hight for convenient handling. They are then wheeled to the syrup tank and filled with syrup, about 300 to 350 pounds of sugar being used to a ton of peaches. The little caps, each with a small hole in the center, to cover the circular openings, are next soldered on with an apparatus by which a large number are handled in a minute. The truck on which stands the rack is then passed on to a tank full of boiling water, in which the rack, cans and all are immersed. The hole in the cap is so small that no water enters and none of the syrup comes out.

Next the rack full of cans is replaced on the truck and passed on to the second solderers, who deftly deposit a drop of solder on the hole in the cap. To make sure that no live germs of decomposition are left within, the cans are again immersed in boiling water and are then ready for packing, in which is included the placing of the proper label and boxing. The syrup is used only to make the fruit palatable and not for its preserving effect, heat and hermetical sealing being depended upon for that.

The cans are made by machinery in the upper story of the building and come rolling down in a steady stream, during working hours, along a railway built for the purpose.

Apricot Pitters.

EDITORS PRESS:—Now that the apricot season is over, will not some one tell us about the small pitting machines, the cost of using them as compared with pitting by hand, their adaptability to fruit of various sizes and conditions, etc. D. M. DIMMICK.

Carpinteria.

[The suggestion is a good one. It was announced recently that the Rogers pitter was doing well at Los Gatos. We would like notes on various devices.—EDS.]

The Stable.

Eastern Experience in Raising Colts.

Mr. J. J. Woodman gives his experience in an interesting way, and though worked out under Eastern conditions, may prove in some respects suggestive on this coast. We quote as follows:

Of course it is understood that *I* am raising colts and horses for the money there is in them, and therefore endeavor to raise them with the least possible trouble and expense, and still have them cared for and grown well enough to readily sell at a reasonably fair price. I raise both spring and fall colts, and think I can raise the latter easiest and cheapest, especially from work mares; besides, by having rye or other early green feed for them after being weaned, their growth is not checked nearly so much as is the case with colts weaned in the fall, which must of necessity subsist on dry and artificial food for several months. I do not usually allow my spring colts to follow their mothers when they are at work, but turn them into a box-stall with oats and water where they can help themselves or turn into a field with some older colts they are acquainted with, where they soon learn to run quietly between meals. I usually halter-break them by tying beside their mother for a few days while doing some moderate work, and find it much easier than wrestling with them after they become older and stronger. I prefer not to wean spring colts until cool weather comes in the fall, generally in October, and find that they winter better than those that I buy and am forced to take earlier. I find it much harder to keep colts growing and thrifty the first winter than afterward, and feed them corn, oats, bran, middlings, roots, if I have them, with plenty of good hay; and usually fail to grow as fast or look as well as I wish them to. We do not tie weaning colts, but turn them loose into a warm box stall, and find it easier and more quickly done. I kept eight head last winter in a stall 14x16 feet, and they got along nicely together; we turn them out pleasant days, and feed cornstalks in the yard at noon. If cold and stormy, we leave them out long enough to drink and have a little play, then put them back and water again at night.

We frequently see weaning colts turned out every day, warm or cold, wet or dry, to stand shivering all day in the fence corners; their owners expecting them to grow flesh, muscle and bone from exposure to the elements, and we usually see that they grow more bones than anything else. I am practicing sowing winter rye early in the fall for early green feed the following spring, and consider it a most excellent plan. We plow sod or stubble only deep enough to turn over, and sow rye on the furrow at the rate of two bushels to the acre, and drag over once thoroughly. My idea is to do the work as quickly and cheaply as possible; besides, when plowed shallow, say three or four inches, the land is not punched up so badly by colts in early spring, while still soft, and by plowing the usual depth the next time, the sod, weeds and stubble are kept beneath the surface. I pasture the rye usually until after corn planting, which gives clover pastures a chance to get well started before being fed. The rye acts as a laxative for the colts, rids them of worms and starts them to shedding their old hair; so that when turned into the clover they are in good shape to grow right along, and the rye-fields are in the very best condition to turn over and plant to beans. I feed no grain while colts are on pasture, and hardly think it pays in the long run to do so. The winter after my colts are a year old, I usually tie them in stalls, using five-ring halters and tying them short; feed them straw mostly, with a fair amount of grain, with hay or corn fodder at noon, fed in the yard if pleasant, and in the barn when severely cold or stormy. By putting something they like in their feed-boxes when out of doors, as an apple, ear of corn, handful of oats, or a little salt, they quickly learn to come in and take their proper places when the doors are opened and they are called, which is much easier than trying to drive them in with a club, and less strain on the temper. The winter after they are two years old I feed them about the same, except, perhaps, giving them a little more straw, and usually harness and drive them a few times as I may have time.

I have, so far, sold more at this age than any other, and believe it to be the best and most profitable age to sell at, and also to buy at, if the purchaser wishes them for immediate work. Some one may ask why I feed straw so much, and I will explain by saying that when I feed with a fair amount of grain, I can make them grow and look reasonably well after they are one year old. I usually raise a good deal of hay, but make it a practice to feed out the straw first. I have raised millet a few times, and have found it when cut early, well cured and fed with straw, an excellent food to help out with. I have never fed oilmeal to any extent, but have found middlings excellent. For several years have raised beets, which make good food when it begins to get warm in the spring; colts and horses usually eat them readily, and a large amount can be raised on a small piece of ground. Have also raised turnips and carrots, but prefer beets to turnips for feeding, and carrots require too much labor for the bulk produced per acre.

When a colt does not eat corn well and has lampas, instead of burning down the bars of the mouth I feed soft food for a few days. When I notice a colt's eyes running I look for a chaff in its eye or a bruise outside, and let its wolf teeth alone. In fact, in raising horses one needs to use a good deal of common sense and judgment, even if it is not in exact accordance with whims we may have heard from childhood up.

As to the profits of horse-raising, from experience I am fully convinced that the same feed and care that will grow a steer old enough and large enough to sell for $50 will grow a colt that will sell for $200, and believe I can keep a colt nicely on the same feed that would keep five sheep, with even greater profit in favor of the colt.

The Vineyard.

Judge Stanly's Experience with Resistant Vines.

Hon. John A. Stanly, whom our readers already know through accounts of his progressive work in dairying, land reclamation, vine-growing, etc., has written a letter to W. B. West of Stockton, upon points suggested by Mr. West's first letter to the RURAL upon resistant vines. The letter is printed below by permission of the writer and recipient:

Judge Stanly's Letter.

W. B. West, Esq., Stockton, Cal.—MY DEAR SIR: I have just read with great interest your communication "Number 1" upon "Resistant Vineyards" published in the RURAL PRESS of this week. I trust that you will succeed in arousing in our viticulturists a proper interest in this matter.

The object of this writing is to express to you my experience of this year as to the bearing quality of vines grafted upon resistant (Riparia) stock. Heretofore, with an experience of but four years, I had about made up my mind that vines so grafted would *not* produce as well as French vines grown upon their own roots, and had roughly calculated that the grafted vines would probably yield 20 per cent less than the same varieties would on their own roots. But this year all this seems to be changed in my vineyard. My grafted vines now bear a crop very much in excess of the same varieties, which I have had an opportunity of observing, which are growing upon their own roots.

This is especially so in the case of the Zinfandels, Mataros and Tannats. Is it possible that the root system of the Riparia is so much more vigorous than that of the Vinifera as to make the grafted vine more productive?

That this root system of the Riparia is more vigorous than that of the Vinifera seems to me to be established by the fact that the Riparia (ungrafted) produces more numerous and longer extending canes than I have ever seen in the case of viniferas of the same age, and this upon the hypothesis that the root growth bears relation to the cane growth.

I beg your attention to another observation which I have made this year and which may prove of value. The grape crop this year in Napa is said to be very light; the grapes are said to have suffered from coulure and heat. My vineyard has so far been absolutely exempt from this complaint, and to the contrary bears such a large crop as to make me a little uneasy as to the *quality* of the wine to be produced from them. My vineyard is, as you are aware, in the lower part of Napa valley, where the summer climate is very much mollified by the saline air of the bay, and to a superficial observer this difference of climatic conditions might afford a reason for the exemption of my vineyard from the effects of the heat or whatever cause may have produced the shortness of the crop in the upper valley. But this difference in climate does not account for the difference of crop, as is demonstrated by the fact that the vineyards of my neighbors, having the precise climatic conditions of my own, are in the exact condition of shortness of crop as those vineyards higher up the valley. My vineyard is on resistant roots and my neighbors' on vinifera roots. Is it possible that this fact can account for the exemption of my vineyard from the causes which have produced the shortness of the crop of my neighbors, and of the vineyards in the valley generally?

I express no opinion upon this question, but give you the facts in the hope that your longer experience and more extended knowledge of such matters may enable you to answer the question.

You did me the honor of paying my ranch a very hasty visit a few years since, and if your engagements would admit of your doing so, I would be very glad if you could repeat this visit this year before the coming vintage, and before you conclude your contributions to the RURAL upon "Resistant Vines." Truly yours,

JOHN A. STANLY.

[Mr. West considers the above record of experience of much interest. He remarks in handing us the letter for publication that he considers coulure and heat effects as due to climatic conditions and not to root influences, except that a young vine with a strong root may resist adverse climatic conditions a little better. It should also be noted that Judge Stanly cultivates his vineyard well, and that is another means of insuring strong vines.—EDS. PRESS.]

Eastern Grapes on Our Southern Coast.

EDITORS PRESS:—I would like to inquire, through the PRESS, relating to the raising of the more hardy varieties of Eastern grapes—for instance, the Concords, Delaware, or Martha—in this locality. Why are they not raised in Southern California? Providing the conditions of soil were favorable, what other drawbacks are there aside from the fogs? Prevailing winds here are from the west, with occasional eastern gales in fall and spring.

Hueneme. H. S. HARVEY.

[Some of our readers resident on the southern coast may give us an interesting letter by describing their experience with these varieties.—EDS. PRESS.]

PATRONS OF HUSBANDRY.

In our Rural Press [illegible] issued every week, will be found [illegible] matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

Pull Together.

Some Grange readers south want to know what the RURAL thinks of the Farmers' Alliance.

While we cannot yet tell so much about it as we may be able to later, we believe this new farmers' organization is on the eve of doing a "powerful sight" of good. It has our best wishes for true success. If the costly lessons of experience the Grange has learned in 21 years are worth anything to the Alliance, every true Patron should freely lend a hand and help along those who are traveling our way, whether they drive a single or double team, or foot it a part or the whole of our road. Why not? Why should one fraternal society (any more than a church) do otherwise than say God-speed to all other deserving organizations? May we not yet hitch teams to advantage, at least in hard places?

A Gala Day at Watsonville.

Saturday, Aug. 23d, was truly a gala day for Watsonville. At an early hour scores of teams, loaded with provisions and happy Patrons, might be seen coming from all directions to the Opera-house, the Grange headquarters for the occasion. The artistic Overseer, Bro. A. N. Judd, with his superb committee, had embowered the stage with vines and flowers, while sheaves of golden grain, from which gleamed half-concealed sickles, with agricultural implements appropriately decorated, presented a beautiful farm-scene seldom witnessed. The tables were—but oh, pshaw! "Pity without relief" is useless, so why tantalize? Suffice it to say that Bro. R. Barland and his energetic committee received encomiums from all, while Bro. C. Porter and committee's coffee was voted A No. 1.

After banqueting the body, the talented Lecturer, Sister A. Bowman, presented a feast to the soul through a splendid program. Exercises were begun with an overture by the Grange Orchestra, or Bowman's Band, led by Dr. Cargill and assisted by C. and W. Bowman, F. Hitchings and Miss Pearson, a pianist and graduate of the Conservatory of Music at Boston. During the exercises this accomplished lady rendered an original musical composition in so artistic a manner as to prove her a genius of harmony. She is temporarily visiting our valley for health and observation, and our music-loving people might, perhaps, induce her (as she is much pleased with the Pajaro) to give courses of instruction in music, both instrumental and vocal. Miss Childer's piano solo, "Drops of Rain," was true to nature. The music throughout was said to be the best heard here for years. Little Lima Bixby captured the audience by her sweet song, while Mrs. Struve's address of welcome and Mrs. Tate's essay were well received. Miss Moliere, a true disciple of the great Delsarte, who has of late freely bestowed her time and talent for the education and amusement of our people, favored the audience with "Money Musk;" being roundly encored, she responded with a selection from Shakespeare, so powerfully as to stamp her a gifted elocutionist and queen of tragedy.

Among the visitors were three of the State Grange officers—the silver-tongued Master, E. W. Davis, the "Old Man Eloquent," P. M., I. C. Steele, and the inimitable young-old man, Treasurer C. J. Cressey—all of whom gave admirable addresses.

Much credit is due the entire Grange for its hospitality and good management, and to none more than to Bro. and Sister J. C. Drew, while Bro. and Sister Uren rendered valuable assistance.

The "Big 40" class was in charge of Sister J. A. McCune and Bro. Hitchings, who marshaled them with ability and skill.

After the meeting a large number of applications for membership was received and (contrary to intention) amid all our other work, another large class will be pushed through with dispatch before the meeting of the State Grange.

Thus ended another day which proved both a credit and a pleasure to all participants, and shows plainly how good it is for farmers to meet together in unity, peace and friendship.

A. P. R.

THE FARMERS' MOVEMENT is a natural outgrowth of the times. For years this most important class of the population has been outrageously robbed. They have borne their wrongs with too much patience; but now they are turning on their oppressors, and it will be a sorry time for the blood-suckers when the votes are counted next November. Let the farmers and industrial classes generally concentrate on Legislative and Congressional candidates, and they can secure what they want. Vote only for the men who will carry out your principles.—*Cincinnati Enquirer.*

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

Farmers of California, remember how you have to delve and sweat to earn the money to pay your State and county taxes. Remember this fall brings a general election, and let me say to you now, before the heat of the campaign is on, remember to vote for men who will appropriate less of public money. Taxes are too high. There is no sense in such extravagance. No farmer can afford to pay the present rate of taxation. Bankruptcy is sure to follow unless taxes are reduced. Remember!

Be vigilant, Patrons, for the politician is about seeking your vote and taxable property.

The Executive Committee of the National Grange and the Executive Committees of the Pennsylvania and Virginia State Granges were to hold a joint meeting at the Interstate Grangers' Picnic Exhibition, which comes off at Williams' Grove, Penn., August 20th to 30th. This is a step in the right direction. This is meeting together, talking together and working together.

Brother H. E. Hayes, Worthy Master of the Oregon State Grange, and other prominent Patrons from our northern sister State, are expected to be present at our State Grange session in October. Come, brothers and sisters of Oregon, don't wait for special invitations. Our Patrons will all be glad to welcome you to our annual conclave.

Only a little more than a month till the meeting of State Grange! How many new Granges are to be organized before then? Deputies should lose no time in preparing for the session.

Now is the time to get your blanks for the railroad agents to sign, so you will be enabled to get reduced fares to the State Grange. Don't forget the blank. Call on Brother Dewey for it if the Secretary of your Grange cannot supply you.

The Trade-Card Plan is worthy of your consideration. Has your Grange taken any action on the subject? Don't say the Executive Committee has not proposed something tangible in the way of business. If you know of a better plan to help the farmer, propose it at the State Grange.

The charter for Waterloo Grange has arrived, and has been duly signed and forwarded.

One by one the links of that strong chain—the *farmers'* chain, the Grange—are being welded. During the past six months there have been, on an average, two new Granges every day. Does it seem to you that the Grange is not growing? Does it impress you that the farmers are not organizing, and that they do not appreciate the power and influence of the Grange? To me it seems just the reverse.

When Faith, Hope and Charity are prompted by Fidelity, then, indeed, is good sure to follow; and remember, the Grange exercises Faith, Hope and Charity, and does it in (Good Faith) Fidelity to all mankind.

When you go to the garden to get a flower, you select an opening bud, or at best a half-opened rose. So, when you select the flowers of the community—men and women—for the Grange, get those who are full of promise; get those who will help and be helped, who will suggest and receive suggestions, who will work for the Grange and be profited thereby personally. Such we want and need.

Encourage your son to earn $3, and when he has earned it, advise him to join the Grange. Membership in the Order will pay him a better dividend than any corporation stock in the United States. Parliamentary law, education, art, science, music, morals, manners and true manhood are always valuable property. These the Grange has to give to any inquiring, attentive, studious young man.

"Not all that glitters is gold." Half of the sweet words that are spoken are not meant. How important, then, when one finds a *true* friend to fully know that fact, and knowing it, to make your friend know it also. Then, indeed, the kind word *is* fitly spoken.

Strive to make *your* Grange the most instructive, the most attractive, the most popular one in California. Then will the attendance increase, the membership grow and the Order be profited.

Remember every leaf on the tree or plant has its use and a duty to perform. So every member of a subordinate Grange has a work to do and a duty to discharge.

Study the true doctrines of Government and you will be more than a partisan; you will then see the need of protecting home and country, and that beats any and all party politics.

Love thy neighbor as thyself, and at the same time forget not that the Grange is the best place to meet neighbor and to discuss those questions that interest all farmers alike. Don't underestimate the Grange!

From Tualitin Grange, Oregon.

EDITORS PRESS:—Tualitin is not dead, neither is she sleeping, that her correspondents have been so derelict in duty; but rush of farm work, cares almost innumerable, which weigh heavily at this season on the farmer, his wife and children, prevent the pen from performing its duty.

No, our Grange members are faithful, our meetings full of interest, and occasionally we add to the number of those who strive to aid us in our work.

The Grange's Opportunity.

When we realize what the Grange might be, what it would be were all its members fully aroused to a consciousness of their duty, each feeling his or her own individual responsibility, working together with enthusiastic determination—working mentally as well as physically—we wonder why the wheels of reform do not roll more rapidly, bringing with every turn the glad tidings of progress in the cause of America's suffering people; for although we claim freedom for our country, is it really ours while the fact is clearly demonstrated that millions of our people are bound as with an iron clasp and pray to be relieved? Whence is relief to come? Only through the education of the men and women of our land.

Cannot the Grange do its full share in this ennobling work of educating the laboring classes, that they themselves may be able by earnest, united, unflinching effort to pave the way, thoughtfully and peacefully, but steadily and surely, to a condition of freedom from servitude and from the shackles of oppression? May the time be not far distant when both men and women shall understand the laws which govern them, and keep in check the elements of corruption which are found even in the highest official stations of our so-styled free American Government!

Sister C. E Kinney, in her "Communication to Sisters of the Grange," strikes the keynote of success in Woman's department, and would every Grange in the nation adopt the plan therein suggested, the social and educational standing of the woman of the farm would be so improved that no other class could excel them in useful lore, or lend more helpful aid in the great movement which agitates the minds of the multitudes thoroughly aroused to the necessities of the present age. How plainly she shows the importance, the utility, the beauty of our work, and the ignorance of the majority of women, both in country and in city, in reference to the laws of their own State.

Sisters, let it be not long *said* of *us*, should we be called "to stand alone," that in default of a business education we "are at the mercy of unscrupulous men!"

Brothers of California, Oregon and Washington, will you not encourage and assist the women of your Grange, that they may keep "mentally abreast" and "be the strong allies and counselors whom our Order needs in this crucial struggle for justice, competence and a type of life worth living on the farm?"

Sister Kinney's letter is deep and practical, and merits the thoughtful attention of the Grange. May its suggestions be of untold benefit to our Order, is the wish of yours fraternally,

S. L. HAYES.

Oswego, Or., Aug. 19, 1890

Eureka, Magnolia and Grass Valley.

EDITORS PRESS:—Eureka Grange has been moved into Auburn, where they think that they can do better and get more members than they would at their old place of meeting.

On the 23d instant, wife and I went by rail from Marysville to Lincoln. At the latter point we procured a livery team and drove 16 miles across the country to Auburn, where we found a goodly number of the members of Eureka Grange assembled at the Grange hall. As soon as we entered, they came forward to greet us with true Patrons' hospitality; and presently the Grange was called to order, and by request of the Worthy Master, I took the chair and conferred third and fourth degrees on a class of four—two brothers and two sisters.

After the degree work was finished, we were invited to take seats at the table prepared for the occasion, and to conclude the fourth degree after the inner man had been satisfied. I gave them a good talking-to on the Good of the Order and what they should do to make theirs a live Grange.

Bro. Hall of Newcastle was there; also Bro. Still of Magnolia. The latter has made arrangements for me to visit Magnolia Grange on the 11th of September, and I hope to see as many Grangers as possible present there and then, as it is a long trip for me and it takes three days and considerable expense to make the visit. So I want a good turnout of the Grangers in that vicinity.

I sent word by Bro. Still for Grass Valley Grange to meet with Magnolia on that day, so that the one visit would do for both Granges.

Fraternally, B. F. FRISBIE.

Yuba City, Aug. 25, '90.

MARCH GRANGE.—Bro. W. T. Lam, W. M. of March Grange, made the RURAL a friendly call the first of the week, and brought cheerful news from Pennington. He says they initiated three new members last Saturday, have more in prospect, and will be represented at the State Grange this year for the first time since their organization.

Timely Thoughts for Farmers.

An Address to the Grangers of Santa Barbara County

[Delivered at the Carpinteria Grange Picnic, Aug. 14, 1890, by J. V. WEBSTER, P. M. C. S. G.]

Worthy Master, Patrons and Friends:—I have often heard of Carpinteria valley. Brother Cadwell never fails to give a favorable impression of it wherever he goes.

Colonel Heath, while at my house some two years ago, praised your climate and your soil, declaring that all land here suitable for walnut-growing was intrinsically worth $300 per acre unimproved.

The picture of its loveliness has not been overdrawn. The sea and the land intermingle but a little distance to the west. Through the enshielding hills the warm currents are kindly tempered to the fortunate dwellers of this delightful region.

This Santa Barbara link in the golden chain of California counties is not less bright and enduring than those formed by her most favored sisters. To the close observer, every spot visited but adds to the charms of our beloved State. In Santa Barbara you have had a boom. Nearly every town south of this has had one. Many people of the colder counties and countries accuse you of exaggeration as to your climate and possible resources. The same is said of your sister counties farther down the coast. If so, it is like the youth who expatiates on the beauty and perfection of his mother, for no sentiment is higher or holier than love for our great Alma Mater.

It needs no prophet to divine the probable future of this coast; as yet we are but just beginning to gather the bright pebbles along the shore of a boundless ocean of beauty and wealth.

The earth is girdled with restless, ever-moving humanity, always seeking the unknown and thirsting for the unattainable. So it has ever been, and so it will ever be. Spots have been found upon the globe so enchanting in position, climate and resources that people of all nations cluster around them like ants about confectioneries.

Be satisfied! The last found is certainly the best. Worship the brown soil of your fields. Love and cherish it as you would an indulgent mother. It is not yours, but simply given in trust for the millions yet unborn, and he who wantonly impoverishes or destroys an acre of land is worse than a vandal. Take pride in your productions. Endeavor to add continually to the charm and comfort of your surroundings, and a wealth of beauty and utility will be developed in California yet unequaled in all the world. Then seekers after health, wealth, pleasure and solace will turn to you, as turns the morning-glory to the rising sun, that life may be sustained and strengthened.

God may shower His blessings upon the earth, but their disposition is left in the hands of men; and to the thoughtful, the chief element in the religion of the future will be the love of Nature.

That we or our children may realize the full fruition of this thought, every citizen has a sacred duty to perform.

Stability and Security of Government

Are indispensable to this development—a Government wherein is secured the greatest good to the greatest number. This end can only be attained by an unbiased and watchful care upon the part of every one in the full discharge of every duty devolving upon all worthy citizens.

The weak must be sustained and the strong restrained. Blind party following must have an end, which can be reached only by a more liberal and intelligent public sentiment.

We complain of many wrongs; some of them are oppressive and discouraging. The farmers of the nation are especially concerned in having them righted.

Combinations

Are the order of the times, and always against the political or material interest of the producers. To offset this tendency, we must meet organization with organization, and there is certainly no time for delay.

These wrongs and exactions come chiefly through the tax gatherers, trusts and transportation companies, and have shown unbearable. The agricultural interests of the Atlantic States are paralyzed. Farms are being abandoned by the thousand. The great Northwest, with her granaries filled to overflowing, mourns in anguish over the fitful profits allowed them by the common carriers. A few railroad magnates and trusts appear to hold the financial destiny of the country in the hollow of their hands. Their dictation is commercial law, from which there appears to be no appeal.

"All the Traffic Will Bear."

To extract from every product for its carrying "all the traffic will bear" is the declared principle and practice in railroad operating; in other words, to extract every cent obtainable in the form of freights and fares.

Is there any remedy for this evil? We complain of hard times. What is the cause? Is it altogether because of the limited amount of money in circulation? Or does not our embarrassment chiefly arise because of unjust exactions?

It is not so much our earnings as our savings which induce prosperity. If the legitimate profits of our toil are taken by excessive taxes, trusts and transportation companies, an additional money circulation will not materially relieve us.

Can we not reach a conclusion as to where the bulk of our profits has gone?

Let us see. The estimated value of all railroad property in the United States is about $8,000,000,000. *Eight thousand millions of dollars!*

Equal to 500,000,000 pounds of silver! *Two hundred and fifty thousand tons*, and would load 50,000 cars with 10,000 pounds each, and make a train 580 miles long. Reduced to gold, it would make 31,250,000 pounds, or 15 625 tons, and would load 3125 cars with 10,000 pounds each, or would make a string of $20-pieces reaching from San Francisco to New York, thence across the Atlantic Ocean to Liverpool, and then have sufficient left to build a golden palace. In fact, this $8,000,000,000 of railroad wealth represents more money *than the aggregate assessed value of all the farms in the United States*—less the mortgages and other incumbrances thereon—and a value equal to the net receipts of all the products raised since railroading became a prominent factor in the carrying trade!

This estimate will give you some idea of the vast wealth accumulated by a comparatively few men within the last 40 years. Seven-eighths of this amount is represented by gifts of the Government, State, county and municipal donations, coupled with the unjust exactions from the people, in the shape of extortionate rates of freights and fares.

With this condition of things existing, is there any wonder that the agricultural interests of the State and nation are depressed? What wonder is it that mortgages are continually piling up on our farms? What hope is there of the country's prosperity, when the principle in railroading prevails everywhere, as expressed by Leland Stanford 15 years ago, that the policy was, and is, to extract from every product for its carrying "all the traffic will bear." In other words, to take every cent which can be extracted from every product carried. Is there no remedy for this evil? Many have been proposed and subsequently found to be unavailing. Legislation, fixing rates of freights and fares, has been tried and failed. A few years since, State railroad commissions were thought to be the proper thing. This experiment has been abundantly tried, with unsatisfactory results.

The United States railroad commission has done something in a general way, but the root of the evil will never be reached by any method yet adopted. Nevertheless, regulation and control we must have, or abandon all hope of agricultural prosperity for the future.

How shall we secure it? That is the burning question which transcends all others.

It appears to me that there is one possible solution of the difficulty. That is, for the Government to condemn, appropriate and operate a sufficient number of railroad and telegraph lines to regulate and control the traffic.

The Nationalists

Declare in favor of the Government condemning and appropriating *all* railroad and telegraph lines, to be operated by Government employes.

Monstrous conception and dangerous beyond precedent! Put it in practice and republican government in this country will speedily come to an end.

A million and a quarter of men are at present required to operate the railroad and telegraph lines in the nation. This vast number of voters, appointed to positions by any party under Heaven, would make them the friends and allies of the appointing power. This is simply demonstrated human nature, and there is no escape from the inevitable conclusion. Self-interest would subsequently carry them with the party of their appointment. Consequently, this element would hold absolu ely the balance of all political power, and from their dictation there could be no appeal, short of revolution. An oligarchy in governmental affairs would then control the destinies of a great people, ultimately culminating in centralization, with a single head in the lead.

Certainly, we are sufficiently near this line of danger at the present time; certainly, the rich and powerful have already a sufficiency of power, and every increase in this direction certainly decreases the chances of republican government on this continent.

Any government to be enduring must be able and ever ready to protect the rights of its subjects. Robbery under the forms of law is the most dangerous and demoralizing of all robberies. Therefore all laws should be just and strictly enforced.

I am opposed to the Government engaging in any business inimical to individual enterprise, where avoidable, but it must have and exer cise strength sufficient to regulate and control a crying evil.

Two lines of railroad and two or three of telegraph across the continent, under the direction and control of the Government, will be sufficient for the purpose.

The Pacific Railroads.

From San Jose to Omaha, the Central and Union Pacific roads equitably belong to the people. Having totally failed to comply with the terms of the Congressional Acts under which they were created and endowed, their lease of co porate life should not be extended, as proposed in the refunding bills now before Congress.

The Government should, therefore, condemn and take possession of said roads, and in conjunction therewith condemn, pay for and appropriate a continuation of the line to Boston via Chicago and New York; then, in the same manner, take possession of some other line from, say, Richmond, Virginia, traversing the Southern and Gulf States, via the "Sunset route" to San Diego or San Francisco.

Rates of freights and fares, fixed and maintained by the Government, on any two such roads, would substantially regulate and control the carrying trade of the whole United States, by compelling every other road to adopt, substantially, the same rates, or become simply feeders to the Government lines.

So with the telegraph lines indicated.

That this plan will be the ultimate result of the controversy appears inevitable, for there seems to be no other practical solution of the embarrassing situation, and public opinion is certainly drifting in this direction.

In order to divert popular attention from this and other vital questions, every cunning device conceivable is being used.

The Sub-Treasury Scheme,

Recently advocated before the Ways and Means Committee of Congress, is of this order; so with Senator Stanford's proposition to loan money by the Government directly to the farmers at nominal rates of interest. Many worthy people have been led off on these tangents. Wall street and other money centers are aiding to stuff these bubbles, in order to divert attention from the consideration of practical and vital questions.

Certainly we need more money. $1,300,000,000 are all we have in actual circulation in the United States, or about $20 to each inhabitant. In 1865 we had in circulation $31 for every man, woman and child. We need at least that proportion now, in order to successfully conduct the business of the country and enable the debtor class to meet their obligations. To meet this emergency, farmers all over the nation have been urging Congress to pass an Act providing for the

Free Coinage of Silver.

For months a bill of this nature was under consid-ration, but the money kings were too powerful for the American people. A compromise has been adopted, providing for the monthly purchase of 4,500,000 ounces of silver, to be paid for in legal-tender notes, redeemable in coin of the United States.

While not altogether satisfactory, this measure has settled the question for the present, and much increase of circulation is likely to result therefrom; consequently easier times are anticipated.

What the farmer chiefly needs is the privilege of retaining a fair proportion of the profits of his products. Being robbed of this, he can have but little available funds, no matter how much money there may be in circulation.

Many industries and branches of trade appear to be fairly supplied with money. The banks are full to overflowing, and secure large returns on their investments. The farmer appears to be in the lurch and most distressed of any class only because somebody else captures the profits of his products.

He is as much embarrassed in his buying as in his selling. Being short of cash, he goes in debt for necessary supplies at ruinous credit rates, anticipating better times—which never come.

The injunction is, "Pay as you go;" you have this gratuitous advice from almost every writer and speaker, as a solution of our financial troubles. But how can the farmer pay as he goes when his goings are continually greater than his comings, in spite of his most desperate efforts "to make both ends meet"? Does he not work a sufficient number of hours? Ask the early twilight, the sun at meridian hight, or the dews of night! The country is certainly attractive and enchanting, but 16 hours of toil per day would mar and curse the glories of Paradise!

What other people labor so incessantly? Would you have him stint his table below its present level, in order that he might be able to pay as he goes? The inmates of San Quentin live as well, while charity and hospital patients are better clothed and fed! What other sacrifices would you have the average farmer make? Not one-half, not one-third of them feel that they can afford to subscribe for a farmers' paper! Printed in San Francisco is one of the best rural and Grange journals published in the United States; yet not one-half of the male members of our Order in this State are on the subscription list of the RURAL PRESS! Nothing can indicate a greater scarcity of money or a greater lack of interest in matters vital to farmers than this fact! The tether is certainly tightening. The slack in the rope has nearly run out, and we might as well brace our feet to withstand the shock that is surely coming.

Trusts and "combines" control the price of almost every product; hence the farmer is unable either to buy or sell at legitimate rates. He is the dupe and dumb, patient pack-animal of every other calling, simply because of his passivity or unorganized efforts. It is difficult to establish unity of action among farmers, chiefly because of their isolation and inaccessibility.

Then, again, if the Grange has an advocate, some other farmer will say he thinks the Alliance is better. If the Alliance has an advocate, the Granger feels antagonized, and between the two, sandwiched in with the constitutional grumbler, but little effective work is done.

The struggle for human existence grows continually greater. The organization of other classes for self-protection goes steadily on. The merchants, mechanics, cooks and hod-carriers are units of their kind. At their meetings they discuss, quarrel and even fight over resolutions and propositions presented, but when any measure is fairly adopted by the majority, the minority gracefully surrenders and joins the majority to push the work agreed upon. Hence the influence of these organizations, socially, politically and financially.

How is it with the farmers? Disintegrated, nowhere fully organized, apparently unconscious of their power and influence. Meetings are held, resolutions are discussed and adopted. The dissenters go home, grumbling and sad, while the majority, reaching their domiciles elated, go to bed and dream of victory, as did the people of Foxopolis, after having passed resolutions denouncing the frogs in the millpond for disturbing the midnight slumbers of the inhabitants by their continual croaking.

Every jewel has its price, and the measure of its value is the cost of its production. So with every human effort. The value of the attainment is measured by the sacrifices made. Effort is stirred by the divinity within us, and without it there can be no divinity of purpose. Sacrifices must be made by the lovers of humanity. The progress of the world is carried on the shoulders of a very few. Then will you not make a vow here to aid in the good work?

For the sake of our calling,

Join Something.

If you don't like the Grange, unite with the Alliance. If you like neither the one nor the other, why then, join the croakers. Increase their numbers to the greatest extent and when the society of croakers gets stronger than the Grange and the Alliance combined, then we will turn over and join them, to the end that all farmers may get aboard of the same craft for a single pull at least.

There was never a more propitious time than the present to move in the matter. "The fields are white unto the harvest." Driveling away is our substance by exorbitant expenditures in every department of the public service.

A general election is near at hand. The smooth-tongued politician is abroad in the land. He is affable and pliable now. Pledge him to do the service of the State, rather than that of the bosses and bribe-givers. Do you want another Legislature like the last? Twelve and a half million dollars appropriated for defraying the State Government's expenses of two years—$3,000,000 more than ever expended before in the same time. Over 72 cents State taxes last year, and it will take about 75 cents on each $100 of valuation to pay the State's expenses for the current year. Add to this the amount of your county and town taxes and figure out how much more you can stand.

Dear indeed are our party affinities. How we do love to whoop up for it. Its influence is certainly boundless, when it can seduce an honest man into voting for a thief simply because he happens to be on our party ticket. There is nothing but misery in the lead of such nonsense. We have got to get over all this unpatriotic twaddle before we can hope for better things.

But, says the wire-worker, the next Legislature will elect a United States Senator. What of that? What difference does it make to the average citizen which party secures its man? Every Senator elected from this State for the last 20 years has paid for the place in gold coin, either directly or indirectly. As to the merits of the men elected, the Lord only knows which has been worst. King Coin and corporations have controlled their action, and unknown and unnumbered are they as representatives of the dear people. The constable of your town is of more concern to you. Then cast party shackles to the wind and vote for *men* and *measures* calculated to secure equitable legislation and reduce the expenses of government.

Legislative Candidates.

The character of the Solons now seeking your suffrage is of deep concern to every voter. Important measures will be pressed upon the attention of the incoming Legislature, and we should commit no mistake in the make-up of that body. At best it will be all we can do to offset the bums and bribe-takers likely to be sent up from San Francisco. We must secure:

(1) The passage of an Act providing for the Australian system of voting in this State.

(2) An Act providing for the payment of State and county taxes in semi-annual installments.

(3) An Act providing for the re-assessment of Central and Southern Pacific R. R. property, whereby these corporations may be compelled to pay their delinquent taxes, amounting to over $3,000,000.

(4) An Act providing for the levying and collecting of an income tax on the net annual earnings of all corporations in excess of $20,000, graded so as to increase the rate of tax as the incomes of such associations increase.

(5) The election of a United States Senator who will pledge his vote and influence to changing the Federal Constitution so as to provide for the election of such Sena:ors by a direct vote of the people.

These are non-partisan questions in which every good citizen is deeply concerned. These are some of the live issues that should be brought prominently forward in the approaching canvass, and the partisan nominee who will not pledge himself to their support should be left at home.

If retrenchment in expenses and reforms in other directions do not speedily appear, our republican institutions will certainly be endangered.

There is unrest everywhere. A life and death struggle has commenced between the tax-payers and the tax-eaters. In every considerable city and town in the land this latter element is continually increasing. All eyes, the nation over, are turned to the country, whence only aid can come in this emergency. Disintegrated and their energies paralyzed by unju t burdens, the farmers are at present poorly able to respond to this call. Consequently disorders must arise. They have already arisen in many of the great cities. Their police forces are being continually increased in order to protect the lives and property of the respectable element.

If the yeomen of the nation were united in action and fairly prosperous, the danger would disappear. But they have been oppressed and plundered so often by unjust laws, corrupt court decisions, trusts and transportation companies that many of them have lost heart.

The way things are now running, thirty years hence will see the American farmer reduced to the condition of the French peasants of a hundred years ago. When appealed to by Louis XVI to aid him in quelling the Reign of Terror inaugurated by the red-handed Jacobins of Paris, they replied: "You have, by oppressions and extortionate taxes, robbed us of our substance, and all love for your government is gone. We therefore have nothing to lose and everything to gain in the success of the revolution."

May this nation be saved from a like calamity! Nevertheless, the tendencies of the times are certainly in that direction. The rich are continually growing richer, more reserved and exacting, while the poor are continually growing poorer and more dependent, with the soil-tillers working for a bare sustenance.

The moral tone of the affluent "society" people of the present day has reached a lower level than that prevailing in the voluptuous age, just before the fall of the ancient Grecian and Roman republics.

How can we check this evil tendency? Who will suggest a remedy? To my mind there appears but one practical solution of these difficulties—but one avenue of escape from the dangers of revolution—and that is, by unity of action among all farmers, to secure just and equitable legislation and a fearless enforcement of the laws; to restrain the rich and protect the poor; to place *manhood* above money and above obligations to party creeds, to the end that misdeeds may be punished, the administration of the government less expensive, simplified and purified, and every man made to feel that exact justice will be meted out to him.

You may call me an alarmist—it may be so. I judge the future by the past. I believe that like conditions produce like results the world over, and that if we would avoid the embarrassments and dangers of the past we must avoid the causes which produced them.

Take these thoughts home with you. Give them a candid consideration and I think you will at least agree with me in urging farmers to organize.

Grimes Up and Doing.

EDITORS PRESS:—**Grimes Grange held a lively and interesting meeting on the 23d inst. The busy season here is on, and the Patrons turned out in force.**

Sisters Clare, Schillig and Kilgore were appointed a committee on a Harvest Feast, and the members are looking forward to something grand. An invitation was extended Bro. Frisbie to visit us at his convenience, and we intend to give him a warm welcome when he does come.

Quite a number of our members purpose attending the Harvest Feast to be given by the Yuba City Grange on the 29th inst. We will expect our Yuba City brothers and sisters to return the compliment when we give our Feast.

Our Grange will be well represented at the Watsonville meeting. Besides our Worthy Master and his family, several of our members will be present. Brother and Sister A. A. Thayer were elected alternate delegates to the State Grange.

Bros. C. P. Wilson and Jesse Poundstone were elected delegates to the California State World's Fair Convention to be held at San Francisco September 11th.

A special meeting was called for Wednesday evening, August 27th, to confer the fourth degree on a brother who desired to attend the Yuba City Grange on the 29th.

This Grange is certainly in a very flourishing condition and promises to become even more so. We purpose to do everything in our power to make it interesting for those already members, and to attract others to seek admission. P.

Grimes, Colusa Co., Aug. 24, 1890.

He Will Be Right Welcome!

The many Californian members of our Order who had the pleasure of hearing and meeting Bro. J. H. Hale of Connecticut when the National Grange was with us last autumn, will read with interest the following letter, just received by the State Secretary:

SOUTH GLASTONBURY, CONN., Aug. 19, 1890.

Bro. Dewey: Possibly you know I have in charge a special investigation of the semi-tropic fruits of the country for the Eleventh Census of the United States. It is my intention now to visit your State early in the fall, and I hope to reach there in time to attend your State Grange meeting at Watsonville on the 8th of October; for I assure you nothing wou'd give me more pleasure than to meet once more with the loyal Patrons of the Pacific Coast; and at the same time there ought to be many in attendance at your convention who could give me much valuable information upon the subject I am investigating. Fraternally yours, J. H. HALE.

We will gladly welcome back so jolly a representative of the National Grange. His bright presence will help insure a lively session; and if Sister Hale (as we hope) is coming with him, it will be all the better!

NORTH PACIFIC INDUSTRIAL EXPOSITION.—**In inclosing to the editor of the RURAL PRESS a complimentary ticket for the second annual exposition of the N. P. I. Association, Sup't and Sec'y Allen says that the time has arrived when the character of the exposition can be largely determined, and he is pleased to be able to state that it bids fair to excel any ever held on this coast in the magnitude and beauty of its exhibits. Many new and attractive features, not hitherto found at any similar exposition in the United States, will be shown, and the Secretary believes that the educational value of a visit to the exposition upon this occasion cannot be too highly measured, and no one can afford to let the opportunity pass without carefully examining its wonders and enjoying its delights. We sincerely hope the display will fulfill its promise to the full content of its sanguine promoters.**



A Country Courtship.

Driving the cows from the upper meadow—
  Beauty and Brindle and Bess—
Now in the sunlight, now in the shadow,
  And now in the wind's caress,
With song as sweet as at morn the starling
  Is wont to the skies to trill,
Mollie, the farmer's daughter and darling,
  Comes tripping adown the hill.

Purple and black are the braided tresses
  Her dainty temples that crown;
Light is her step on the sward it presses
  As fall of the thistle-down.
The squirrels peek from the wayside hedges
  As the maiden moves along,
And count it chief of their privileges
  To list to her jocund song.

Down where the alders and slender rushes
  Border the rivulet's banks,
And the widened sweep of the water gushes
  Under a bridge's broad planks,
Whistling a love-song in broken snatches—
  His hat pushed back from his brows—
Robin, the miller, awaits and watches
  For the coming of the cows.

Up to their knees in the stream, the cattle
  Drink deep of its crystal flow;
Little they care for the lovers' prattle
  Or the bliss the twain may know.
Their heaving sides with their draughts distended,
  They enter the path again,
And crop the grasses, with heads low bended,
  On either side of the lane.

The shadows deepen, the dew is sprinkling
  With diamonds all the meads;
And faint and far, in the distance tinkling,
  The sound of the bells recedes.
Still on the bridge where the water glistens,
  As the moonlight on it falls,
The miller talks, and the maiden listens,
  But the cows are in their stalls.

—*H. D. Kelly in Ladies' Home Journal.*

Subjects for Conversation.

[Written for the RURAL PRESS by MARGARET B. HARVEY.]

When I was a small girl, about thirteen years of age, I was consumed with an unquenchable desire to be "ladylike." And to be ladylike I thought implied the ability to converse well. I confided some of my ambitions to my Sunday-school teacher, whom I believed a miracle of perfection.

"Yes," she said benevolently, "it *is* a good thing to be able to converse well—it *is* 'ladylike.' As you grow older and gain more knowledge of the world, you'll learn how to converse. For instance, if you'd been a little older and seen a little more, you wouldn't have talked about what you did the other day."

"What I did the other day!" I exclaimed in surprise and fear. "What was it?"

"About the horses—that wasn't interesting!"

Not interesting! I felt utterly crushed. That, for the time being, was the end of my ambition. I had committed the unpardonable blunder of relating something that was not interesting!

But many times since has this conversation come back to me. Many times have I remembered the circumstances under which I told "about the horses."

My teacher, another lady, the latter's nephew and myself were in a Germantown wagon, driving along a romantic country road. The horse stopped to nibble at some bushes that overhung the post-and-rail fence. I noticed it and exclaimed:

"A horse will eat lots of things—he'll chew a pine log!"

"How do you know?" asked my teacher.

"Because we had a hired man that told me so. He had been in the war and seen the army horses do it." Then, struck with a sudden recollection, I added: "That man told us a great many queer stories. He said that some of our own soldiers stole horses from the Government and sold them to the rebels."

"Why, Emma!" "Why, Tom!" "Did you ever hear of such a thing?" "Wasn't it dreadful?" It was with such exclamations of surprise and incredulity that my statement was received. Yet, two days later, Miss Emma herself told me that it was "not interesting."

In the light of recent experience, I venture to assert that it *was* interesting. It interested me when I heard it first; it interested my hearers when I repeated it. I have never repeated it since, but I have often wondered whether it was really true. Never yet have I seen anything of the kind mentioned in the many-times-told "annals of the war"—never yet have I met another soldier who related a similar story. Yet so strong was the impression of that "squelching" that I have scarcely recovered from it yet. I have never had the courage to ask a single question about army horses for fear I should lay myself open to the reproach of being "uninteresting;" and I have no doubt that I shall go through life ignorant concerning some of the very things I want to know, simply because I cannot bring myself to ask.

My teacher's words have not come true. As I grow older and gain more knowledge of the world, I am more and more in doubt as to what constitutes the fine art of conversation. If, as the critic of to-day is so ready to declare, this is a lost art, it may be because the people of to-day were squelched when they were little, as I was. If they had been left to their own unperverted instincts and permitted to talk "about horses," perhaps they would be talking much better now. Perhaps some out of them all would have volunteered to tell me about army horses, and not felt afraid. I might have known by this time what I have long wanted to know, without asking a question.

But oh! I *do* hear so much that does not interest me a particle. Is the fault with people or with me? The same Miss Emma consumed a whole hour telling me how her dog bit her chicken—I did not know that she had a chicken, and was mortally afraid of her dog. Would she have been offended if I had told her that *that* was "not interesting," or would she have said, as many do, "If it interests me, it *ought* to interest you"? Well, perhaps it ought, yet whenever I hear that stale exhortation, "Be a good listener," I feel like exclaiming, "That means a brave martyr!" I have known of brave martyrs afterward hearing of themselves something like this: "I tried hard to entertain her, but I couldn't. She sat there two mortal hours and never said anything but 'Yes' and 'No.' I never was so tired in my life! Did you ever hear of anything so trying?" This is, truly, "the pang without the palm" with a vengeance. The martyr could have said more than "Yes" and "No" if she had only known that she was expected to say more. Had the other not tried so hard to entertain, she might have found herself in the way of obtaining the very piece of information that she wants, for we all have "horses" that we are afraid to mention.

Now what is to be done about it? What are our young people to do—and older ones, too—if they sincerely desire to improve? I'm sure I don't know, but I feel like advising them thus: "Don't be afraid of horses, if horses happen to be on your mind." Yet I have horse-sense enough to perceive that this rule, literally followed, would often lead to trouble.

The old books on etiquette contained a rule of this order: "A gentleman should never use Greek words in the presence of ladies, as ladies cannot understand them." I heard of a young man who attempted to follow this rule; he was in doubt concerning the rendering of a certain passage in Homer. In the hope of having his difficulties cleared away, he went to the residence of the professor, to meet there, *not* as he expected, the professor alone, but the professor and his charming niece. Our young man was profuse in his apologies. "You must excuse me for bringing Greek roots into your parlor, etc.," but the professor cut off the pretty speech by remarking quietly to his niece, "Mary, your version of that passage was better than that of any of the students. I used it in my lecture to-day." I wonder how much you could have sold the young man for. Very likely he thought it wouldn't always do to "adapt your knowledge to the capacity of your hearers."

And the old books said: "Avoid religion and politics as subjects for conversation." This cannot be done. It is surprising the rapidity or the certainty with which any conversation, continued past a certain point, drifts into religious topics. This may be set down as a law that never fails, showing that the subject of religion, even in the minds of careless men, is more real than people think or will admit. And no one not a wooden image can live through an exciting political campaign and not catch the infection that is in the air and express himself accordingly.

It ought to be supposed that anybody knows enough not to talk about difficulties with servants, to enlarge upon the shortcomings of other people, to complain of their food, to dilate upon dress, to obtrude their business. But how often are you likely to hear anything else? Strange to say, you are constantly regaled with just such "stuff"—for it *is* stuff—from people of whom you have every reason to expect better things. But if it interests them perhaps it's all right—evidently they don't want to hear about books, music, scenery or travel.

I once knew a woman who had crossed the Atlantic six times. All I ever heard her tell about any of her voyages was in this fashion: "The Americans know nothing but trade. You'll find that out if ever you go to Europe. The men on the steamer always ask, 'Who's that, what's his line?'" I was ignorant enough to confess that I did not understand the meaning of the question, "What's his line?" "Oh," answered my informant, "it means 'What does he buy?'" Then I understood—far more than my informant thought. I understood that all the American men whom *she* knew were buyers like her husband. I had lived with Americans all my life and knew many who had been to Europe, but had always innocently supposed that they knew something besides trade, as they said so little about it. I knew numbers of American men who had gone to Europe for the sake of art, science or education.

Before I forget, I must be audacious enough to lay down one cast-iron rule. No matter whether I am good authority or not—heed it. Never talk about the "bawths" or "bahths" you have taken (the spelling is *bath*), nor say that you have been "cleaning yourself." This is a recent exorescence of Anglo-mania as disgusting as it is surprising. People of sense take it for granted that you are clean—they know all about the ordinary means of becoming so. You don't need to advertise the fact that you are not dirty. An Englishman does it for fear somebody will think him a common person who does not bathe. You are under no such disagreeable necessity in a country where we are all aristocratic and all common.

Similarly, let me beg you to spare sensitive stomachs. It is a difficult matter to write about—but there are certain topics which some persons can never hear mentioned without suffering all the pangs of seasickness. I might illustrate, but I could only do so at the risk of hurting somebody else. The strange part of it is that what influences one may not another; so it is safe to keep quiet. Hearing is worse than seeing. I could go into a hospital and behold the most terrible sights with scarcely a tremor, provided I thought I could be of some use; but let another person come and tell me about them, and I feel just ready to faint or die.

After the above, you naturally expect me to indorse the old rule: "Spare us your ailments." So I do; but within certain limitations. The person who has recovered from a spell of sickness is like a shipwrecked mariner providentially brought to land—he needs some interest and sympathy if he is to get along at all. It may do you quite as much good as it will the convalescent if you show that interest and sympathy. As for the half-sick, those who are always complaining without apparent cause, they are more to be pitied than the out-and-out ill. I can understand the feeling of the small boy who exclaimed: "Mamma, if I've got to be sick at all, I'd like to be sick decent!"

And how about the other old rule: "Don't talk about yourself; it sounds egotistical!" Why, it is safe to break this sometimes. People want to hear about yourself; if they don't, why are they so anxious to pry into your private affairs? If you don't say something about yourself, you will soon discover that you are the object of unpleasant suspicions; you will hear such remarks as: "Miss Grace must have some mystery about her," or "Miss Grace is very selfish; she keeps everything secret." When you are talking about yourself, you are not talking about your neighbors. Furthermore, what you do choose to utter, you must utter on your own responsibility—not that of other people's "what *I* think," not "what Mrs. Jones thinks."

When all is said and done, better say something than nothing—better chatter like a parrot than keep still like a wooden tobacco sign. There is music in the human voice, even when its tones are imperfect and when not a word can be distinguished. Our voices were given us to use, even with the risk of using them improperly. Suppose you *do* blunder occasionally; we are all in the same boat, for everybody else does. Unless your blunder is very glaring or oft-repeated, nice people will never notice it nor dwell upon it, and you needn't mind people who are not nice. Be nice yourself toward other people. Exercise judgment and charity. If you try to aim high, you cannot fail to get hold of proper subjects for conversation sometimes, and when you do, it will tell in your favor and be remembered longer than your less felicitous occasions. We will still try to believe that conversation is not yet a lost art; it should not be, when to converse is something that we all have to do, if we have our faculties at all. Try to converse—try!

Save Your Steps.

Written for the RURAL PRESS by MAUDE S. FRASER.]

"Although I expect a great deal of my little ones," said my neighbor to me one day, "I by no means use all my spare energy in training them. I really have found it much harder to control myself than to hold my children in check."

"Surely," I said with a smile, "surely you do not easily lose self-control. I have often admired your sunny, even temper."

"I am not naturally so," she said with great humility. "I must watch myself continually if I would be the example I wish to keep before my children. Then in order to save my strength to use in their best interests, I must save my steps."

"I think you are right," I said slowly. "A step is a small thing of itself, but very important in the aggregate. How many steps do you suppose you take during the day?"

"They could not be easily estimated," said my friend, "and yet, as you know, I have taught my children to give me a great deal of assistance. I do not have to move about on tired feet in the evening picking up toys and clothing they have left scattered about. Then as I am not strong, I have to sacrifice my pride for my health and the happiness of those about me. I have to *make* my work light about the house. We very often eat in the kitchen, especially in the cool weather, because there it is only one step instead of a dozen from the stove to the table."

"I think you are very wise," I said encouragingly. "This pretty little dining-room makes a nice room for you and the children to sit in, and you save all the steps you would otherwise take with those tired feet from this most convenient china closet to the table. I wish all mothers with limited strength were as wise as you."

"My dear wise mother gave me many of these strength-saving thoughts. It is really the steps—the unnecessary steps, one takes during the day that are fatiguing rather than the work itself. I try not to go down cellar for one thing, and leave on the table several articles that I will by-and-by need to make an extra trip to put in place. I have learned to work both ways; carry something down and bring something back. I observe the same rule in going up and down the stairs to the rooms above."

"Perhaps I am tiring you," she said with a little start.

When I eagerly assured her of my interest, she invited me out into her neat little kitchen.

"See," she said, "I try to keep my working utensils where they may be easily found. Think how many steps I save on wash-day by having everything I need from the boiler to the bluing-rag as near the wash-bench as is consistent with neatness. On baking day my patent cabinet table is a treasure in itself, for I am able to keep in it all the materials I would need to use besides the necessary pans for baking."

"In my model kitchen I shall have the motto: 'Save your steps,' I said, as I thanked her with a smile."

He Didn't Want to Trade.

Dick Sharp owns a pretty fine rig. Yesterday evening Dick drove into the country to get a breath of fresh air. When about two miles out, he overtook a sunburned stripling who was driving the toughest-looking specimen of horse-flesh that Dick ever saw. His tongue hung out like a stocking on a clothes-line, his legs were covered with spavins and warped like a rustic chair, his eyes were entirely gone and sickening, mattery boles were in their places, while his tail was worn down to a mere stump by incessant switching. Along his sides and back, where the harness rubbed, were large sore spots, and what was left of his mane was matted together with burdocks and chaff. Dick was a good deal amused at the sickly skeleton and kept looking at him longer than he should have, as the sequence will show. Just as he drew up the lines to drive past, the boy stopped his horse and said: "You seem to be taken with this horse of mine, mister; if you want to take a good look at him, it won't cost you anything; I'll just size up that off horse of yourn and mebby we can make a swap."

This proposal, made in the best faith, apparently, by the boy, staggered Dick, but he got out and looked at the horse's teeth, and tried to shove his tongue back into his mouth, without success, however.

"What makes him keep his tongue hanging out that way?"

"It's his lungs, mister; that animal is so full of good, sound robust lungs that something has got to protrude."

"What went with his eyes?'

"Oh, we had them taken out; too much life; had to do it; did it to curtail his spirits. Why, mister, before we deprived that animal of his sight it was awful to see him go; no rig could stand it. The moment he saw a team ahead of him he began to race, and no power on earth could stop him."

"I notice he's got a few knobs on his legs."

"Yes—I was just going to call your attention to them; we put them there—did it to tone him down. About once a week he gets too high strung for us, and we have to beat him over the legs with a hammer till a spavin comes out; that sobers him somewhat. It seems cruel, but we've got to do it to sadden him a little or no one could ride behind him."

"What did you shave his tail for?"

"Didn't shave his tail; fast trotting did that. I know you'll think I'm stretching it a little, but before we took to putting these spirit-sinkers on him and he got under full headway, his hair blew away like chaff in a windstorm. Do you see them sore spots on him? He used to be all over like that; effects of speeding him; rushing through the air. Now, you see, just before the fall races begin, I'll quit depressing his spirits and go to the county fair and win a bag of money. I tell you it requires intellect to understand this horse's nature. How'll you trade?"

Dick didn't care about trading and drove off, while the boy chuckled: "I guess the next time he sees a plug he'll not count the spavins on his legs."—*Toledo Blade.*

Chaff.

"YOUR account has been standing a long time, Mr. Dukey." "Then give it a seat, my dear Sheare." "Very glad to, sir. Shall we make it a re-ceipt?"—*Harper's Bazar.*

TEACHER: Johnnie, what is a conversation between two persons? Johnnie: A dialogue. Teacher: And between more than two persons? Johnnie: A polly'wog.—*Munsey's Weekly.*

SHE (reading the paper): Another cyclone out West! It has swept dozens of farms clear of everything. He: I'll bet the mortgages didn't budge an inch.—*Siftings.*

SOMETIMES a typographical error adds zest, as in one "local" which began, "Dr. Smith, who is widely known as one of the most killful of our physicians," the "s" having disappeared with the usual depravity of inanimate things—or shall we say, with a divination of the truth wholly unusual?—*Christian Union.*

Betsy Hicks' Story.

"How nice it would be if a woman had some way of earning a few dollars for herself," thought Betsy Hicks as she twisted her hair into a tight knot on the top of her head. "Now, some farmers' wives have the butter-money, but our butter-money all goes to help pay the interest on our indebtedness, and as I do no milking and only a small part of the butter-making, the money would not be really mine. Eben cannot get time or money to fix up my chicken-house, and so I can make nothing on my poultry. If I could only write for the papers as my teacher did! She said I had talent, and I know I could write a better story than some of the silly trash I have read. I believe I could make a nice story of something that happened in our village when I was a young girl." While Betsy meditated, she finished her toilet, made the beds and dusted, and dressed the baby, and embellished the facts of her story in a manner that only a lady of keen imagination could have done. It had long been Betsy's habit to snatch the few moments while rocking baby to sleep, for reading, and this morning she chanced to pick up an article which told of Louisa Alcott's first attempts, and how she only got five dollars for her first story. To Mrs. Betsy Hicks five dollars seemed quite a sum, and she stopped her reading to calculate how many stories it would take to re-roof her chicken-house, for way down in Betsy's heart she was caring more for her poultry than the fame of a writer of romance.

Mrs. Betsy was a practical little woman devoted to kitchen, babies, dairy and poultry, but she was driven to an extremity in her need, for there was a mortgage on the farm, and her good man worked early and late, and undertook more than he could execute, in order to keep up the interest. Perhaps he had gone more deeply in debt for machinery than he ought. As Betsy meditated on this manner of raising money, she drew her chair nearer the glass and compared her freckled brow with that of Elizabeth Stuart Phelps. The comparison must have been pleasing, for she laid the now sleeping babe in the cradle and brought out her long-unused writing desk and began her story. Her fingers were stiff from hoeing, the previous evening, but the story was progressing finely, when Maggie, the hired girl, put her head in the door to ask if "Missus was ready to make the pudding she promised Master for dinner."

"O Maggie," hesitated Betsy, "I am not feeling well, so I will let it go until to-morrow, and you can open a can of fruit for dessert." "Eben won't like it so well," she reflected, "but a woman cannot always be in the kitchen. The mind needs nourishment as well as the body." Never had Betsy's mind felt the need of nourishment so much as on this important morning.

I need not tell you how the baby cried, how Maggie needed new instructions for dinner. The story was only begun that morning, but after a week of such interruptions, Betsy's story was ready for the press. The big cyclopedia had given her instructions about writing only on one side of the paper, etc. One of the greatest drawbacks to her writing had been the frequent appearances of Eben at the door, with inquiries as to where she put the hoe and other distracting questions. At each of these untimely calls, Betsy had secreted her writing beneath a pillow and hastily set a few stitches in a patch on Eben's overalls.

Eben had told her, on the occasion of his sixth call, that he thought those overalls scarcely worth the labor she was expending on them. This was embarrassing, but now she had the story finished, and it really read very well. Betsy deliberated as to what paper she should send it, and decided in favor of the agricultural paper Eben subscribed for; in fact, her only chance of seeing it in print lay between that and the county paper, and the stories in the county paper were all printed on the patent side.

"I shall not dare have it returned in case it isn't published," thought Betsy, "for Eben would be sure to get it from the office. I will tell them to put it in the waste-basket if it is not worth publishing. I do wonder how long it will be before they send me a check, if it should be published."

Betsy opened the papers very eagerly for the next three weeks, when one day Eben returned from town, and throwing an envelope in her lap grunted out: "Thought you'd be very sly, didn't you? You'd better mend the pockets in my coat before you turn blue-stocking."

When Eben made his exit, Betsy tremblingly opened the letter, to find there would be no check, but the beloved story was to be published. "We shall not throw the manuscript in the waste-basket," wrote the editor, "but we cannot pay for such matter. We always publish anything short that points a good moral."

"Well," sighed Betsy, "it pointed a good moral. I am glad of that, but I shall have to find some other way to get a new roof on the chicken-house."—*Prairie Farmer.*

A LIVING PROOF.—Young Mr. Freshly, conversing with an elderly friend of the family: When I see how we have things now, electricity, telegraph, telephone, and think how people lived sixty years ago, I can't help thinking that our grandfathers must have been fools. Mr. Oldboy (obviously nettled): When I see some of their grandchildren, I can't help thinking the same.—*Boston Times.*

YOUNG FOLKS' COLUMN.

Story of a Little Yellow Frog, as Told by Himself.

[Written for the RURAL PRESS by F. W. E. W., aged 11.]

The first that I remember, I found myself in a dark hole, in the corner of a great, damp world.

My mother was relating an incident which had occurred just before I had awakened. She said that upon awakening from a sound slumber, she had heard a great rumbling noise, and upon looking up she saw a great something come floating down an inclined plane.

"This," she said, "I immediately concluded was a human." She had something in her hands that were large and slick and round, and had a large open place in the top. One could easily see through them, for they were made of a substance called glass. She set them on the ground and one of them fell over.

"Now I want to tell you, little froggies," she continued, "that I do not want you to go near them, for although they are pretty, there may be harm in them."

So my mother concluded, and after telling us that we might hop about and enjoy ourselves as best we could, she settled herself for a quiet nap.

We began to hop around and to search for something to enjoy ourselves with. We very soon became tired of this sport and my older brother hopped into a corner and went to sleep. My younger brother and myself were very curious, so we began to hop again.

We hopped until we came up to those large glass things (I have heard since that they are called jars), and forgetting our gentle mother's command, we went into the one that had fallen over.

We were in there having a good time playing at skating rink, when suddenly another of those great tall somethings which are called humans came floating down that inclined plane, and a voice said: "Why, mamma, you've turned over one of the glass jars."

Then we felt ourselves suddenly thrown downward, and found that the big glass jars were almost all sides, and that the only place we had to hop in was a small, round, slick glass floor.

Oh, the terror we felt when we found that we could not get out! Our poor mother came and tried to help us, but she could do us no good. We tried to climb up the walls of our glass prison, but try as we might, we could not get out.

Our mother, after trying for some time to get us out, left us and went back to our hole with my other brothers and sisters.

Oh, it would be hard to describe the misery which we then went through. The hunger, cold and loneliness would be too hard to describe.

One morning I awoke from a night of pain to find my poor little brother dead. Then my misery was worse than ever. It is more than I can bear to tell it. With my brother it was hard enough, alone it was worse. But as my poor frog toes are worn out with writing, I will not try to tell it.

One morning I saw another one of these large somethings come down that inclined plane and I heard a sweet voice say: "Oh, you poor little thing!" On looking more closely at her, I noticed that she was smaller than the other humans and was what people call a little girl.

Suddenly I felt my glass prison lifted, and then I was borne up, up, up into the light above. It was so very light that I had to shut my eyes to keep from being dazzled. I was taken into a house and shown to some people and then I heard the voice say again, "I am going to take him back and let him out." My heart gave a great leap. Was I to be set free after all my sorrows?

Then I heard that sweet voice say again: "Oh, sister, here is the skeleton of a poor little froggie who has died in there. I must set this little fellow free or he will die too."

Then my little preserver carried me back again to that damp world which people call a cellar. I felt the jar turned up and I hopped away, feeling happier than I had ever felt before in my short frog life.

Elmira.

The Lost Ring.

"Please tell me a story, Auntie," said little Ethel, one stormy afternoon.

"If this weather continues, my stock of stories will soon be used up," said Ethel's pretty young aunt, but she laid her book aside just the same, and sat down by the little girl, and began: "When I was six years old my Uncle George brought me from Boston the prettiest present you can imagine. It was in a little white box. Can you guess what it was?"

"A muff," said Ethel, who had a new one.

"No; something very small."

"A little watch."

"Smaller than that."

But Ethel could not guess until Auntie said, "Something to wear on one's finger."

"Oh, I know, a ring."

"Yes, a lovely little ring, set with two rubies and a pearl," said Auntie. "I was so pleased and so careful of it that they let me wear it all the time, although it was an expensive ring and did not fit very tightly.

"I had two playmates whom I loved very dearly, a black and white kitten called Spot, and a half-grown chicken named Peter.

"When Peter was little his mother used to peck at him and drive him away from her, until at length I took pity on him and cared for him myself. He was very grateful, and would follow me everywhere. I asked sister Annie to find a good name for him, and she said 'Peeper' would be a perfect fit, but I thought 'Peter' sounded better, and chose that instead. He learned to know his name, and would come whenever I called him. I felt sure he and Spot understood everything I said, and I used to talk to them as other girls do to dollies. I did not like dollies. They couldn't run about with me like my pets.

"One day after I had been playing hide and seek among the haycocks with Spot and Peter all the morning, I came in to dinner and found, when I was washing my hands, that my dear little ring was gone. How I cried! The whole family helped me look for it, father and mother and all, but it was of no use. The ring was nowhere to be found.

"I felt so badly that I couldn't play at all that afternoon. Peter seemed to sympathize with me, I thought, but Spot was as frolicsome as ever. I sat down on the doorstep in the afternoon, almost heart-broken, and said, 'O Peter, *won't* you and Spot help me find my ring? You know I would do anything I could to please you.'

"Spot only climbed the wooden piazza posts in reply, but Peter looked carefully about, turning his head first one side and then the other, and began to scratch among some loose straws that were scattered about, and what do you think! There was the ring beneath them.

"I ran to mother with it, so happy I could hardly speak, and then I ran back to Peter and hugged and kissed him more than he liked, I am afraid. Afterward I made him a nice dish of Indian-meal dough, with plenty of corn sprinkled in it, like plums, as I could think of nothing he would like better, and he seemed very much pleased with it. I thought Spot seemed a little jealous, but I wasn't quite sure."

"Thank you, Auntie," said Ethel, and then she ran off to play at being auntie herself, and she acted the whole story very nicely, with the old cat for Spot and the baby's rubber chicken for Peter.—*Portland Transcript.*

DOMESTIC ECONOMY

RICE BREAD.—Two cups milk, two cups boiled rice, one cup white cornmeal, three eggs well beaten, two tablespoonfuls butter, teaspoonful salt. Bake in a hot oven, in rather shallow pans.

APPLE SNOW.—Bake six good apples, take out the pulp, and when cold beat it thoroughly with the whites of three eggs, and sugar enough to stiffen a little; serve with a boiled custard for sauce.

BAKED BANANAS.—Select large, ripe bananas, and bake them in the oven as you would potatoes. When the skin begins to split at the seams they are done. Take them out, and serve one to each person, as a vegetable. They should be peeled and eaten with butter and a little salt.

CREAM PIE.—Line a plate with crust, stir to a cream one-half cup of sugar and one tablespoonful of butter, add two well-beaten eggs, two tablespoonfuls of flour and two cups of milk; mix all together well; flavor to suit the taste, pour into the lined plate and bake like a custard pie.

TO MAKE RASPBERRY SALAD.—To a quart of ripe raspberries you need half a pint of red currant jelly and a gill of clear syrup, made by dissolving a gill of sugar in a saucepan with a tablespoonful of hot water; when melted, add the currant juice; when cold, pour this all over the raspberries and set on ice till morning.

TOMATO SALAD.—Cut six ripe tomatoes into slices and remove all the seeds; rub a dish with onion and pour into it a mixture of oil and vinegar (in the proportion of two spoonfuls of oil to one of vinegar), sprinkle on the tomatoes pepper and salt, and leave them in the dressing two hours. They will then be ready to serve.

LEMON PIE.—Two lemons, juice and grated rind, two cups of white sugar, one cup of cream or rich sweet milk, two tablespoonfuls of cornstarch mixed with the yolks of six eggs; bake in a rich crust. Beat the whites to a stiff froth with eight tablespoonfuls of pulverized sugar; spread on the top of the pies and brown; this will make two pies.

COCOANUT BALLS.—Measure two cups of freshly grated cocoanut. Beat the whites of two eggs to a stiff froth, add four tablespoonfuls of powdered sugar, mix carefully, and then stir this into the cocoanut. Form into tiny pyramids, using sufficient sugar to stick them together. Place them on greased paper and bake in a moderate oven until a golden brown.

GERMAN PUFFS.—One pint of milk, three eggs, a little salt, and flour enough to make a thin batter; pour into eight buttered cups. Have the oven hot, and don't be discouraged if they don't rise for the first 20 or 25 minutes; they will soon surprise you by puffing above the cups and turning a golden brown. For sauce, beat pulverized sugar and a small piece of butter together, moisten with milk and flavor.

GOOD HEALTH.

THE KEMMLER EXECUTION.—Much unfavorable comment has been made in the papers in regard to the Kemmler execution. These comments are no doubt largely due to the supposed degrading innovation which such executions may possibly engender in the minds of oversensitive persons. Such objection is senseless. The supposition on the part of some persons that the death of Kemmler was prolonged and highly painful is without reason. His taking off was without doubt instantaneous and absolutely painless. The physical distortions manifested were purely muscular, and may be produced in the same way upon any cadaver, as is well known to all medical men. If the current had been kept up for a few seconds longer, no such indications would have occurred, unless the current had been turned off and then turned on again, which would have been an unnecessary thing to do. The current should have been passed through the body by way of the two hands properly moistened and secured in the circuit. Everything about that execution, when properly considered, shows that it was certain, humane and in every way proper. It has proved that the traditional and barbarous gallows should be consigned to oblivion.

MISTAKES.—It is a mistake to labor when you are not in a fit condition to do so; to think that the more a person eats the healthier and stronger he will become; to go to bed at midnight and rise at daybreak, and imagine that every hour taken from sleep is an hour gained; to imagine that, if a little work or exercise is good, a violent or prolonged exercise is better; to conclude that the smallest room in the house is large enough to sleep in; to eat as if you had only a minute to finish the meal in, or to eat without an appetite, or to continue after it has been satisfied merely to please the taste; to believe that children can do as much work as grown people, and that the more hours they study the more they learn; to imagine that whatever remedy causes one to feel immediately better (as alcoholic stimulants) is good for the system, without regard to the after effects; to take off proper clothing out of season because you have become heated; to sleep exposed to a direct draught; to think any nostrum or patent medicine is a specific for all diseases.

WHAT IS TRUE LIFE?—The mere lapse of years is not life. To eat, and drink, and sleep—to be exposed to darkness and to light—to pace round in the mill of habit and turn thought into an implement of trade—this is not life. In all this but a poor fraction of the consciousness of humanity is awakened, and the sanctities still slumber which make it worth while to live. Knowledge, truth, love, beauty, goodness, faith, alone can give vitality to the mechanism of existence. The laugh of mirth that vibrates through the heart, the tears that freshen the dry wastes within, the music that brings childhood back, the prayer that calls the future near, the doubt which makes us meditate, the death which startles us with mystery, the hardship which forces us to struggle, the anxiety that ends in trust, all these are the true nourishment of our natural being.—*James Martineau.*

MARRIAGE WITH DRUNKARDS.—The efforts to raise the poor and degenerate inebriate and his family are practically of no value as long as marriage with inebriates is permitted. Recently the Legislature of the State of Victoria, in Australia, has passed a law which gives a wife the right of divorce if the husband is found to be an habitual drunkard. If after marriage she discovers that he is an inebriate, she can also get a divorce. The husband can do the same with a wife if she is proved to be an inebriate. This is a clear anticipation of the higher sentiment which demands relief from the barbarous law which would hold marriage with an inebriate as fixed and permanent.

FOR SLEEPLESSNESS.—It is claimed that the most potent and most perfect remedy for sleeplessness is to drink hot water. If one awakens in the night, as hopelessly wide awake as if galvanized or electrified with vital activity, an invariable remedy is a glass of perfectly hot—not warm—water. It can be heated over the gas, or over a spirit lamp, and sipped while almost at boiling heat, and one who tries it will find himself going off to sleep like an infant, and getting, too, the most restful and peaceful sleep imaginable.

PALPITATION OF THE HEART.—Dr. Nebo (in *Journal de la Sante*) says that an excessive palpitation of the heart can always be arrested by bending double, with the head downward and the hands pendent, so as to produce a temporary congestion of the upper part of the body. In almost all cases of nervous or anemic palpitation, the heart immediately resumes its natural function. If the respiratory movements be suspended during this action, the effect is only the more rapid.

HEART DISEASE FROM OVER EXERTION.—A warning against undue physical exertion by those not accustomed to it is contained in the remark of the chief surgeon of the National Soldiers' Home at Dayton, Ohio. This physician said that of the 5000 soldiers in the home "fully 80 per cent are suffering from heart disease in some form or another, due to the forced physical exertions of their campaign."

PACIFIC RURAL PRESS

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SAN FRANCISCO:
Saturday, August 30, 1890.

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Drills and Harrows—P. P. Mast & Co.
Triple-Acting Pump and Power—Woodin & Little.
Thoroughbred Cattle—G. W. Dimick, Hubbard, Oregon.
Windmills—Challenge Windmill & Feedmill Co., Batavia, Illinois.

See Advertising Columns.

The Week.

Next week will be the last before the opening of the State Fair, which will occur in Sacramento on September 8th. Consequently the next issue of the RURAL will appear as our customary State Fair number, with many additional pages and a proportionate increase in value and interest of contents.

Among the thousands of visitors at the State Fair the RURAL meets many new faces and wins many new friends. It is also one of the great occasions of the year for advertisers, and is fully appreciated as such by those who have had experience. Those desiring space should make early application, for our engagements for this year's State Fair paper are larger than usual.

The coming season promises to be one of unusual activity in agricultural operations, and manufacturers and purveyors of farmers' implements and supplies should make a good opening of the campaign by prominent declarations during State Fair time.

The promise for the display at Sacramento is unusually fine. Beginning with the great Admission Day celebration in San Francisco, and continuing then to the great Fair in Sacramento, the rural resident can see enough of the world to give him new relish and freshness for country activities. It will be a good change of scene. Take it!

Sound Trade in Produce.

We have so often proclaimed against gambling in food products and the fictitious and injurious standard of values thus established that we fear our readers may tire of the subject. We feel, however, that there is hardly anything of greater importance than to make our trade in the great staples sound and honest and the published quotations represent actual transactions. It is timely to refer frequently to this subject because of the bill pending in Congress known as the "Butterworth Anti-option Bill," which is designed to do away with the wretched system of trade-gambling which prevails in all great produce centers and casts its baneful influence over the whole producing area. Some friend sends us a copy of the *Eagle*, published at Wichita, Kansas, which contains a letter urging the passage of this Butterworth bill. The issue involved seems to be simply a question whether a few gamblers can control for their own benefit the entire wealth, labor and interstate commerce of this country or whether supply and demand shall make values and enable the farmers and producers to intelligently raise such crops as the soil they own is suited for, and the producer and manufacturer such goods as are a prime necessity which they know will be wanted without danger of having the value of their labor and production destroyed by the vandalism of selling promises in place of actual property.

The writer to whose article we allude makes the following strong statement of what we conceive to be the facts in the case:

It is well known that the quotations (manipulated) sent out from New York, New Orleans, Chicago and other speculative exchanges fix the values of the productions in this country and are used effectually in the markets of the world. When prices are depressed first in this country by sales of 100 times as much product as is produced, the buyers are appalled at the magnitude of the crops and supplies in this country and withdraw from the market, enabling the sellers of these false promises to put down values without hardly at times making a sale, checking consumption and distribution all over the world, and encouraging gamblers in other countries to assist in this downward flow of values by selling their promises in the United States against the crops of grain and cotton raised in Europe, Asia and India. It is well known that the more fictitious sales that are made, the easier it will be to buy back their promises at a profit, thus destroying the production of the world without furnishing any substitute to make amends for the injury they have done to the labor of the world, and particularly to these United States, which is one of the largest agricultural countries on the face of the globe.

It is to make this deplorable state of affairs impossible that the advocates of the Butterworth bill are laboring. They claim that it is the duty of Congress to foster the agricultural and laboring interests of this country first, not to the injury of other legitimate interests, but in harmony, and that harmony can be firmly established by legislating in favor of all restriction and abolishing all false methods of trading, and stopping all impediment to the free development of supply and demand principles for actual property, not promises that represent nothing and would be utterly impossible to keep.

It seems that opposition has been made to the Butterworth bill on the ground that it would prevent an actual producer from selling his crop in advance. This is provided against by an amendment which the author of the bill has himself offered in these words:

In any prosecution for dealing in futures or a violation of the provisions of this Act, it shall be sufficient defense thereto if the defendant therein satisfactorily proves that at the time of entering into any contract subject to such prosecution such contract was made with the United States, or any State or country, county or municipality, or that at the time of making such contract he was a farmer and had an article so sold in actual course of production at the time of making such contract, or that at the time of making such contract he was a manufacturer or producer actually engaged in the production of the article so contracted to be delivered, and that such contract was made with the intention in good faith on his part to actually deliver the article in compliance with the contract, and that the defendant at the time of making such contract had the ability and a reasonable expectation of being able in the ordinary course of his business to produce and deliver the article contracted about in compliance with such contract, and at the time had ability and a reasonable expectation of being able in the ordinary course of his business to procure and deliver the article contracted about in compliance with such contract.

Of course it is not intended to interfere with any transaction which in good faith intends to deliver the product. It is a movement against transactions which have no such intention whatever. The very existence of such contracts and false promises to deliver is a national disgrace, and destroys all incentive to honest labor, and encourages a spirit of gambling that will demoralize and debauch the rising generation.

Our Fruit at the East.

California fruit is most delightful to look at, from almost any point of view, this year. Each week some new phase of the interesting situation develops and all are interesting and encouraging. First of all, it is pleasant to know that our Eastern customers are pleased both with the fruit and the prices they are paying for it. The *American Cultivator* of Boston, after speaking of the beneficent act of California in supplying a good amount of fruit this year to save the Eastern people from the scurviness of a fruitless diet, and assuring its readers that fruit at almost any price is cheaper than doctors' bills, uses these words:

At this time last year, and in previous years, New York City alone would be receiving from New York, New Jersey, Delaware, Maryland and adjoining States not less than 300,000 packages a day of summer fruit, mostly peaches and pears. Now there are hardly 1000 packages a day arriving from all these States combined. To fill this enormous gap there is only the California crop. California is a great fruit State, however, and she is sending her products rushing across the continent in special trains in a manner surprising even to her own "hustling people."

Prices on California fruit are not over 20 per cent higher than last year. That is quite reasonable, considering the monopoly of the market that State's fruit enjoys this year.

It is a maxim of enlightened trade that it is quite as important to please a customer as to get one. Upon doing this depends our future sales of fruit, and comments like that of our Bostonian contemporary are grateful.

The question of how California fruit will do at the East in coming years when the local supply is not cut off, is of course an open one, and some hold that prices will recede to the old narrow margin between profit and loss to our growers. We do not so believe, but are firmly of the opinion that J. W. Nelson, secretary of the San Jose Packing Co., is quite right when he says: "Our California fruits will have a wider introduction this year than ever before, and even if the Eastern crop is good next year, we will more than hold our own." These words were probably intended to refer to canned fruit, but the application is the same in the case of fresh fruits.

Speaking of canned fruits, there has come an advance which even the most sanguine never dreamed of. Mr. Nelson said:

From information we have received there is hardly any fruit anywhere in the United States, outside of California. Prices here early in the season were low and a great many factories sold freely, but they began to hold their fruit and now prices have gone up marvelously and they are simply overburdened with business. We will pack at least 125,000 cans this season, and I have no doubt the entire pack of the State will amount to over a million. The combined capacity of all the canneries will prove inadequate to meet the demand. The pack of 1890 will be consumed long before the pack of 1891 and business next year will be more promising than ever.

The hunger of the Atlantic States for canned fruit is seen in the reports from New York that buyers quietly picked up 6000 cases of California canned peaches in English markets and have already shipped a large proportion of them to New York and sold them at a good profit. The movement of this fruit twice across the Atlantic and the payment of profits to all handlers, show the state of the market as forcibly as could any number of words. If California does not get a good world-wide advertisement for her grand fruit product this year, she is never likely to have one.

THE woolen-mill at Ensenada, Lower California, is kept running day and night in filling orders in cassimeres.

Death of Rev. Dr. McKaig.

Rev. Walter Wilber McKaig, well known throughout this State as preacher, orator and writer, died last Sunday in Oakland, aged 63. He had been for years afflicted with diabetes, and his death was the close of a tedious, often painful illness, the last three months of which he was kindly cared for at the Fabiola hospital.

Dr. McKaig was a native of Ohio, the son of a Scotch farmer. He studied for the ministry and began preaching as a Methodist, but afterward joined the Presbyterians. He had charge of churches in Cincinnati and Chicago, and when David Swing was accused of heresy, Dr. McKaig warmly espoused his cause, and was afterward tried himself, on similar charges, but acquitted.

Coming to California about 1865, Dr. McKaig first ministered to a large and thriving Presbyterian Society at Marysville, but having become a convert to liberal views, he moved to San Jose, where he preached for some time to the Unitarian Society.

Afterward, having studied law, he was admitted to the bar and practiced awhile in Colusa, having ex-Attorney-General Hart for his partner. But he was heard to say that although he could earn more as a lawyer than as a preacher, he always regretted having left the ministry. And in truth he never gave up preaching altogether, but often filled the pulpits of the late Dr. Hamilton in Oakland and of Dr. Stebbins in San Francisco, besides delivering addresses to various Spiritualist associations.

In later years he edited the Stockton *Independent*, and was engaged successively in editorial work on the Oakland *Tribune*, *Enquirer* and *Evening Express*. He also tried law and journalism in Los Angeles. His latest work was done for the *Illustrated Pacific States* and the RURAL PRESS, and the many articles which he wrote for our columns, from 1883 to within a few months of his decease, were marked by a philosophic insight, a humane spirit, a wise breadth of treatment and a combined strength of thought and felicity of diction which made them at once pleasing and impressive. His editorials for holidays and anniversaries, and on questions of wide bearing and large public import, were especially happy and suggestive.

Dr. McKaig was a member of the Knights Templar and the Enterprise Lodge of A. O. U. W. He leaves two sons and a married daughter, the latter residing in Chicago.

The funeral services took place at Hamilton hall, in Oakland, Tuesday morning. Rev. C. W. Wendte of the Unitarian church and Rabbi M. S. Levy spoke of the departed, and the following stanzas were feelingly sung by their author, James G. Clark:

Let me rest on Thy bosom,
I'm lonely and weary,
The stars are all gone from my sight;
Let me rest on Thy bosom,
On Thine, and Thine only,
Till darkness gives place to the light.
My last joy is taken,
My last hope is shaken,
The wild waters over me roll;
My heart all forsaken
Now turns to Thee only,
The day star and dawn of my soul.
Let me rest, Lord,
Let me rest.

Let me rest on Thy bosom,
The world may bereave me—
Thy law is my light and my stay;
Let me rest on the bosom
That never will leave me,
Though lover and friend turn away.
In language unspoken,
In silence unbroken,
I bring all my sorrow and woes;
Thy love is a token
That will not deceive me,
Nor leave me alone with my foes.
Let me rest, Lord,
Let me rest.

Shropshire Sheep at the State Fair.

The Directors of the American Shropshire Registry Association have voted to offer the following special premiums at the California State Fair, in September:

For best flock of registered Shropshires (2 shearling ewes, 2 ram lambs, 2 ewe lambs), 1st, $20; 2d, $15.

For best flock of 5 lambs (3 ewes, 2 rams), to be the get of one ram, and bred by exhibitor, $15.

Sheep eligible to compete for the above premiums must be recorded and have a number in the Record, a certificate of which must be filed with each entry; and each sheep must bear an ear-tag, with number and initials corresponding with that given on the certificate.

A Nicaragua House.

The canal projectors contend that Nicaragua is the greatest existing field for American enterprise. However that may be, we shall all hail with delight the commencement of practical work on that great engineering scheme. Since the virtual collapse of the Panama canal this Central American offers the only location possible for a ship canal between the Atlantic and Pacific oceans. The reason is two-fold. Firstly, the interruption of the great mountain chain, extending practically from Valparaiso to the Mexican frontier; secondly, that Nicaragua lies outside of the zone of calms, which would have rendered the Panama canal useless for sailing ships. The people of Nicaragua have a type of house—such as is shown in the engraving on this page—much like that in which the Mexicans of California lived before the advent of the Americans. It is of adobe with tiled roof and an arched corridor or porch around it. Senator Stanford has adopted this general style for the buildings of the Leland Stanford University, thinking it best fitted for the climate. The buildings are of one story, with arched corridors, but stone takes the place of the Mexican adobe. Such structures are warm in winter and cool in summer. There are still numbers of such buildings standing in portions of California; a few of them being out toward the Mission in this city.

The Sequoia Reservation.

In our issue of August 16th we gave the full text of a bill introduced by Mr. Vandever and then pending in the House of Representatives providing for the reservation of Government lands covered with sequoias in Tulare county. Word now has come that the bill has passed the House after amendment, as suggested by the friends of the forest residing in the district, and that the following lands are to be reserved: Tp. 18 S., Range 30 E. (M. D. B. and M.); Tp. 18 S., Range 31 E; Secs. 31, 32, 33, 34, Tp. 17 S., Range 30 E. This area is suggested by the local promoters of the praiseworthy enterprise, and if this can now be secured, they hope to accomplish more when the next Congress meets. There is naturally a sharp issue between the timber-cutters and those who desire to save the trees, but the sentiment of the public at large is strongly in favor of preserving these splendid specimens of tree growth for the benefit of coming generations. The project now rests with the Senate, and there should be no hesitancy on their part to carry out the work so well begun in the House.

Few who have not been in the mountains can understand the destruction that is going on among these giant trees and the rapidity with which the land has recently passed from Government ownership. What remains, and it is very little, comparatively, should be saved from the lumberman's ax; and if anything is to be done, it must be done at once.

FLORIST AND GARDENER.

Fremontia Californica.

EDITORS PRESS:—At this time, when the world is hearing so much of Gen. Fremont, a brief notice of this tree named for him seems appropriate. He discovered it in crossing the Sierras over 40 years ago. It grows at 2000 to 4000 feet altitude. When in bloom, 'tis one of the most showy trees of the Sierra brushlands. It is completely covered with beautiful yellow blossoms a hand's breadth across. The objection to it as an ornamental is the short length of time it remains in bloom, which rarely exceeds two weeks. It sometimes attains a hight of 30 feet and one foot diameter of trunk, but is usually smaller. In botany it belongs to the order *Sterculiaceæ*, and combines in its botanical characteristics something of the mallow and the basswood. Its leaves are rounded, five to seven lobed, resembling the fig, but smaller, and clothed with rusty hairs underneath. The seedpods are as large as the end of a man's finger, ovoid in shape, with staminal cup at base. When ripe it splits into five portions, each of which contains a few black seeds. The bark so closely resembles slippery elm in taste and properties as to be hardly distinguishable. The wood is hard when seasoned. The branches are so tough and flexible that it has acquired the common name "leatherwood;" they're universally used by teamsters and equestrians for whips.

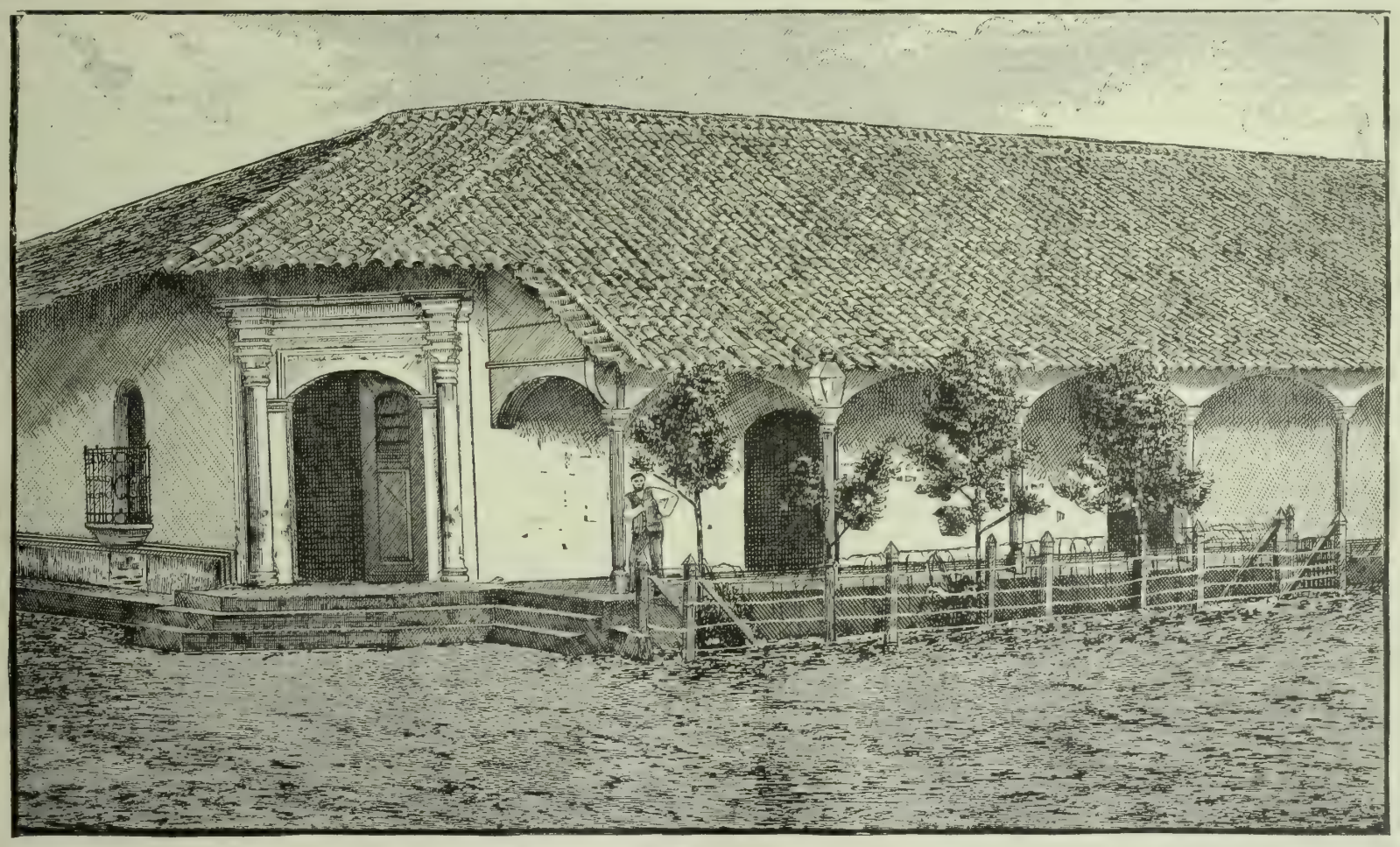
This tree is too tender for the climate of the Northern Atlantic States, but it has been successfully grown in the Southern States and in France and England. I have shipped considerable quantities of the seeds to European seedsmen. W. A. SANDERS.

Sanders, Cal.

Japanese Gardening in Los Angeles.

The Los Angeles *Express* gives an account of work in preparation for the chrysanthemum show in that city this fall which is interesting. All through the year the ladies in whose hands this enterprise rests have been diligently preparing for this second and more elaborate fair, which will open October 29th in the new Market hall and continue for ten days. The great chrysanthemum garden which occupies the entire space of the large yard back of Judge Widney's residence on Olive street, through the courtesy of Judge and Mrs. Widney, has been used exclusively for this purpose during the year. Here, under the watchful eye of an experienced Japanese gardener, the plants have been carefully nurtured and cultivated. Hama Shigeta has devoted his whole time to them for six months, and for the past three months has had two assistants to help him to care for his rapidly growing family of 4000 plants. There are from 700 to 1000 varieties, and Hama and his assistants care for them as tenderly and take as much pride in them as a mother does in a favorite child.

Some novel methods of gardening have been introduced quite unknown to American gardeners. To toughen and strengthen the plants, cooked beans are packed about the roots and other varieties are kept moist by covering the top of the soil with out grass. Some extremely fanciful devices are arranged as racks for the larger and more ambitious plants to climb upon. Parasols, birds with outstretched wings, frame-houses, etc., made from splinters furnish support to the branches and form another illustration of that love for the artistic, and almost fantastic, we might say, which seems an inborn trait of the Japanese nation. A pile of 20,400 sticks in one corner of the yard had just been received and gives one an idea of the amount of work and material necessary to rear these petted children of the soil. Many of the chrysanthemums are already in jars ready for transportation to the fair, and many others are growing in tiers upon the garden terraces. These must be transplanted, and Hama will accomplish this feat as follows: A week before the time for removal, he will carefully cut around each plant, several inches back from the root, severing the small tendrils which reach out on all sides. He will then immediately replace the plants with the earth clinging to the roots, and the cut and bleeding tendrils will have a chance to heal and callous over before they are finally removed to the pots.



EXTERIOR OF A TYPICAL NICARAGUA HOUSE.

THE VETERINARIAN.

Milk Fever.

EDITORS PRESS:—What is milk fever, the symptoms and cure?—R. H. B, *Riverside.*

EDITORS PRESS:—The names Parturient Apoplexy—"Puerperal Fever," "Milk Fever," "Dropping after Calving," all apply to a disease peculiar to the cow, and it generally occurs within three days after calving. Good milkers are more predisposed to this disorder, also aged animals, it being rarely seen in a cow before the third calf. It is most often seen after the fifth, and an animal once attacked is more liable to another attack when parturition occurs again. Animals that are in a plethoric condition are more susceptible to milk fever. I have seen three cases which occurred previous to calving.

Symptoms.

The animal about four hours after calving becomes restless, raises the hind feet alternately, breathes quicker than usual, and when made to move, staggers behind. The animal ceases to eat, there is cessation of rumination, a wild look in the eyes, and the supply of milk suddenly fails. In about 24 hours the cow falls; she tries to get up but is paralyzed behind. The eyes then protrude and become bloodshot, and are very often insensible to touch. The pulse is full and soft and often slow, but very soon becomes faster, and finally imperceptible. The breathing is slow and irregular, and after awhile stertorous. The horns are hot, and the mucous membranes become purple. Delirium sets in, and the animal dashes its head about with great violence, or else becomes comatose, and lies with the head turned around to the shoulder. The eye becomes glassy; there is twitching of the muscles of the eyelids. The udder generally becomes flaccid, but sometimes becomes hard and small. The power of deglutition is lost, the bowels are constipated, and no urine is discharged. The rumen or paunch is distended with gas. *After death* the blood is found to be dark in color and the veins distended; petechiæ exist on the serous membranes, and there is congestion of the spinal cord.

Pathology.

Milk fever is a disorder of the sympathetic nervous system. In the milk cow this system is highly developed. Alimentation, lactation and interogestation are under its direct control. At calving, especially when it is rapidly accomplished, a large excess of blood is thrown upon the system. This causes sudden increase of blood pressure, and congestions and apoplectic lesions take place. When the udder is in a healthy condition, it is very active in removing the excess of nutritive blood constituents, while the watery matters and the different salts are removed by the other excretory organs.

The sudden loss of milk, retention of urine, constipation of the bowels, loss of power to swallow, are proofs that the functions presided over by the sympathetic gangliated cord are not duly performed in parturient apoplexy. The presence of coma, delirium and convulsions is thoroughly explicable, as due to congestion of the brain and spinal cord. There are several other theories as to the nature of the disease that I might give, but think it unnecessary.

Treatment.

Prophylactic treatment consists in having the animal in a healthy condition about the time of calving. Allow plenty of exercise and adopt other measures to prevent plethora. It is even necessary in some instances to purge and bleed.

In the *early stages*, bleed from the jugular vein, and sufficient to affect the pulse. Give a powerful cathartic. This must be done in all cases and at any stage of the disorder, as the bowels must be moved as quickly as possible, and it is extraordinary the amount of purging medicines that may be given before the bowels respond, due to the distention of the blood-vessels which prevents their absorption.

The animal must be milked regularly, supported with bundles of straw to prevent lying flat on the side, also must be covered with blankets, and apply friction all over the body. Apply ice or cold water to the forehead. The most important part of the treatment is the frequent giving of diffusable stimulants to rouse the sympathetic system into activity. I also advise the application of a stimulating liniment along the spine. Injections per anus must be frequently given, and the urine drawn off with a catheter. When the act of swallowing is impaired, the medicines must be given through a probang introduced into the œsophagus (gul-

let). I frequently introduce the trochar and canula, and administer the stimulating doses through the canula. (Insert the trochar and canula the same as you would for hoven, or bloat.)

When the animal is recovering, you must be very careful in the feeding; in fact, nothing but gruel must be allowed for some time. If paralysis of the hind parts continues, stryohnia must be given, and blister over the spine. When there are no signs of improvement after a short treatment, have the animal put out of her misery. A. E. BUZARD, M. R. C. V. S. L.

11 Seventh St., S. F

AGRICULTURAL NOTES

CALIFORNIA

Butte.

ABOUT IRRIGATION.—Oroville *Register*, Aug. 14: During the past two or three years there has been considerable discussion in this region as to the amount of water needed for irrigating an acre of orange trees. This year the question has been pretty definitely settled. The Palermo Co. run 600 inches of water to Palermo, and this serves to irrigate 1800 acres of fruit trees. To be sure these are not all orange trees, but most of them are. At this rate one inch of water, ordinary miner's measurement, will irrigate three acres of land. Upon the same basis, a canal carrying 8000 inches of water will irrigate 24,000 acres of land. It was thought the Big Bend Co. would bring in a ditch with from 8000 to 10,000 inches of water. It is quite certain that a still larger canal will be taken from the river by the Golden Feather Co. It will be readily seen what an enormous area of land can be irrigated from Feather river, yet hardly lessen the quantity of water in the stream.

Colusa.

WHEAT YIELD.—Williams *Farmer*, Aug. 23: J. O. Zumwalt stored some wheat in W. H. Williams' warehouse that averaged 153 pounds to the sack and 15 sacks to the acre, making 2295 pounds, or 38½ bushels to the acre. This is from land lying within two miles of Williams, and demonstrates the fact that after a thorough wetting, such as the ground received the past winter, it will produce as well as ever. W. R. Tully has also delivered grain at the Stovall-Wilcoxson warehouse that averaged 146 pounds to the sack and 36½ bushels to the acre.

Contra Costa.

LARGE RESERVOIR.—Martinez *Democrat*, Aug. 23: The Union Stockyards Company has commenced work on its large reservoir in Rodeo valley. About 60 men are engaged in digging pits for the purpose of testing the ground for a foundation for the dam. The dam will be 100 feet high and 1000 feet long, and will be built of earth, concrete and clay puddle. It will be situated between Martinez and Pinole, in Rodeo valley, about four miles from Pinole. The reservoir, when completed, will be 1¾ miles in length and will cover all of the lower part of Rodeo valley. It is estimated that it will hold over a billion gallons of water, and will drain a watershed of 7000 acres.

Kern.

DAIRYING—COLONIZATION—QUICK RETURNS. Bakersfield *Echo*, Aug. 21: Poor prices for butter and cheese are causing quite a decline in the dairy business here. The Mountain View dairy has entirely suspended operations, a number of the cows being turned out and the remainder of them being transferred to other ranches. The Anderson ranch is now keeping but 150 milch cows, when two or three times that many were formerly kept there. No cheese at all is being made there, the price being considered too low....About 300 head of horses are now employed at Rosedale in extending the canals to new lands to be colonized this winter. Mr. Carr stated, a few days ago, that since operations were begun there last fall, 60 miles of canal have been made, all for the purpose of conveying water to lands that have been and are to be settled in small tracts. He is very anxious to employ more men and teams so that he may be able to supply four sections a month with water. The colonization agents assure him that this amount of land will be needed to supply the demands of immigration this fall and winter. Another party of farmers will leave England in September, and several parties are forming in various parts of the Eastern States to start about that time also. The present season has been so satisfactory to those who settled here last spring that they are writing the most favorable letters back to their friends...."The greatest wonder to me is that fig culture does not attract more attention than it does," said a gentleman who has kept an eye on fruit interests generally. "Few trees begin to fruit earlier in life than the fig, and none live to a greater age and bear more regularly. Why, a fig tree begins to bear at a very tender age, almost before you realize that you have a tree. I was passing Isaac Gambel's place, in the edge of town, a few days ago, and noticed his young fig trees. They were put out a year ago last spring as cuttings and now they are full of fruit. You hardly believe it, and still it is true, as you may see for yourself; and that is not an extraordinary case, either, for the tree habitually bears when young."

Los Angeles.

ORANGE ORCHARDS.—Pomona *Progress*, Aug. 21: The young orange orchards on the Packard Orange Tract are most interesting. They are growing superbly, and one cannot imagine better kept pieces of land. There were over 13,000 trees planted on the tract last winter, and of these less than 50 have failed to thrive. A force of workmen is kept constantly employed in irrigating and cultivating the land. Not a weed is to be seen on any of the cultivated land, and stones of more than an inch in diameter are strangers to the place. The planting of orange trees on the Packard Tract next winter will be larger than ever, and more improvements are to be made in new roads, shade trees, shrubbery, etc.

Mendocino.

CREAMERY AND MILK—FRUITS AND TREE STUMPS.—Mendocino *Beacon*, Aug. 23: The Humboldt Creamery is now paying $1 per 100 pounds for milk. This is equivalent to 25 cents per pound clear for butter....A visit to the orchard of Mr. Gorrell on Navarro Ridge will convince the most skeptical that good fruit can be raised very near the coast. He has a dozen varieties of apple, some of which are of excellent flavor and size. Besides apple, he has several large bearing trees each of pear, peach, plum, cherry and crab. Of small fruits he raises every year currants, gooseberry, raspberry, blackberry, strawberry and grapes. One of the striking features of this orchard is the number and size of the redwood stumps scattered among the fruit trees. Mr. Gorrell says they act as reservoirs of moisture, and are a benefit to the orchard.

HOPS.—Ukiah *Dispatch and Democrat*, Aug. 22: A few sales were made the first of the week at 25 cents. Twenty-seven and one-half cents was offered on Wednesday, but no takers. Hop-picking will be in full blast the first of next week. A few parties picked small quantities this week. Among those who began picking hops this week were Bartlett Bros., Hugh Burk, Z. G. York, Thos. Rhodes and T. J. Fine. Growers generally, who have not already contracted, will not sell at any price.

Mono.

STOCK SOLD.—Bridgeport *Chronicle-Union*, Aug. 16: The cattle belonging to the estate of Louis Sammann, deceased, have been sold to Kirman & Rickey for $13 per head, 300 to be delivered on the 20th inst., and the balance by September 13th.

Monterey.

GRANARY BURNED.—Salinas *Index*, Aug. 21: The large granary belonging to M. Lynn, on the Buena Vista ranch, was destroyed by fire Aug. 20th. The building contained about 3000 sacks of feed and seed barley. The loss is estimated at $5000, with no insurance.

Orange.

IRRIGATION BONDS.—Anaheim *Gazette*, Aug. 21: A letter from C. C. Wright, author of the Act under which the irrigation districts of the State are working, written to a gentleman of San Bernardino, contains the following information: "Turlock Irrigation District has sold $130,000 of its bonds at 90 cents on the dollar. Modesto Irrigation District has sold $101,000 in bonds at 91 cents. Brown's Valley Irrigation District, Colusa county, has just sold a large amount of its bonds, but I do not know the exact amount. They received prices varying from 90 to 92 and 93 cents on the dollar. Alta district, situated in Tulare and Fresno counties, has purchased, with its bonds at par value, what is known as the 76 canal. This is the largest canal in California, being 130 feet in width, and has great capacity. The price paid for it was $410,000. I am only giving you such information as I know to be reliable. What I have stated above you are at liberty to make use of in any way you may deem proper. I challenge denial of any of the statements, and promise you if they are questioned I will furnish ample proof in their substantiation. The Grangers' Bank of San Francisco has held the funds that were realized from the sale of the Turlock bonds, and A. Montpellier, the cashier and manager of that bank, would readily settle any question as to whether the bonds of that district have actually been sold. I did not mention that in the case of Turlock and Modesto districts they have sold all the bonds which it is desired to sell at present. Turlock district made its sale of $310,000 about eight months ago and refused to sell any more bonds until the money should be needed in the prosecution of their work." Vineland Irrigation District, in Los Angeles county, has sold its bonds to the extent of $40,000; price not stated.

San Bernardino.

GOOD RETURNS.—Riverside *Press and Horticulturist*, Aug. 23: The orange crop from the Evans rancho and the lands of the Riverside Land & Irrigating Company the past season amounted to 14,912 boxes, 50 carloads of fruit. The orchards comprise about 195 acres, of which 75 acres are young orchard and yielded only about 500 boxes of the golden spheres. The crop was sold at an average of about $2 50 per box.

Shasta.

FRUIT.—Anderson *Enterprise*, Aug. 21: The fact that fruit-buyers are becoming so plentiful here is a recognition that we are becoming somewhat of a fruit-raising district. The cannery will in all probability turn out 4000 cases of peaches, 350 cases of blackberries, 250 cases of plums and pears and several carloads of dried fruit. A number of fruit-raisers are drying their own product.

San Diego.

LARGE CITRUS ORCHARDS.—San Diego *Sun*, Aug. 22: A company was organized in San Diego several months ago to go into the orange and lemon business upon a large scale. They purchased an entire nursery stock and secured 500 acres of land which they propose to plant to trees within the next two years.

GRAPE PICKING.—*San Diegan*, Aug. 23: Thomas O'Brien, who goes to the Cajon for the Vineyard Company, says the picking will begin on September 8th or thereabouts. The Vineyard Company alone will require 200 men, and at least 700 more will be used during the picking and packing season.

Solano.

HOW IT WORKS.—Dixon *Tribune*, Aug. 23: In an interview with Eli Snyder he says: "I commenced farming in 1886, purchasing in that season 90 acres of land, 1½ miles southeast of Davisville, wholly unimproved, for the greater part of which I went in debt. I planted the first season six acres of vineyard, three acres of peaches, five acres of pears. These are now in bearing, and will yield the present season about $1000. I have since added 15 acres of prunes, 30 of apricots, seven of nectarines and two of almonds, which will come into bearing by another season, when my orchard will begin to pay me; indeed, it is even now self-sustaining, and each season will add to the yield. The expense of taking care of it is trifling, since I contrive to do most of the work myself, besides raising vegetables, such as corn, potatoes and sometimes melons between the rows, and by means of these I have contrived to live without increasing my debt. My place is now worth in actual cash $10,000 more than I paid for it; in fact I have refused this advance. The present season I have 100,000 young trees to sell, besides about 70,000 grapevines, the profits of which will about clear me of debt."

Sonoma.

GOOD POLICY.—Santa Rosa *Democrat*, Aug. 23: The policy adopted by the San Francisco & North Pacific Railway Co. with regard to the fruit-packing industry of this city, is liberal and deserving of hearty commendation. Not only have special rates been made for shipping the fruit to and from this city, but a great reduction in fares to the employes in the canneries who live out of town has been made.

FRUIT AND HOPS.—Healdsburg *Enterprise*, Aug. 23: Wm. Mothorn will gather an average of 300 pounds per tree from his prune orchard this year, the trees being now in the second year of bearing. The crop was sold early in the season at $40 per ton, but $60 per ton could have been realized now had the grower held. ....The peaches raised on the G. D. Phillips place this season have been sold for 18 cents per pound, dried and unpeeled. This is a good price and nets the growers a handsome profit. ....At the Grant yard, hop-picking will be commenced Sept. 1st. All who desire work will be given excellent camp-ground, well shaded, with wood and running water conveniently at hand.

Stanislaus.

WATER RIGHTS.—Modesto *News*, Aug. 15: On Saturday the Turlock and Modesto Boards of Irrigation directors and their attorneys met in Modesto to discuss and agree upon a joint dam and joint water rights for the two districts. The agreement reached concerning the distribution of water was, that each district divide the water upon a basis of the acreage of each of the districts. It was further agreed that if either district in the future desired to acquire additional water rights, the other district is to be given 60 days' notice of such intention, and such district would have the option of paying one-half the cost and receiving one-half the benefit accruing from such additional water rights. The joint dam agreed upon will be about 15 feet higher than would have been constructed by the Modesto district were it to build a separate dam, but the additional hight will allow the district to go back of what is known as the Dominici bluff, which enables the construction of a canal more cheaply and more permanent than could be done at the lower elevation.

Tulare.

GRAPE PICKERS—BROOMCORN.—Hanford *Gazette*, Aug. 21: There is quite a stir among grape-growers now that the grapes are about ready to pick, and the inquiry for help is becoming more brisk. There will be no idle hands this season for want of work. A large number of the women and girls are preparing to enter the vineyards and earn their $1.50 to $2 per day....Ross Ludlow was disputed about growing broomcorn to maturity in 36 days, and on Monday last, four days after the statement, he brought in samples 14½ feet high, 40 days from the seed. A little figuring will show that it had to grow 4½ inches every day for the 40 days. As it took several days to sprout and get started, no doubt that some days it grew nearly two feet.

SORGHUM.—Porterville *Tidings*, Aug. 22: Mr. J. R. Graham on Upper Tule is making sorghum. We happened along there last week and saw the operation. He has three acres of cane from which he will get about 400 gallons of syrup, judging by the results so far. The mill cost about $60, the rest of the plant being home-made, consisting of a flue of brick on the ground about eight feet long and high enough to receive fuel, on top of which was laid the evaporating-pan, just large enough to cover the flue. Here the sap from the sorghum is boiled down, being skimmed while boiling. This is Mr. Graham's first experiment, and he thinks he could fit up much better another season and make a greater saving. Home-made sorghum of much poorer quality has been retailing on the river at $1 a gallon, and is preferred for family use to the San Francisco refinery's "Golden Drips" (largely glucose at 65 cents. Mr. Graham's syrup is of a light golden color and has a pleasant sub-acid flavor that is agreeable to most tastes. He received the seed from a neighbor and does not know the variety. He will readily get about 70 cents at wholesale for the syrup, and will net $175 to $200 profit from his three acres of cane.

HOME-DRIED FRUIT.—Tulare *Register*, Aug. 22: We have heard of one or two instances where housewives are drying peaches and nectarines picked from the trees in their yard. Where it is desired to have something besides canned fruit, this is a good idea. One or two hundred pounds of fruit may be dried with but little trouble. A few boards arranged where the sun can reach them is all the apparatus necessary, and to split the fruit and drop the pit out is the biggest part of the work. If it is desired to sulphur the fruit, that is a simple affair also. Get some ends or sides of boxes, of the same size, or any other boards for that matter; spread the fruit upon them, stack one on top of the other with slats between to keep the fruit untouched by the board above it, and cover the whole with a large box. Then put a few handfuls of sulphur on a shovel and burn it inside the box a few minutes, say a half-hour. Fruit can be dried for home use just as easily as it can be "put up."

WHEAT YIELD.—Deer Creek Cor. *Tidings*, Aug. 22: Threshing is in full blast and not more than half-done here yet, though several machines have come in from the coast and places in the San Joaquin valley, where crops were not so good and machines more plentiful. The wheat blockade at Deer creek switch, on the east side road, and also at Alila, on the main line, is greatly annoying ranchers and teamsters in this vicinity; also at Pixley it is frequently impossible to unload without nearly a whole day's delay. It seems as though the powers that be realize that during the season all the grain can be handled, and it is of little consequence to them if the rancher should have to delay his work and thereby sacrifice what little profit he might have realized on his crop, thus missing the first opportunity for several years of reducing the mortgage on his home.

LARGE ORCHARD.—Visalia *Times*, Aug. 21: W. D. Garland of San Francisco, owner of the Bacon ranch, nine miles southeast of this city, has contracted with W. C. and J. R. Pendergrass of this city to plant 320 acres of the place to peaches and prunes. Two hundred acres of the land will be planted this winter, and the remainder a year later.

Ventura.

ARTESIAN WELL—BEANS.—Saticoy, Aug. 20: Captain R. Sudden has sunk on his ranch an artesian well 190 feet deep, and a good flow of splendid cool water has been realized. This is the first artesian well on this side of the Santa Clara river. For 12 years previous water had been hauled on this place.....In speaking of the bean crop in Ventura county, Mr. Levy, a prominent business man of Hueneme and a close observer, estimates that this county will this year ship 1000 carloads of beans.

Yolo.

LARGE SHIPMENTS.—Winters *Express*, Aug. 23: Four hundred carloads of fruit have been shipped from Winters this season to date. This includes Eastern and local shipments by freight and express. Four hundred carloads equal 9,000,000 pounds. Think of what a vast pile of fruit that would make if thrown in a heap together. The season has yet two months or more to run, and shipments are being made every day.

Yuba.

WHEAT—BARLEY—SILO—DAIRY.—Marysville *Appeal*, Aug. 22: One of the wheat-buyers of this city informed us that the crops in Yuba and Sutter counties, judging from the amount of wheat which has been sold and that which he knew was held and stored, was really just about one-third of that of last year. In speaking of the wheat sold he said that proportionately more wheat had been sold this year, and in fact but little was stored. This, he stated, was largely due to the high prices that had been paid, and the scarcity of ready money.... The barley crop in Yuba and Sutter counties seems to have been entirely exhausted. There has been no barley for sale on the streets of Marysville for the past two or three weeks, and although the quotations here are only $1.40, a buyer says that if any was for sale here it would find a ready market at $1.50. The barley crop in these two counties has been much shorter in proportion than the wheat crop. The most observant buyers say that there was not one-sixth of a crop in this section....A large and fine barn is going up on the Hall farm, about five miles northeast of Marysville, on the Brown's Valley grade. This place is owned by Capt. Hall of the firm of Hall, Luhrs & Co., Sacramento. He is introducing some improvements that are new to California, or at least to this part of the State. Among them is a silo. This is found on many thousands of Eastern farms, but may need some description here. A silo is a cellar made as air tight as possible, with a cement floor and a close-fitting door or cover. In this silo, green fodder of any description, such as alfalfa, clover, green vegetables, corn or roots may be packed tightly, and will keep in a fresh and green condition for an indefinite period. The silo is regarded in the East as an invaluable aid to the farmer and stock-raiser. It is the intention of Capt. Hall to establish a large dairy industry on his place, for which it is well adapted.

The Botanist.

Grasses of the North Pacific Coast.

The State of Washington, rich in every respect in regard to flora, is also very well represented by numerous families of *graminæ*—that is, grasses. These grasses, some of them imported and some native, are of a very great economical value, consequently their description in a popular form will be probably welcomed by numerous readers. To give, however, an opportunity to the reader to be able to understand some of the botanical terms, and to distinguish practically one species of grass from the other, we will begin with a short introduction, after which will follow the description proper.

The grasses form the most widely diffused families of plants, growing as well in the cold countries as in the tropics. The cereals of our climate, as, for instance, wheat, rye, barley, are grasses, and so are also bamboos and sugar-cane of hot countries.

A grass is composed, like many other plants, of the following parts: First, the root; second, the stem; third, the leaves; and fourth, the flowers.

Root.—It is well known that many grasses are annual and they possess a tuft of numerous slender fibers. The longer-living graminæ have also fibrous roots, but they are thicker and less branched.

Stem.—The aerial leaf bearing branch or stem is called a culm. This culm is usually cylindrical and hollow, and conspicuously joined by the so-called nodes, which are a strong plate of tissue, tending to strengthen the stem. In some grasses, in addition to the culm, there are also the so called rhizomes—that is, horizontal subterranean stems, which usually bear a greater or less number of scales, and in other species again a few of the lower internodes become enlarged, forming a kind of bulb. This bulb forms nutriment stores in which are concentrated a mass of food for support of the plant under peculiar circumstances. Grass culms grow with great rapidity, and they are usually unbranched, except at the top, where they divide into branches of the panicle—that is, of the flowering part, though there are also grasses where leafy branches rise from the side nodes.

Leaves.—They are solitary at each node—that is, they are placed alternately on opposite sides of the culm at greater or less distances. They consist of three parts—the sheath, the ligule and the blade. The sheath is usually of great length, and often completely surrounds the culm. At the summit of the sheath, at the point where the blade of the leaf leaves the culm, is the so-called ligule, usually a small, thin membranous organ, usually erect and pressed around the culm. This ligule is sometimes absent, though quite rarely, and sometimes is represented by a tuft of hairs. The ligule is the same for the grasses what the stipules occurring at the base of the leaves are for higher plants. The blade or lamina is usually far much longer than broad, and is set on the sheath at an angle. It is generally known under the name of leaf. The venation consists of parallel nerves, the central nerve, called the midrib or mid-nerve, being usually strong and extending to the point of the leaf.

Flowers.—The flowers are generally at the end of the culm, or side branches, and they are variously arranged. Sometimes they are many; sometimes very few; sometimes in a panicle, with many spreading rays, that is, branches; sometimes in a close spike. They consist of the essential organs, and of the envelopes, the former being the stamens and pistils. The stamens, usually three in number, are composed of the anther and filament, the former being the small organ which contains the so-called pollen, or dust, fertilizing the pistil or female organ, the latter, that is, the filament, being the thread-like stem on which the anther is borne.

The central organ of the flower is the so-called pistil, consisting of the ovary, the style, and the stigmas. The style is usually divided into two branches, at the extremities of which are delicate organs, the stigmas receiving the pollen for the fertilization of the flower. The ovary is at the base and contains the future seed.

The stamens and pistil are generally inclosed between two leaf-like scales, or husks, facing each other, which are called the envelopes of the flower. One husk is higher on the axis than the other, and also more delicate, and usually smaller. The smaller husk is called the palet; the larger and coarser one is known under the name of the flowering glume.

If the flower is formed as above described, then, together with the pair of outer glumes at the base, it is called the spikelet. Usually there are, however, many flowers in a spikelet, arranged one above the other, with a pair of empty or outer glumes at the base of the cluster. Sometimes, again, the lower palet is prolonged into a bristle-like appendage, the so-called awn.

The ovary, in ripening, becomes a grain (caryopsis) which consists of the usually adherent pericarp of the hull, within which is the seed proper, consisting of a small embryo situated on the outside and at the base of a floury albumen. We must also mention here that at the base of the pistil are situated one or two minute scales (lodiculæ), which are usually very diminutive, but sometimes in some genera are as long as the ovary. Again, sometimes, the flowers are arranged in several rows on one side of a narrow, flattened branch, which is called a rhachis.

Having given a general outline of grasses, we will proceed now to the description of

Different Species of Graminæ,

Which are so abundant in this State. The genus *Beckmania* and *Panicum*, or different kinds of millet, are closely related to each other. The slough grass, *Beckmania crucæformis* var. *uniflorus*, grows abundantly in this State, and can be found near Seattle. It grows in tufts, its stout culms being about three feet high, and the thick leaves eight inches long and half an inch wide. The spikelets are crowded together on the one-sided spikes. The panicle is longer than the leaves, and also a little wider, and is composed of numerous short branches. It is an excellent grass for stock, especially the sterile shoots and bottom leaves. The *Panicum* has a spreading-branched panicle, the terminal branchlets of which are adorned with spikelets of a single perfect flower. This perfect flower has a thick, hard glume with a similar palet and with the pistil and stamens inclosed between them. This species is in some countries used for bread-making, and its name is from the Latin *panis*, bread. The barnyard grass, or *Panicum crus galli*, has thick culms, usually over three feet high, and it is said to furnish four tons of hay per acre. It requires no cultivation, and it annually reseeds the ground. The red-top panicum, *Panicum agrostoides*, grows in large clumps on the margin of lakes and rivers, and it is nearly twice as tall as the previous one. It is a good grass when young; it is found, however, only in a few moist localities in this State. The crab grass, *Panicum sanguinale*, is an introduced grass, and it is very seldom to be met with. It is three feet tall, and has at the summit from three to six slender flower spikes. At the lower joints the culms are sometimes bent and then they frequently take root. This grass is better and finer in the Southern than in the Northern States. The switch grass, or the fall panic grass, *Panicum virgatum*, grows mostly in the eastern counties, but it is also found on the seashore. It is nearly five feet high and grows in clumps.

The genus *Phalaris* is found everywhere in this State. This grass prefers wet ground, when it reaches the hight of over three feet. It has strong, creeping rhizomes and its culm is stout and smooth. The leaves are long, sometimes 10 inches, but only about half an inch wide. The reed canary grass is called *Phalaris arundinacea*, and the ribbon grass of our gardens is a variety of this grass.

The genus *Anthoxanthum* comes originally from Europe and its variation, the so-called sweet vernal grass, *Anthoxanthum odoratum*, is much employed as lawn grass on account of its slender culms and scanty foliage.

Of the genus *Alopecurus*, the so-called Rocky mountain foxtail, *Alopecurus occidentalis*, is indigenous in Eastern Washington, and the water foxtail, *Alopecurus geniculatus* var. *aristulatus*, is found in wet meadows in other parts of the State. The first one yields a larger quantity of fine hay than the second one, and both are no more than a foot in hight.

Of the genus *Stipa* we find a few species in the State. Stamens are usually three, spikelets one-flowered, and the flowering glume has a hardened, sharp and bearded pedicel or stipe at its base. This stipe is often dangerous to sheep, as it penetrates into the wool and into the flesh. The different species of this genus—that is, *Stipa spartea, Stipa comata, Stipa viridula*—are generally known under the name of beard grass, bunch grass and feather grass. *Stipa spartea* is also often called devil's knitting needles, porcupine grass and arrow grass, on account of its very long awns inclosing the seed. It is also sometimes called buffalo grass.

The *Aristida* is worthless grass, growing in bunches about one foot high. The flowers are purplish, with slender awns.

The regular bunch grass, *Oryzopsis cuspidata*, is a mountainous grass, growing in very dense tufts. The culms are nearly two feet high, with narrow leaves. The panicle is over five feet long, and the spikelets each one flowered. The glumes inclose an ovate flower covered with silky hairs, which is, however, not a flower, but the flowering glume of hard texture. It grows usually on the sandy soil.

The genus *Phleum* is a very common grass, and two of its species, *Phleum pratense*, or the so-called Herd's grass, and *Phleum alpinum*, are to be found near Seattle. It is cultivated in this State, and it makes excellent hay. Herd's grass was found by Timothy Herd in wet localities of New Hampshire, hence it is also known under the name of Timothy. The culm of this grass is erect, with leaves about five inches long, and the base of the culm is a little bulbous. The flower spike is densely flowered, and the roots are very fibrous. It is one of the most valuable of grasses and it yields large crops, and it can be raised almost in any soil, moist or loamy, sandy or gravelly. It is sometimes sown with clover, but it is better to have the timothy meadows free from other plants. The clear seed weighs 45 pounds to the bushel, and about 12 pounds ought to be sown to the acre.

Of the genus *Agrostis*, or the so-called red-top, finetop and bent grass, the *Agrostis exarata* grows abundant in all the parts of this State. It is three feet high, with a stout culm, with broadish leaves over five inches long. The panicle is also over five inches long and pale green. It makes good hay. Other species are *Agrostis requivalvis* and *Agrostis scabra*.

A very common grass in Washington is wood reed grass, *Cinna pendula*, of the genus *Cinna*. It is a slender grass, five feet high, with creeping rhizoma and with a long, loose, drooping panicle. It grows usually in swamps and shaded woods, and on account of its leafy culms is good for hay.

An excellent grass is also the so-called blue joint, or small reed grass, *Calamagrostis Canadensis*, found in moist meadows near the Canadian boundary. Its culms are from three to five feet high and very hollow, and the leaves are one foot long and about half an inch wide, flat and rough. The panicle is long and spreading, of a purplish color, the spikelets short-stalked, and at the base of the flowering plume are silky white hairs. The stem sheath is smooth. This very productive grass ought to be more cultivated in this State. The cattle relish it very much. Another species of this grass, *Calamagrostis sylvatica*, is also found in Washington in sandy localities. It grows in tufts and is more coarse than the previous one. It is also sometimes called bunch grass, and in the scientific world is known under the name of *Dryenxia sylvatica*.

The genus *Trisetum* is represented in this State by *Trisetum subspicatum*, a purely mountainous grass, sometimes only a few inches in hight and sometimes two feet. Its culms are erect and smooth, the panicle spike-like and the spikelets two or three flowered. It is a nutritious grass.

Now we are coming to the well-known grass, wild oats, *Avena fatua*, which is diffused almost all over the world. It does not differ very much from the cultivated oat, *Avena sativa*. It differs in the presence of the long twisted arm, in the smaller size of the grain, in having more flowers in the spikelets, and in brown hairs which cover the flowering glume. Though very good as fodder, the *Avena fatua* is injurious to any grain-field. The origin of the cultivated oat is believed to be wild oat, and Professor J. Buckman succeeded in raising "the potato-oat type" and "the white Tartarian oat" from grain of *Avena fatua*. There appears also to be a great tendency in the cultivated oat to degenerate on stiff clay soils into "weed oats."

The fall oat grass, evergreen grass, or meadow oat grass, *Arrhenatherum avenaceum*, is much valued on account of its rapid, vigorous growth and productive herbage. The culms are from two to four feet high, with four or five leaves each, the sheaths smooth but the leaves are rough. The spikelets are on short pedicels and the panicle is loose, nearly ten inches long. This grass is found but seldom in Washington.

The buffalo grass, *Buchloe dactyloides*, is a very low grass, scarcely rising three inches above the ground, and it grows in patches and tufts and spreads by means of off-shoots or stolons. These off-shoots are sometimes two feet long, with joints every few inches. It is a very valuable grass, but grows only on the level ground.

In the dry localities of this State, especially toward Oregon, is found *Kœleria cristata*, sometimes known under the name of June grass. It is usually over one foot high, the leaves short and the panicle a little over two inches long. In fertile soil it grows longer, and is then over two feet high.

The alkaline or salt grass, *Distichlis maritima*, is found only near Bellingham bay and in a few places in Eastern Washington. It has strong creeping root-stocks, culms about 18 inches high, and rigid, sharp-pointed leaves. It is not a first-rate grass.—*M. Lopatecki, Ph. D., in Seattle Post Intelligencer.*

Horticulture.

Observations in Japan.

EDITORS PRESS:—I arrived here after a somewhat unpleasant voyage of 16 days from San Francisco. The thermometer varied between 56° and 60° till the last four days, on account of the northerly route we were taking, when it rose to 70°. The distance made was 4650 miles, and we crossed the meridian of 180°, on the 10th day out, and so the 13th of June had no existence for any of us.

For a week after arrival we had hot weather, and one day up to 93°; then the rainy weather set in, and we may expect it daily for three or four weeks and the thermometer day and night at about 70°. I write this that you may compare the climate of this part of Japan with your own, so as to judge of the time the fruits grown here should ripen with you.

I find that the fruit-dealers know little about the names of the fruits they sell, and I have to depend on the nurseries or fruit-growers. I can hear of no plum called "Botan," but the "Botankio," a roundish large plum, is just coming into the market hard and green. The stone is not as small as the Hattankio nor is the plum as large. The latter is just now appearing at the stalls, and while the Botankio is round with a point like a pimple, and turns from green to a beautiful golden, the Hattankio is a conical fruit. I have never seen the "Botankio" in California, but think it ought to be popular, as it keeps well and the samples I have had for four days are turning color and ripening with a delicious perfume. The Hattankio ripens a purple, in some instances of a dirty, unsightly appearance and in others a very handsome rich color. Why this difference I do not yet know.

You know the Japanese pick all their fruit hard and green and eat it so, but the main use of fruit seems to be eaten as a condiment (with rice), sun-dried and salted or pickled. They are unacquainted with the lusciousnes of a sun-ripened peach, and even to the babies are given the hard, red-fleshed small peaches, called "Watermelon" peaches on account of the color. It is no wonder that cholera is common and has already appeared in Nagasaki when such fruit is not prohibited from being sold.

A good deal has been said about the *Citrus trifoliata* being a dwarf tree, but if left to grow it reaches 25 feet or more. The Japanese have no use for it at that hight, using it for a grafting stock or hedges of about six feet high trained to grow even between framework of split bamboo. Just now the new shoots are growing six feet above the fences and will soon need trimming off.

The late rains have started vegetation, but the weeds do not grow in such quantities as in California, and are easily removed with the hoe.

There seems to be an impression in Florida that the Oonshiu orange is called Satsuma because grown in that province, whereas the fact is that there are none there of importance, Kishiu is the province where they are mostly grown. I had the pleasure of a long interview with Prof. Tamari of the Agricultural College, Tokio, and he knows of Oonshiu trees at Hakone, and believes the cold there is as low as 10° Fah. He considers it will stand that degree of cold. As it has already stood still lower cold in America, any statistics from here are superfluous. H. E. AMOORE.

Yokohama, Japan July 17.

A Fruit Farm Near Pasadena.

Mrs. Jeanne C. Carr sends us the following clipping from the Pasadena *Tribune*, stating that she can verify the statements made therein, and certainly they are interesting:

One has but to take a drive in any direction from Los Angeles to get some idea of the immense crop of fruit now being gathered in this vicinity.

Yesterday a *Tribune* reporter visited the ranch of C. C. Thompson, just north of Pasadena, which the residents look upon as a model fruit farm, and take pride in showing visitors its products.

Mr. Thompson purchased the 80 acres of land comprising the ranch about eight years ago, and in the past six years has planted 60 acres of the tract to peaches, prunes, pears and plums, selecting only the best varieties obtainable. This season the crop is phenomenal, and has been raised entirely without irrigation. The reporter was shown through the orchard, and found the trees airly overburdened with fruit. The peach crop was well under way and had nearly all been gathered, but there were several tons of Orange Cling and Crawford peaches still on the trees. Samples of the fruit on nearly every tree were found to measure from 12 to 15 inches in circumference. The crop has been sold to the Monrovia Company at a very remunerative figure.

The prune crop is especially noticeable. The trees are laden with German, French, Hungarian and Silver prunes, and present in their many and varied colors a beautiful sight. Mr. Thompson is curing this crop himself, as he finds it pays better than to sell the fruit on the trees. He has 14 men employed, and at his "drying-ground" has constructed a miniature railway, having laid tracks in several directions from the place where the fruit is dipped. After this process is gone through with, the trays are placed on trucks and distributed over the ground. The capacity of the force is ten tons per day, and he is working to the full limit. He will realize nearly $3000 from his peach crop alone, and possibly $5000 from other fruits.

The total income from the 80 acres will not fall below $10,000, and this produced by fruit on which not a drop of water was used for irrigation. A year or so ago he was offered $125,000 for the 80 acres but refused to sell. He and his estimable wife are justly proud of their success and take pleasure in showing the fruits of their toil.

Will They Die?

EDITORS PRESS:—What are the after effects of last winter's excess of water on trees that did not die but are manifestly badly affected?

I had 60 trees, prunes and walnuts (three years old) killed by water, and about 100 affected.

The prunes are badly gummed and the trunks are blackened, but have made a very good growth, five to seven feet.

The walnuts have made almost no growth, and the foliage does not look healthy. Some have grown only four or five inches and others two feet or more.

Will these trees be liable to grow healthy another year or sicken and die?

Carpinteria, Cal. J. W. ANDERSON

[What can growers say about these points?—EDS.]

MONARCH STRAWBERRIES AT SANTA BARBARA.—At the last meeting of the Santa Barbara Horticultural Society, Mr. Delos Wood

presented a box of strawberries of magnificent size and delicious quality, giving a statement as follows: "This kind of large strawberry, double the usual size and of fine flavor, is called 'Monarch of the West.' I grow them on a one quarter acre of ground, and irrigate by a one-half-inch pipe. The yield has been for a month past from 75 to 100 boxes per day, selling at about six cents per box, wholesale price, while other kinds bring only half that sum. I expect to pick and sell at that rate for two months longer."

California's Stallions.

I beg to announce that, with a view of perpetuating the forms and characteristics of the leading stallions of California, I am issuing a series of lithographic likenesses. Each portrait issued will be an acknowledged likeness, the result of a close study of the horse and an artistic treatment of the subject In order to secure for the series an immense advertising value, from a breeder's point of view, 4000 copies, at least, of each portrait will be issued.

Terms, $100 for first issue of 100 copies. In quantity, for advertising purposes, copies will be furnished at low rates.

H. Boyd, Artist.

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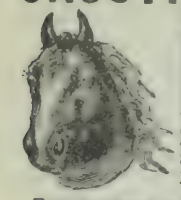
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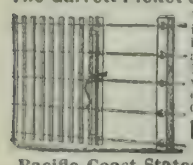
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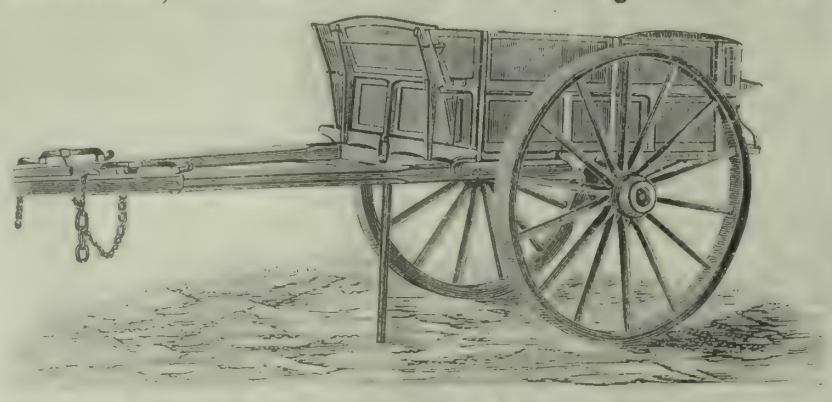


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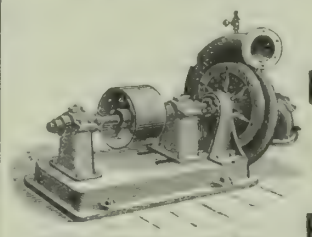
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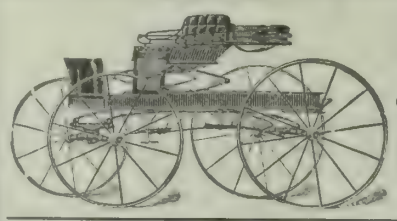
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Fabiola Hospital, Oakland.

We cordially indorse the following article which has been sent to us by our correspondent:

In 1876 Mrs. R. W. Kirkham and other charitably disposed ladies of Oakland met together for the purpose of starting a homeopathic hospital and dispensary. Each of them subscribed liberally toward this object, and having secured the gratuitous co-operation of a number of Oakland's most skillful homeopathic physicians and surgeons, they took a small building on Market street and started under the name of the Oakland Homeopathic Hospital and Dispensary Association.

In 1883 a still larger building was purchased, but in less than three years this also proved too small for the demand.

The late Anthony Chabot then generously donated two and one-half acres of land on the corner of Moss avenue and New Broadway as a site for the erection of a building of adequate size. Many of Oakland's wealthy and generousmen then came forward, and, by liberal donations, helped the good cause along. Prominent among these was Frederick Delger, who gave the munificent sum of $5000. And soon the building depicted on this page was erected and dedicated with appropriate ceremonies. To it the name "Fabiola Hospital" was given, in honor of Fabiola, a Roman lady of the fourth century, who first founded a public hospital, thus inaugurating "a charity that has overspread the world and will, to the end of time, alleviate the anguish of humanity."



FABIOLA HOSPITAL, OAKLAND, CAL.

Those who have had an opportunity of visiting and inspecting it, will have a better idea of the incomparable advantages it possesses as a home for invalids than any description can afford. But there are many persons who look upon a hospital as much the same thing as a prison, and expect to see nothing but gloom and misery in both. Could these people but pay a visit to the above institution, their views would soon be changed; for they would find a pleasant home where the misery necessarily attendant upon sickness is reduced to a minimum.

A healthier or pleasanter site could scarcely have been chosen. In a quiet neighborhood, surrounded by picturesque scenery, the air pure and bracing, it is no wonder that the patients treated there are contented and happy, even in their sufferings. The best surgical and medical skill that Oakland can afford is in constant attendance at the hospital, all the service being gratuitous.

Although the hospital is a homeopathic institution, through the courtesy and liberality of the ladies composing the Board of Directors, allopathic patients are admitted and allowed to have allopathic physicians attend them.

Besides the medical attention, patients have the most devoted care from a corps of trained nurses. The training of nurses for the care of the sick is one of the most important works done by the hospital. Young men and women fulfilling the requisite conditions are admitted to the training school and receive a thorough training in the various branches of a nurse's work. The course extends over two years, at the end of which time (the final examination having been passed) a diploma is presented, certifying to the recipient's knowledge of nursing, ability and good character. This school is being largely taken advantage of and will be increased as the hospital itself increases in size. It will not be very long before this takes place, as the Directors are now erecting an annex which will have accommodations for 40 more patients, that is, will nearly double the present capacity of the building.

The hospital admits three classes of patients, irrespective of sex, nationality or creed: First, those who are destitute and unable to pay anything; second, those whose means do not enable them to pay for medical attendance at home; third, those who desire the hospital advantages as private patients. Those suffering from contagious diseases are not admitted. Patients are received upon recommendation of two or more of the Directors and a written order of admission signed by the physician who is to have charge of the case.

The following are the officers of the institution:

Honorary President, Mrs. R. W. Kirkham.
President, Mrs. John Yule.
Vice Presidents, Mrs. Remi Chabot, Mrs. D. B Hinkley and Mrs. J. A. Folger.
Corresponding Secretary, Mrs. Eleanor S. Doering.
Recording Secretary, Mrs. G. M. Stolp.
Treasurer, Mrs. Q. A. Chase.
Auditors, Mrs. Peder Sather, Mrs. R. N. Garrill, Mrs. S. M. Snook.
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Advisory Board, Mr. F. Delger, Mr. Q. A. Chase, Gen. R. W. Kirkham, Mr. Thos. Crellin, Capt. Asa Simpson, Mr. Hiram Tubbs, Mr. P. N. Remillard, Mr. John Glascock.

During the year just closed over 150 patients were admitted. This does not include those who have been treated at the "Free Clinic" connected with the hospital, in charge of Dr. S. I. Fenton, the resident physician.

Such an institution speaks volumes for Oakland, and well deserves the hearty support of all who feel any sympathy for suffering humanity. Long may it stand and increase its sphere of usefulness—a splendid monument to the noble charity of those kind men and women who have brought it to its present high standard, and to the progress which the great truth of homeopathy has made in "the Athens of the Pacific." R. W. W.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING AUGUST 19, 1890.

434,552.—BEDSTEAD—F. H. B. Babbe, Santa Rosa, Cal.

434,695.—GAS ENGINE ATTACHMENT — Barrett & Daly, S. F.

434 555.—HANGING-UP ATTACHMENT FOR STAMP BATTERIES—I. K. Cleaver, Deadwood, Cal.

434 556.—FIRE-PROOF PAINT—J. T. Durkee, Portland, Or.

434,434.—ANIMAL TRAP—R. E. & A. J. Eads, Pomona, Cal.

434 772.—TOOL-HANDLE—J. W. Eaton, Placerville, Cal.

434,780.—TOOL-BOX—C. O. Hescox, Tacoma, Wash.

434,712.—LIFTING JACK—Milo P. Holmes, S. F.

434,785.—GUN SIGHT—O. A. Horner, Eureka, Cal.

434,718.—LEAF-TURNER—W. F. Mitchell, S. F.

434,453.—ELEVATOR SAFETY DEVICE—E. F. Moenning, S. F.

434,565.—DRAPER SLAT PROTECTOR—Wm. D. Nelson, Traver, Cal.

434,677.—RIVETING MACHINE — Geo. Pardy, S. F.

434 463.—STEAM CONDENSER—F. Rademacher, Los Angeles, Cal.

434,814.—SUBSOIL IRRIGATOR—J. H. L. Tuck, S. F.

434,617. — STOVE-LID LIFTER — P. Wilhelm, Portland, Or.

434,494.—HARVESTER—T. C. Wilkin, Independence, Or.

434,693.—ORE CONCENTRATOR BELT—G. E. Woodbury, S. F.

The following brief list by telegraph for Aug. 26 will appear more complete on receipt of mail advices:

California—Alfred Brumwell and M. F. Doolittle, Kansas City, Mo., assignors of one-third to J. M. Thompson, S. F., cable-grip; Ellswood Chaffey, Santa Monica, mechanism for transmitting power; Frank M. Merrill, Oakland, comoressed air street-car motor; Henry E. Skinner, assignor to A. T. Allen, S. F., trolling spoon Washington—August F Baatz, Bellingham, railway brake; Frederick Ban, Tacoma, soldering iron.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

DIXIE THOMPSON of Santa Barbara county has a field of 2300 acres of beans to look after these days.

J. H. White's Sale of Cattle and Horses.

There has been no offering of high-bred stock within the past year that has attracted more attention than the proposed public sale at auction of herd of Holsteins and the high-bred horses of Mr. J. H. White of Lakeville, Sonoma Co.

Full description of some of the Holsteins has been given in the RURAL during the last two years, and it has been generally conceded that this herd was among the most notable and bred from the best strains of this class of cattle. The Petaluma *Argus*, published near the home of Mr. White, in last week's issue says:

The horses and cattle owned by J. H. White of the Lakeville Stock Farm are to be sold by auction in San Francisco on Thursday and Friday, Sept. 4 and 5, 1890, at the Railroad Stables, corner of Steiner and Turk streets.

This sale is a matter of so much importance to the farmers, stock-raisers and the people in general, in this section of the State, that it is entitled to more than a passing notice. It is scarcely worth while to mention the fact that it costs no more to raise a fine animal than a scrub, after once getting a start. This is evidently a stock county. One of the principal sources of profit is from horses, and our county is fast taking rank among the leaders in this great industry. Only by breeding the best strains of horses and cattle can we maintain an equality with Kentucky and some of the Eastern States, and attract buyers from abroad.

The catalogue contains the pedigree of 48 horses and 105 cattle. The horses are all well bred and many of the colts and fillies are of the most popular strains and contain the blood of the most noted performers of the present day. There are 30 colts and fillies that are so finely bred that we would hardly know how to choose from among them, and if we had a stock ranch would buy them all. Take for example the weanling filly, by Contention, he by Director, dam Miss Helen by Gen. Benton; first dam Miss Kohl by Arthurton, second dam by Speculation. Or the bay filly by Hernani, son of the great Electioneer—Gipsy by Paul's Abdallah, he by Hambletonian 10; its first dam by Gen. McClellan, second dam by Boston, third dam by Medoc. Or the pacing filly by Marco, out of Nellie Requa by Alexander's Abdallah. Or the filly by Admont, first dam by Arthurton, second dam by Speculation. We could continue this to the end of the column with equally good ones, and will have to close by advising our readers to get a copy of the catalogue and give it a careful perusal. Annetto, by Anteeo and Emma Volo, by Antevolo, the property of M. O'Reilly, will be offered at the same sale.

The Holstein-Friesian cattle are now universally admitted to be among the very best "all round" cattle in the country, and Mr. White's lot of 105 were from the pick of Holland. There is no chance to make a mistake in buying any of these cattle, as they are all registered and from the best milk strains.

Traction Engines.

A RURAL representative visited the agricultural works and machine shops of Daniel Best at San Leandro one day last week. The full force of men is at work on traction engines at present, on two of which the finishing touches are being given for exhibition at the State Fair in September. There were a number of visitors present, among whom was Mr. A. Liebes from the City of Mexico, who has been inspecting the various traction engines now being constructed in this State. He has in view the purchase of several of these engines for hauling silver ore and timber in Mexico, and if their capability proves what is claimed for them, he has no doubt that he will have a demand for 100 or more.

Look for Good Things.

A man educated will succeed the best, a mechanic with the best tools will do the finest work and whoever presides in the kitchen will obtain the best results with the least trouble when supplied with the best appliances.

The combination frying-pan and toaster is a case in point. It will give you a juicy steak and elegant toast whether over coals or a smoky fire. Cook onions or anything without the odor penetrating the house. Can be used over coal, wood or gasoline with equal facility. Then comes the improved baker and roaster; using this, no burnt bread is possible, does its own basting. Retains all the vapors arising while roasting, a delicious gravy is the result and the meat made juicy and tender. Other indispensable novelties for kitchen use found only at the Novelty Hardware Co., 1433 Market St. Send for circulars.

The Secret of Success.

The success that Messrs. Loomis & Nyman of Tiffin, O., have met with in the manufacture of Well-Boring Machinery is due largely to the fact that they have every facility for manufacturing first-class machines, and are thoroughly responsible in all dealings, and have been engaged in the business for over 30 years. Also by a liberal patronage of the newspapers. Their advertisement of "Bore Wells" is familiar to most readers. All persons interested in the subject should write for catalogue to Messrs. Loomis & Nyman, Tiffin, Ohio.

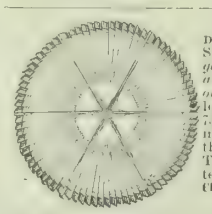
APIARIAN SUPPLIES.

Italian Queens, $2.50 each; Black Queens, $1 each. Swarms from $2.50 each; Smoker, $1. Comb Foundation, $1.25 per pound; V-groove Sections, $4 per 1000 Comb Honey wholesale and retail; Hives, etc. W. STVAN & SON, The Homestead Apiary, San Mateo, Cal.

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12 to 15-Inch
CENTRIFUGAL PUMP.
Send Price and Description to
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A practical treatise by T. A. GAREY giving the results of long experience in Southern California. 196 pages, cloth bound. Sent post-paid at reduced price of 75 cts. per copy by DEWEY & CO., Publishers, S. F.

Real Estate Directory.

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Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

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GEO. B. POLHEMUS, Coyote, Cal. Holstein-Friesian cattle, comprising males and females on advanced register. First premium in great milking test at State Fair, 1889, was won by a member of this herd.

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Short Horn Cattle and Draft Horses.

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San Francisco, Cal., Oct. 22, 1888. **PETER SAXE & SON, Lick House, S. F.**



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— OF —

Standard and High-Bred Trotting Horses

— AND —

THOROUGHBRED HOLSTEIN CATTLE.

Property of J. H. WHITE, Esq., Lakeville, Sonoma County, Cal.

On Thursday and Friday, September 4th & 5th, 1890.

At RAILROAD STABLES, Cor. Turk and Steiner Sts., San Francisco.

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These animals are ALL THOROUGHBRED AND REGISTERED and from the choicest families, including the AAGGIES, NETHERLANDS, JACOBS, MENLOS and TWISKS. It is the only offering ever made on this Coast of these extra fine butter and milk tribes.

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Mixes instantly with water. Prevents the fly from striking. In a two-pound package there is sufficient to dip 20 sheep, and in a seven-pound package there is sufficient to dip 100 sheep.

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—ON—

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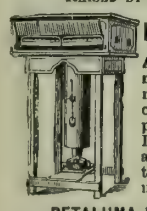
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1890.

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Entries for premiums close Monday at 7:30 P. M. Exhibitors are urged to make as many of their entries on Saturday before the fair as possible. Goods, animals and articles for exhibition must be in their places by 10 P. M. on Monday.

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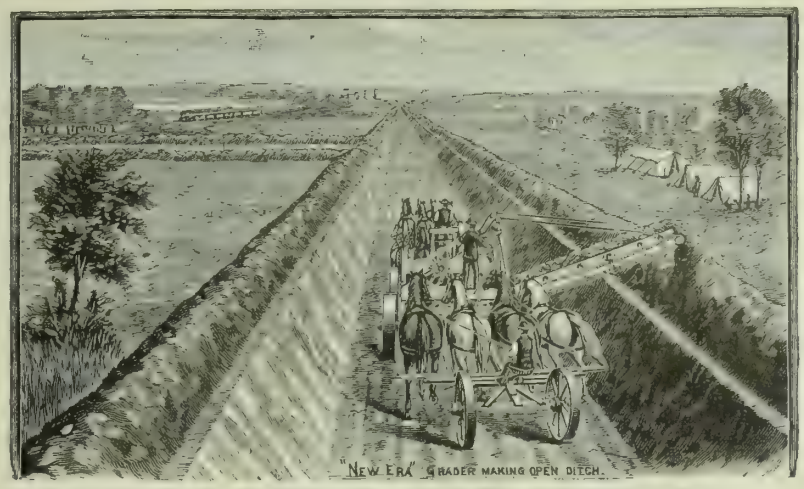
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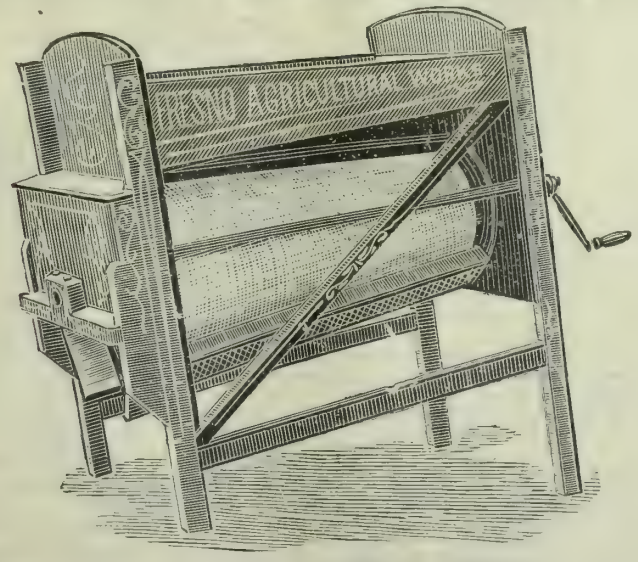
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Commissions one cent per pound, which includes all charges after wool is received in store until sold. Sacks furnished free to shippers. Cash advances arranged for when desired. Write for circulars. Information furnished promptly by mail or telegraph when desired.



GREAT REDUCTION IN PRICES TO CLOSE BUSINESS!

We now offer our Entire Stock of

Carriages, Buggies, Phaetons, 4-Spring Wagons, Carts, Harness and Lap Robes.

BRIGGS CARRIAGE CO., 220 & 222 Mission St.,
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Poultry, Eggs, Game, Grain, Produce and Wool.

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San Francisco Office, 313 Davis St.

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Consignments solicited. 413, 415 & 417 Washington St., San Francisco.

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Authorized Capital	$1,000,000
Capital paid up and Reserve Fund	800,000
Dividends paid to Stockholders	627,500

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July 1, 1889. A. MONTPELLIER, Manager.

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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Aug. 27, 1890.

The weather the past week continued favorable for fruit-dryers, who are taking full advantage of it. Fears are expressed that we may have early rains, and if so, much damage may have to be met by late driers. In all kinds of farm products trading has been fairly active at good prices, particularly in cereals. Wheat at the East and abroad has fluctuated at strong prices. The following is to-day's press cablegram:

LIVERPOOL, Aug. 27.—Wheat—Firmer. California spot lots, 7s 6d to 7s 9½d; cargoes off coast, 38s 9d; just shipped, 38s 6d; nearly due, 38s 9d; cargoes off coast, stronger; on passage very strong at extreme prices; Mark Lane wheat, turn dearer; in Paris, quiet.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Aug.	Sept.	Oct.	Nov.	Dec
Thursday	7s6d	7s6½d	7s6½d	7s6d	7s6½d
Friday	7s7½d	7s7½d	7s8½	7s8d	7s8½d
Saturday	7s7½d	7s7½d	7s8½	7s8d	7s8½d
Monday	7s8½d	7s8½d	7s8½d	7s8½d	7s11d
Tuesday	7s8½d	7s8½d	7s8½d	7s8½d	7s8½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	38s9d	38s6d	38s9d	Firm.
Friday	[illegible]	[illegible]	[illegible]	Quiet.
Saturday	[illegible]	[illegible]	[illegible]	Firmer.
Monday	[illegible]	38s6d	38s9d	Steff.
Tuesday	[illegible]	[illegible]	[illegible]	Firm.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York for the past week:

Day.	Aug.	Sept.	Oct.	Nov.	Dec.	May.
Thursday	107½	107½	108¾	109¾	110¾	.
Friday	108¾	108¾	109¾	110¾	111¾	.
Saturday	110	110½	111¼	112¼	114⅝	.
Monday	109	111	109	111⅝	107⅝	.
Tuesday	109	109½	....	....	111¾	.

The closing prices for wheat have been as follows at Chicago for the past week:

Day.	Aug.	Sept	Dec.	May.
Thursday	103½	103⅝	107⅞	111⅞
Friday	104¼	105	108⅜	112⅝
Saturday	106½	106⅝	109⅝	103⅝
Monday	104⅞	104⅝	107⅜	111⅛
Tuesday	107	107⅛	108⅝	112⅝

NEW YORK, Aug. 27.—Wheat—$1.10⅞ for cash; $1.08⅞ for September, $1.11⅞ for December and $1.15⅜ for May.

CHICAGO, Aug. 27.—Wheat—$1.06¾ for August, $1.06⅞ for September, $1.08⅝ for December, and $1.12½ for May.

Foreign Grain Review.

LONDON, Aug. 26.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: New English wheat is in demand; red is quoted at 37s. and white at 40s. Foreign wheat and flour were quiet until the end of the week, when they became strong. Good reports from Germany, Hungary, Roumania and Russia checked a rise. At to-day's market new English wheat sold at 42s.; foreign advanced 6d. American corn advanced 3d.

Crop Items.

PESTH, Aug. 22.—Statistics gathered by the Hungarian Minister of Agriculture place the wheat harvest of the world at 775,000,000 hectoliters, and the quantity required by importing countries at 123,000,000 hectoliters. The total quantity available to meet the import demands is estimated at 148,000,000 hectoliters. The Minister of Agriculture lays stress upon the fact that owing to the small quantity of stored grain, the surplus is small as compared with the import requirements.

MONTREAL, Aug. 22.—A cipher dispatch received to-day from Manitoba by a leading broker stated that frost ranging from two to five degrees had prevailed over the whole province of Manitoba and the Territories, and that about 75 per cent of the crop had been injured more or less severely. The general opinion here is that the estimates of the extent of damage must be purely conjectural as yet.

TORONTO (Ont.), Aug. 22.—The Agricultural Department has issued a bulletin dealing with the crops. The area of the fall wheat crop is 102,000 acres less than that of last year, and the area of the barley crop is 174,000 less. The spring wheat area is greater by 203,000 acres, and the yield of wheat exceeds that of last year by 57,000 bushels. The fall wheat throughout Western Ontario is of good quality, and the crop of spring wheat will probably be better than fair.

Wool.

NEW YORK, Aug. 24. — No sales of California wools were recorded this week. The market is looking strong, and wholesalers declare that they fear to sell lest they will not be able to duplicate stock at the same figures in the West. Pacific coast keeps selling well, common at from 17c to 19c and medium at 25c, while 1888 stock sold this week for 12 to 16c.

NEW YORK, Aug. 26.—The Eastern wool markets are quiet for the date. Tight money and the indefinite position of woolen goods exclude some buyers and cause hesitation on the part of others. Prices, however, do not waver, and the interior firmness has held out longer than was anticipated. The movement in fine washed wool is remarkably light for the period. In Boston there is a good business for Territory, Texas and California wools. Of the latter, 250,000 pounds were sold at 16@24c.

Peach Failure.

NORWICH (Conn.) Aug. 25.—Forty years ago Connecticut peach orchards were the finest in the world. The fruit was as fair as that of California. So immense was the yearly crop that the market was surfeited and farmers turned their hogs into the orchards. Then came "the yellows," an inexplicable disease that killed every tree in the State. After that, few peaches grew in Connecticut until a dozen years ago fruit-growers began to set out new orchards and learned to deal with the disease. They couldn't cure it, and at the end of three years it invariably kills an orchard. But they set out new trees each year, and in the second and third years, before "the yellows" attacked the orchards, the growers had two big crops, then they let the trees perish. In this way the prestige of Connecticut peaches was revived. But this year more ill fortune has befallen peach men. The trees didn't bear at all, and the crop is a total failure. A big fruit-grower at New London said a day or two ago that the crop in Connecticut will be less than 200 baskets. As there is no Southern crop, the outlook is dismal enough for preservers.

Local Markets.

BARLEY.

	Buyer Season. H.	L.	Seller 1890. H.	L.	Buyer 1890. H.	L.
Thursday	142	140	130½	130	136½	136
Friday	141½	140	....	....	136	135½
Saturday	141½	141½	130⅝	130⅝	136⅝	136⅛
Monday	143	142½	....	....	137	136⅝
Tuesday	142½	142	130	129½	136½	136

WHEAT.

		S. S.	Nov.	B. '90.	B S.	S. '90.
Thursday	h.	....	....	145⅞	155	142
	l.	....	....	144	154	142
Friday	h.	....	....	145⅞	155	....
	l.	....	....	145	154	....
Saturday	h.	....	....	145⅞	154½	142
	l.	....	....	144½	154⅜	142
Monday	h.	....	....	146⅛	155½	....
	l.	....	....	145⅝	154⅜	....
Tuesday	h.	....	....	146⅝	155½	....
	l.	....	....	145	155	....

BAGS—Grain bags are weak at 7½c for standard sized. The demand is slow.

BARLEY—The sample market has been fairly active at full prices. In futures, trading has been free at gradually strengthening prices. The following are the reported sales made on to-day's Call:

Morning Session: Buyer 1890—500 tons, $1.36. Buyer season — 300 tons, $1.42½; 200, $1.42¾; 200, $1.42½ ₩ ctl. Afternoon Session: Buyer 1890—500 tons $1.36⅝; 300, $1.36. Buyer season —500 tons, $1.42¾; No. 1 Brewing, buyer season —100 tons, $1.44½ ₩ ctl.

BUTTER — Receipts are large. The demand is free at a slight decline. The impression prevails that prices will not shade off much, if any more for the present.

CHEESE—The demand is fairly active, but free receipts are against any present improvement.

EGGS—The market has made another upward move. At the higher quotations buying is slow. It is claimed that receipts will begin to increase.

FLOUR—The market is strong but no higher. The export movement is free.

WHEAT — The market is very strong at full prices under a fair demand and a strong holding. In futures, trading continues quite active; the fluctuations are small in this market, but quite wide abroad. The following are to-day's Call Board sales:

Morning Session: Seller 1890, new, season storage paid—100 tons, $1.41½. Buyer 1890—1000 tons, $1.45⅞; 100, $1.45⅝; 2800, $1.45¾. Buyer season —200 tons, $1.54⅞ ₩ ctl. Afternoon Session: Buyer 1890—700 tons, $1.45¾. Buyer season—700 tons, $1.54¾ ₩ ctl.

[COMMUNICATED.]

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Aug. 26th, were as follows:

Flour, qr. sks	59 050	Buckwheat, sks	156
Wheat, ctls	206,500	Middlings, sks	3,327
Barley, "	45,947	Alfalfa, "	....
Rye, "	2 86	Chicory, bbls	273
Oats, "	6 042	Broomcorn, bdls	88
Corn, "	4 694	Hops, bls	77
*Butter, "	1,440	Wool, "	1,907
do bxs	276	Hay, tons	3,183
do bbls	51	Straw, "	130
do kegs	21	Wine, gals	258,027
do ½ do	....	Brandy, "	1,180
†Cheese, ctls	1,100	Raisins, bxs	20
do bxs	171	Honey, cs	495
Eggs, doz	24 530	Walnuts, sks	....
do " Eastern	24,900	Flaxseed, sks	....
Beans, ctls	6,010	Mustard, sks	737
Potatoes, sks	31,685	Almonds, sks	....
Onions, "	4,075	Peanuts, sks	....
Bran, sks	7,775	Popcorn sks	106

*Overland 50 ctls. †Overland 248 ctls.

Cereals.

The local wheat market has ruled strong throughout the past week under review, and this, too, in the face of high charters for spot and near-by vessels. The strength of the market is in sympathy with higher prices at the East and also abroad. The cheapening of money in England has considerable influence on market values, although to the advance in the price of silver it is more largely due. The tonnage on the way is increasing, but that due within the next 30 days only aggregates about 40,000 tons register, but within the following or succeeding 30 days the registered tonnage that is due aggregates fully 80,000 tons. As each ton registered is equal to a carrying capacity of 1 6-10 short (2000 lbs) tons, the quantity of wheat that can be safely handled is easily figured out. It now looks as if we may possibly have a surplus tonnage, for the high cost of coal in this city will attract liberal shipments from Australia. The wheat tonnage (registered tons) on the way up north compares as follows with the like time in 1889:

For	1890.	1889.
Oregon	44,414	35,386
Puget Sound	32,310	11,334
British Columbia	19 584	8,661
Totals	97,308	55,381

The above shows a gratifying increase for the present season.

Threshing in this State will soon be through with. The returns from the threshers are very mixed, making it quite difficult to arrive at a satisfactory estimate; yet judging from last year's outturn we still adhere to the opinion that it will be about 1,050,000 against 1,450,000 last year. Taking it as a whole, the grade is better in 1890 than it was in 1889. Oregon and Washington advices are confirmatory of a large outturn. The average to the acre runs from 15 to 20 ctls, fully 40 per cent more than in last year. The quality is excellent.

Barley has held to strong prices through the week. The absolute certainty of a shortage in the crop is the prime support to the market. The demand from feeders and maltsters is good, but from shippers it is slow owing to the prices here being above European and Eastern parity. The grade this year is said to be above last year's, both in weight and color. Eastern Oregon and Eastern Washington advices report an increased yield this year.

Oats have held firm but steady. The demand is good. The yield in this State is light. It is stated that the crop in Oregon is only an average.

Corn is strong at unchanged quotations. The light yield at the East is in favor of holders.

Rye is steady. Buckwheat is slow.

Feedstuff.

Bran and middlings are in good request at higher prices than have ruled for two years past. Ground barley is strong at a slight advance. Feed-meal is steady.

Choice grades of hay are strong at another advance. The consumption is quite large, being larger than ever before known. Fair to good grades are stronger, but poor is slow. The yield this year is not as large as it was estimated early in the season.

Fruits.

In berries, raspberries are scarce and high. Strawberries and blackberries are in fair receipt. Prices are unchanged, but, if anything, a little firmer. Huckleberries are lower under freer receipts.

In tree fruits both pears and peaches are firmer, with quite an advance in the latter. Canners are buying. Plums are unchanged, receipts being quite heavy. Nectarines are firmer. Apples are meeting with a better inquiry; chiefly for the more choice, better keepers for shipping.

Grapes are a shade weaker under free receipts, with local buyers offish. In wine grapes there is nothing new to report.

The dried-fruit market continues firm notwithstanding a weaker feeling at the East. Strength here is due to light available supplies, Eastern buyers having contracted for about all to be had, which compels large jobbers on this coast to bid well up so as to have their wants met. A carload of prunes was shipped from Los Gatos on yesterday (Tuesday) to the East and another was sent out from Santa Rosa. Apples appear to be in better demand. Quotations in sacks are as follows: Evaporated apples (boxes), 12@13c per lb; sliced, 8@9c; quartered, 7½@8c; pitted plums, 9@9½c per lb; evaporated peaches, 18@21½c; bleached apricots, sacks, 14@17c per lb; boxes, 17@18c per lb; White nectarines, 15@17c; Red nectarines, 11@12c; California prunes, ungraded, 8½@10½c.

Dried grapes are not quite so active, owing to buyers having dropped their bids to 3¾c for the better grapes against 4c a week ago. Some think the decline temporary and brought about by a weekly contemporary's insidious attack against the prices which obtained at that time.

There is a good demand for lower grades of raisins. The buying, it is said, is due to the higher cost of dried fruits. For other raisins the market is quiet but strong. For raisins in the sweat, quotat ons are given at from 4½ to 6 cts, according to grade, etc. For September-October delivery, Layers are quoted at $1.75 to $2.25 and loose Muscatels $1.50 to $2.

Vegetables.

The onion market continues to show strength under moderate receipts and a good demand. Shipments the past week to Australia and New Zealand aggregated nearly 2000 crates. It now looks as if the crop was short of expectations.

Potatoes are stronger, notwithstanding freer receipts. The inquiry is chiefly for the better keepers. The call is both local and for shipping.

In garden truck there is nothing new to report, outside of lower prices for tomatoes. At the decline, canners are in the market.

Live-stock.

The market is without essential change. Offerings continue free. The high price of feedstuff is against cattlemen not having desirable range for their stock. It is generally claimed that when the new stock-yards get under way the market may improve. Cows are reported unchanged; the demand is said to be quiet owing to the high price of feed and the low price of butter. Hogs are weaker.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4¼@4⅝c ₩ lb; dressed, 7¼@8½c ₩ lb.; heavy, 3⅝@4c ₩ lb.; dressed. 5¾@6¾c ₩ lb. Stock hogs, 4¼@4½c ₩ lb

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¼@5½c ₩ lb.; second quality 4¾@5c ₩ lb.; third quality, 4c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6@8c ₩ lb.; large, 4@6c.

MUTTON—Wethers, 6½@7c ₩ lb.; ewes, 6@6½c ₩ lb.; lamb, spring, 7@8c.

Miscellaneous.

Poultry has arrived quite freely, causing a weaker market.

Hops have been booming, until at the close 30c is named. In this State and Oregon 25c was freely paid, then 27½c, and now 30c is named as the price, but we are not informed of sales being made at over 27½c. The Eugene, Oregon, *Register* of Aug. 22 says: From one of the most prominent hop growers in Lane county we learn that there will not be over half the usual number of bales of hops gathered this year. During the past few years several yards have been grubbed out and others have been allowed to wear out instead of being replaced, and but very few new yards have been started. Besides the decrease in acreage, the yards in many parts of the country are not bearing as heavy as usual, and for this reason he feels justified in saying that there will not be more than half the usual number of bales. He expects his yard to fall short 13,000 pounds.

Wool is reported unchanged. The tone is far from reassuring, being weak, owing to close money markets at the East and heavy stocks of woolen goods.

Beans are coming in fairly free. The market is very strong for new to arrive. The unfavorable crop weather at the East is in our favor.

Honey is coming in quite freely, but the market is kept fairly well cleaned up at a slight reduction on quotations.

New crop nuts are meeting with a good inquiry, with buyers bidding an advance for October delivery.

Hog products are strong, with perhaps a slight advance obtainable.

Exports by sea the past week aggregate as follows: Wheat ctls, Liverpool, 91,703; Cork, 60,669; Rio de Janeiro; 41,216. Flour bbls, China, 17,266; Japan, 1120; Manilla, 250; Australia, 232. Barley ctls, Liverpool, 10,169. Brandy gals, Liverpool, 4479. Canned fruits cases, Liverpool, 8027; Glasgow, 1050; Australia, 280. Cotton lbs, Liverpool, 99,113. Oats ctls, Mexico, 1607. Butter lbs, New Zealand, 1000. Apples boxes, Australia, 2076; New Zealand, 325. Beans lbs, China, 5378; Australia, 14,437; Hops lbs, Australia, 3000. Broomcorn lbs, Australia, 31,172. Honey cases, Liverpool, 326; Australia, 45. Hay bales, Mexico, 139; Honolulu, 600. Wine gals, Mexico, 2852. Corn ctls, Australia, 2000. Onions, crates, Australia, 1648; New Zealand, 120.

From the *Commercial News* of Aug. 27th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	295,268	219,426
On the way to neighboring ports	23,841	21,329
In port, disengaged	3 751	28,655
In port, engaged for wheat	42,247	67,340
Totals	365,107	336,750

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Aug. 20, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	1,497.210	1,539,837
Flour, bbls	138,461	159,894
Barley	39,959	138,951

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, Aug. 27, 1890.

BEANS AND PEAS.			**HIDES.**		
Bayo, ctl	2 60	@ 3 00	Dry light to hvy	10 @	11
Butter	2 10	@ 2 30	Salted	5 @	8½
Pea	2 60	@ 3 00	**HOPS.**		
Red	4 00	@ 4 25	Oregon, 1890	25 @	30
Pink	2 75	@ 3 50	Cal 1890 Choice	25 @	30
Large White	—	@ —	do Fair to G'd	20 @	—
Small White	2 60	@ 3 00	**ONIONS**		
Lima	4 50	@ 4 75	Silver Skin	2 25 @	2 65
Ftd Peas, blkeye	—	@ —	Pickling	85 @	1 00
do green	—	@ —	**NUTS JOBBING**		
do Nies	2 00	@ 2 25	Walnuts, Cal. lb	9 @	10
Split	—	@ —	do Ch'ce	11 @	12
BROOM CORN.			Almonds, hd shl	5 @	6½
Choice to Extra	75 00	@ 85 00	Softshell	14½ @	15½
Fair to Good	65 00	@ 70 00	Paper shell	16 @	—
Poor	45 00	@ 60 00	Brazil	11½ @	13
CHICORY.			Pecans	9 @	11
California	6	@ 6½	Peanuts	6 @	8
German	6½	@ 7	Filberts	11½ @	12½
DAIRY PRODUCE, ETC.			Hickory	6 @	8
BUTTER			Chestnuts	14 @	—
Cal. Poor to fair, lb	17	@ 20	Pine nuts	7 @	8
do good to choice	22	@ 24	**POTATOES**		
do Giltedged	25	@ 26	Early Rose, sks	1 00 @	1 10
do pickled	17	@ 20	Chile	1 10 @	1 20
do in kegs	14	@ 16	Peerless	80 @	1 00
do Creamery in rolls	26	@ 27	River Reds	— @	—
Eastern do	18	@ 21	Humboldt	— @	—
do do, in tubs	17	@ 18	Petaluma	— @	—
CHEESE.			Burbanks	75 @	1 10
Cal. choice mild	10	@ 11	Sweet	2 @	3
do fair to good	8	@ 9	**EGG FOOD**		
Young America	10	@ 11	Manhattan, ₩ lb	12 @	—
N. York Cream	10	@ 12	**PROVISIONS**		
Western	8	@ 10	Cal. Bacon		
EGGS.			Heavy, lb	10½ @	11
Cal. ranch, doz	35	@ —	Medium	12 @	—
do do sel'cted	37½	@ —	Light	13 @	13½
do. store	27½	@ —	Extra Light	@	—
Est'rn ordinary	—	@ —	Lard	9 @	11
do fresh	17½	@ 25	Wheat and Oats	10 00	@14 00
do selected	27½	@ —	Wild Oats	8 00	@11 00
do to arrive	25	@ —	Tame do	8 00	@10 00
FEED			Clover	8 00	@10 00
Bran, ton	19 00	@21 00	do ch'ce red top	—	@ —
Feed meal	20 00	@ 00	Barley	7 00	@10 50
Gr'd Barley	27 50	@29 00	Barley and Oats	—	@ —
Middlings	26 00	@29 00	Alfalfa	—	@ —
Oil Cake Meal	25 00	@ —	Stock Hay	—	@ —
Manhattan Food Per 100 lbs	7 50	@ —	Alfalfa Compr'sd	—	@ —
HAY.			Straw bale	45	@ 55
Compressed	12 00	@16 00	**FLOUR**		
Wheat, per ton	10 50	@14 00	Extra, City Mills	4 25	@ 4 50
do choice	15 00	@15 25	do Country Mills	4 25	@ 4 50
Wheat and Oats	10 00	@14 00	Superfine	3 25	@ 4 00
Wild Oats	8 00	@11 00	**GRAIN, ETC.**		
Tame do	8 00	@10 00	Barley, feed, ctl	1 25	@ 1 30
Clover	8 00	@10 00	do Choice	1 31½	@ 1 33½
do ch'ce red top	—	@ —	do Brewing	1 33½	@ 1 34½
Barley	7 00	@10 50	do do Choice	1 37½	@ 1 42½
Barley and Oats	—	@ —	do do gilteds'd	1 45	@ —
Alfalfa	—	@ —	Chevalier once	1 50	@ —
Stock Hay	—	@ —	do com to good	1 30	@ 1 40
Alfalfa Compr'sd	—	@ —	Buckwheat	1 75	@ —
Straw bale	45	@ 55	Corn, White	1 31½	@ 1 37½
FLOUR			Yellow	1 25	@ 1 32½
Extra, City Mills	4 25	@ 4 50	Oats, milling	1 70	@ 1 75
do Country Mills	4 25	@ 4 50	Surprise	1 67½	@ 1 71½
Superfine	3 25	@ 4 00	Choice feed	1 67½	@ 1 71½
GRAIN, ETC.			do good	1 64½	@ 1 65
Barley, feed, ctl	1 25	@ 1 30	do fair	1 55	@ —
do Choice	1 31½	@ 1 33½	do Gray	1 45	@ —
do Brewing	1 33½	@ 1 34½	do Black	1 40	@ 1 50
do do Choice	1 37½	@ 1 42½	Rye	1 25	@ 1 32½
do do gilteds'd	1 45	@ —	**Wheat, milling.**		
Chevalier once	1 50	@ —	Gilt edged	1 47½	@ —
do com to good	1 30	@ 1 40	do Choice	1 45	@ —
Buckwheat	1 75	@ —	do fair to good	1 42	@ —
Corn, White	1 31½	@ 1 37½	Shipping, cho'ce	1 42½	@ —
Yellow	1 25	@ 1 32½	do good	1 40	@ —
Oats, milling	1 70	@ 1 75	do fair	1 34½	@ —
Surprise	1 67½	@ 1 71½	Sonora	1 36½	@ 1 40

Rope.

Baling, Duplex, lb	12
" Manilla, lb	14
Twine, for hops, balls, tarred, lb, Manilla	16
" " grape vine, balls, lb "	16½
" " " coils, lb "	16½
" spring, lb "	18
" binder (650 ft. to lb), lb	15½

Duplex twine 3c per lb less.

BERKSHIRE SALES.—Phil M. Springer, Secretary American Berkshire Association, Springfield, Ill., sends the following transfers of recorded Berkshires: Consul 24287, Pearl Princess 24288, and Countess of Marnhull 24414 by John Snell's Sons of Edmonton, Ont., Canada, to John Craig of Macleay, Oregon; Riley's Queen 16174, Tom Ball 16176, Louie 17259 and Sue G 17261 by M. Hebblethwaite of Berlinville, Ohio, to Wm. B. Sherman of Spokane Falls, Washington; Spartan 24449 by Andrew Smith of Redwood City, Cal., to C. A. Coffman of Rivera, Cal.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Aug. 27, 1890

Bananas, bunch	1 00 @ 2 50	do Malvoise	40 @ 70
Cranberries	— @ —	Green Gages lb	1½@ 2
Limes, Mex	5 50 @ 6 00	Waterm'l'ns 100	6 00 @12 00
Lemons, Cal., bx.	3 50 @ 4 00	Cantaloupes crt	50 @ 1 20
do Sicily, bx.	9 00 @10 50	Nutmeg melons	50 @ —
do Malaga	9 00 @10 00	Crabapples, box	75 @ 1 00
do do Seedling	4 50 @ 5 00	VEGETABLES.	
Pineapples, doz.	3 00 @ 5 00	Okra, dry, lb	6 @ 10
Strawberries, fair, chest	4 25 @ 6 00	do green bx.	75 @ —
Apricots, lb	2½@ 3½	Parsnips, ctl.	1 25 @ 1 50
Raspberries do	12 00 @14 00	Peppers, dry, lb	12 @ —
Blkberries, do	3 50 @ 5 00	do green, bx.	35 @ 50
Huckleberries lb	7 @ 9	do Bell	50 @ —
Figs, box, black	50 @ 1 00	Turnips, ctl.	75 @ 1 00
do white	25 @ 50	Beets, sk.	75 @ 1 00
do Smyrna	— @ —	Cabbage, 100 lbs	60 @ 75
Plums, lb	1 @ 2	Carrots, sk.	50 @ 60
Egg plums	2 @ 2½	Mushrooms, Cultivated, lb	— @ —
Pears, bx.	50 @ 1 00	Wild, lb	— @ —
do Bartlett lb	2½@ 3½	Cucumbers box	20 @ 45
Peaches box	50 @ 1 00	Tomatoes, bx	35 @ 75
do choice	1 15 @ 1 25	Garden peas, lb	2 @ 3
do canning, lb	4 @ 5½	Sweet do do	1½@ 2.
Apples com box	50 @ —	String Beans	1 @ 2
do choice	1 00 @ 1 25	Lima do	3 @ 3½
Nectarins, Red	75 @ 1 25	Squash, summer, bx	25 @ 50
do White	75 @ 1 00	Marrowfat, ton	20 00 @25 00
Grapes, box	25 @ 40	Garlic, lb	6 @ 8
do Muscats	50 @ 75	Green corn doz	18 @ 22
do Rose of Peru	40 @ 65	do do corn sk	1 00 @ 1 50
do Tokay	60 @ 1 00	Egg Plant, bx	40 @ 60
do wine Ziufandel	14 00 @16 00		

California Fruits East.

CHICAGO, Aug. 21.—The Earl Fruit Co. to-day sold California fruits as follows: Bartlett pears, overripe, $2 60@2.70; Tokay grapes, $2.40@2.75 per half-crate; Muscat grapes, $1.45@1 65 per half-crate; peaches, $1 75@2.20.

The Porter Bros. Co. sold six carloads. Early Crawford peaches brought $1.60@1.90; Susquehanna peaches, $1.80@1.90; Muscat grapes, $1.60 @1.75 per half-crate; Bartlett pears, $3.25@3.55, with the exception of some overripe stock, which sold at $1.40@2.10; Tokay grapes, $2.50@2.60 per half-crate; Japan plums, $1.25; Gros prunes, $1.40; Hungarian prunes, $1.55@1.40; Orange Cling peaches, $1.90; White Cling peaches, $1.75; Beurre Hardy pears, $2 40@2.50; Beurre Clairgeau pears, $2.25; Black Hamburg grapes, $1.35 per half-crate; Rose de Peru grapes, $1@1.25 per half-crate.

NEW YORK, Aug. 21.—Sgobel & Day, agents of the California Fruit Union, report that the market on Bartlett pears is improving daily. Peaches are in demand, but they must be prime and of full size. The weather is favorable.

The contents of three refrigerator cars were sold to-day at the following prices: Bartlett pears, $3.80@3.05; Gros prunes, $1.90@1.60; Washington plums, $1 65@1.30; Yellow Egg plums, $1.75@1.60.

CHICAGO, Aug. 22.—Porter Bros. sold ten carloads of California fruit to-day as follows: Peaches —Orange Cling, $1.50@2; Early Crawford, $1.75@ 2.05; Susquehanna, $1.60@2. Pears — Bartlett, $2.50@3.25, with the exception of one car of inferior stock which sold at $2.05@2.15; Beurre Hardy, $2.50; Beurre Clairgeau, $2 25. Grapes—Muscat, half-crate, $1.55@1.75; Tokay, poor to fair order, $1.75@2.60; Gros prunes, $1.50@1.70.

CHICAGO, Aug. 22.—The Earl Fruit Co. sold California fruit to-day as follows: Bartlett pears, condition fair, $3.35; over-ripe, $2.55@3. Grapes—Tokay, half-crates, $2.60@2.95; Muscat, $1.60@ $1.80; Rose de Peru, not wanted, $1@1.30; peaches, $1.65@2.20.

CHICAGO, Aug. 23.—California green fruits—Prices have not changed materially. There was the usual local and order demand. The supply continues ample, quotable as follows: Nectarines, 20-lb boxes, $1@1.25; peaches, 20-lb boxes, Crawford, $2@2.25; Orange Cling, $1.5c@1.75; pears, Bartletts, green, $3@3.50; ripe, $1.50@2.50; Beurre Clairgeau, $2@2.50; Duchess, $1.75@2; Beurre Hardy, $2.50@2.75; Gros prunes, $1.50@1.75; Purple Duane plums, $1@1.75; Washington, $1@ 1.25; Egg, $1@1.25; Columbia, $1@1.25; German prunes, $1.55@2; grapes, half-cases of 4 baskets, Fontainebleau, $1.25@1.50; Muscat, $1.75@2; Tokay, $1.75@2; Rose de Peru, $1@1.25. B ans continue salable, and the market is ruling firm. Lots that have been for some time held for higher figures are being by degrees sold out. It is from this source, and not from current receipts, that buyers are obtaining supplies, for arrivals are very small. California Pea beans, $2.40@2.50 ₱ ctl.; California Lima beans, choice, 5½c ₱ lb; common, 2@4c.

CHICAGO, Aug. 23.—The Earl Fruit Co. sold four cars of California fruit to-day as follows: Bartlett pears, ripe, $2.15; table, $2.10; peaches, $1.85@ 2.10; small lot White Cling, $1.30; Gros prunes, $1.65; Beurre Hardy, $2@2.50; Washington plums, $1.70; Tokay, half-crates, a trifle moldy, $2.30@ 2.90; Muscats, $1.75@1.80; a few poor, $1.40@1.60.

CHICAGO, Aug. 23.—Porter Bros. sold eight carloads of California fruit to day as follows: Bartlett pears, all ripe, $1.85@2.95; Tokay, half-crates, $2.75 @2.90; Muscat, $1.5(@1.80; Orange Cling peaches, $1.70@2; Susquehanna, $1.80@2.05; Early Crawford, $1.75@2 05; White Cling, $1.70; Fallenberg plums, $1.95; Japan, $1.30; Rose de Peru grapes, half-crates, $1.05@1.80; whole crates, $2.60; nectarines, $1.90; Beurre Clairgeau pears, $2.15; Beurre Hardy, $2.35; Yellow Egg plums, $1.05@1.35; Gros prunes, $1.45@1.85.

NEW YORK, Aug. 25.—Sgobel & Day, agents of the California Fruit Union, report that the market continues strong on all fruit; and, even with the largely increased offerings, the fruit to-day sold rapidly. Dealers appear especially hungry for peaches.

Five carloads were sold to-day at the following prices: Early Crawford peaches, $1.50@2.10; Late Crawford peaches, $2.60; Susquehanna peaches, $1.75@2.45; Orange Cling peaches, $1.75@2.05; Tokay grapes, $2.75@3.50 per half-crate; Muscat grapes, $1.05@1.70 per half-crate; Bartlett pears, $2.25@3.80; Gros prunes, $1.60@2.20 per half-crate; German prunes, $1.75; Hungarian prunes, $1.75. Demand good.

CHICAGO, Aug. 25.—The Earl Fruit Co. to-day sold at auction four carloads of California fruits as follows: Bartlett pears, over-ripe and poorly packed, $2.10@2.50; Beurre Hardy pears, $2 30@2.45; Howell pears, $2.55; Susquehanna peaches, $1.75@ 1.90; Yellow Cling peaches, $1.65@1.90; Tokay grapes, in poor order, $2.40@2 80 per half-crate, some in bad order selling for less; Muscat grapes, in poor order, $1.3c@1.70 per half-crate.

The Porter Bros. Co. sold eight carloads. Bartlett pears, green, $3.15@3.95; Bartlett pears, ripe, $2@3; Early Crawford peaches, $1.8c@2; Susquehanna peaches, $1.90@2.10; Orange Cling peaches, $1.90@2.10; Muscat grapes, $1.55@1.80 per half-crate; Rose de Peru grapes, $1.25@1.45 per half-crate; Foster peaches, $1.75; nectarines, $2; Purple Damascus grapes, $1.75 per half-crate; German prunes, $1.75; Hungarian prunes, $1.70; Gros prunes, $1.90@2.10; Tokay grapes, $2.2c@2.90 per half-crate; Fontainebleau grapes, $1.30@1.60; Egg plums, $1.50.

NEW YORK, Aug. 25.—The *Evening World*, in the course of a long article on the fruit market, says: The only fruit that is worthy of the name now to be found in the market comes from California. The Pacific Coast supply began to come here during the latter part of July. Of course, all this fruit is of the best quality, and it is held to be worth about its weight in gold. Small boxes of Early Crawfords and oranges and Yellow Clingstones weighing about 25 pounds sell from $2 to $4. The late Crawfords will probably bring more. The fruit preservers are in a bad state of mind over the situation. There are not enough peaches in all the Eastern States to supply a single good-sized canning factory.

NEW YORK, Aug. 25.—There is nothing to add to last week's strong situation in packed and canned Pacific produce. Full support is accorded the ruling scale of prices by buyers, who accept the position of things, and sellers lose little time with reluctant purchasers. Dried nectarines sold at 25c. Fifty-seven cars of fresh fruit caused some slow trading, as the previous week's high rates checked consumption, but good prices are still obtained for Bartletts not yellow ripe. Plums arrived in a tender condition. The outlook for the fall trade is bright, as many buyers will come back to the quality and condition of the fruit.

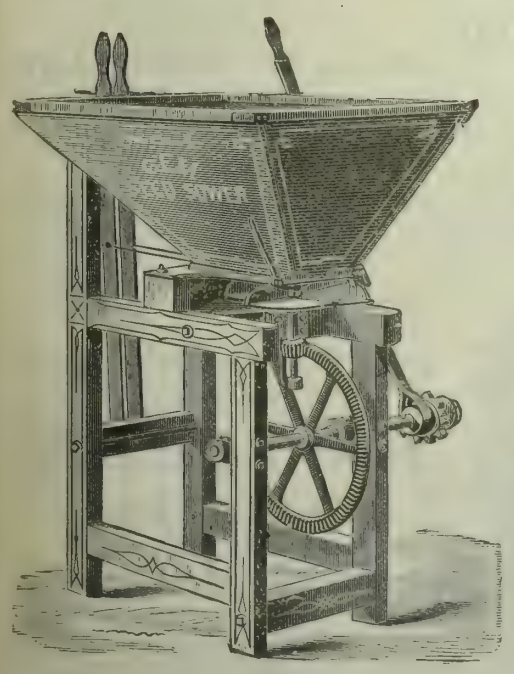
PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE, Aug. 20-26.	Olympia. Rain	Temp.	Wind	Weather.	Portland. Rain	Temp.	Wind	Weather.	Eureka. Rain	Temp.	Wind	Weather.	Red Bluff. Rain	Temp.	Wind	Weather.	Sacramento. Rain	Temp.	Wind	Weather.	S. Francisco. Rain	Temp.	Wind	Weather.	Fresno. Rain	Temp.	Wind	Weather.	Keeler. Rain	Temp.	Wind	Weather.	Los Angeles. Rain	Temp.	Wind	Weather.	San Diego. Rain	Temp.	Wind	Weather.
W.	.00	66	N	Cl.	00	64	SE	Cy	.01	58	N	Cy.	.00	92	S	Cl.	.00	80	S	Cl	00	62	W	Cl.	00	90	Nw	Cl	.00	92	Nw	Cl.	.00	70	SW	Cl.	.00	72	W	Cl
T.	.00	64	S	Cy.	T	64	N	Cy.	.00	62	Nw	Cl	.00	92	SE	Cl.	00	82	SW	Cl	.00	64	W	Cl.	00	92	W	Cl.	.00	88	S	Fr	00	74	W	Cl	.00	72	W	Cl.
F.	.34	60	SW	Fr.	.T	60	E	Cy.	.00	64	Nw	Cl.	.00	90	SE	Cl.	.00	84	SE	Cl.	00	68	W	Cl	.00	94	W	Cl.	.00	92	S	Cl.	00	80	W	Cl.	00	72	SW	Cl.
S.	.02	66	Nw	Cy.	.00	74	N	Cl.	.00	62	Nw	Cl.	.00	96	Nw	Cl.	.00	92	Nw	Cl	00	72	W	Cl	.00	96	Nw	Cl	.00	92	W	Cl.	.60	72	W	Cl	.00	76	W	Cl.
S.	.01	70	N	Cl.	.00	72	N	Cl.	.00	60	N	Cl.	.00	100	Nw	Cl	.00	92	SW	Cl	00	64	W	Cl	.00	96	Nw	Cl	.00	92	S	C.	00	70	W	Cl.	00	72	W	Cl.
M.	.00	76	Nw	Cl.	.00	80	Nw	Cl.	.00	58	SW	Cl.	.00	102	SW	Cl.	.00	86	SW	Cl	.00	60	W	Cy.	.00	96	Nw	Cl	.00	88	SE	Fr.	.00	70	W	Cl.	.00	68	W	Cl.
T.	.00	76	NE	Cl.	.00	84	N	Cl.	.....	.....	.....	.....	.00	94	SE	Cl.	.00	78	S	Cl.	00	60	W	Cy.	.00	96	Nw	Fr	.T	84	N	Cy.	.00	68	W	Cl.	.00	70	W	Cl.
		.37				.T				.01				.00				00				.00				.00				.00								.00		

EXPLANATION.—Cl. for clear; Cy, cloudy; Fr., fair; Cm., calm; – indicates too small to measure. Temperature, weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

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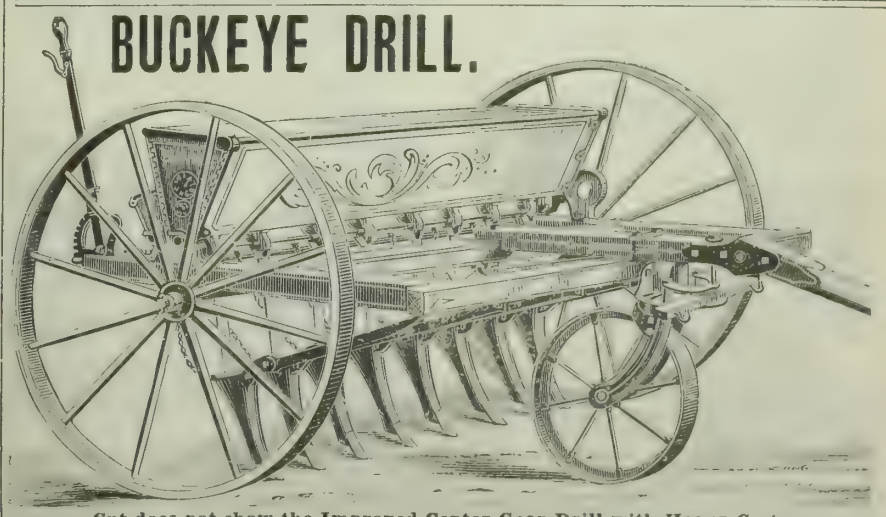
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The First Mechanical Invention.—On Thursday, July 31st, occurred the one-hundredth anniversary of the issue by the United States Government of a patent for a mechanical invention. The patentee was Samuel Hopkins, for a process for making pot and pearl ashes. The number of patents issued during the first century of the nation's existence was 433,432, and still they multiply.

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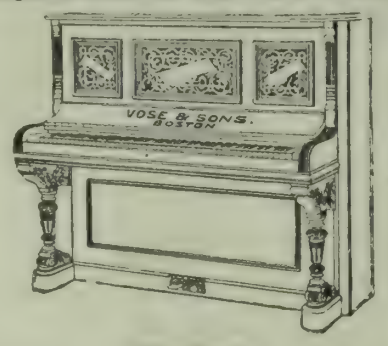
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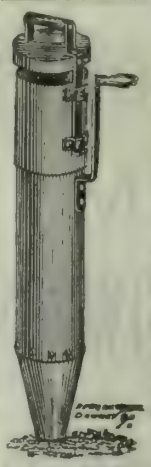
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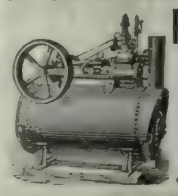


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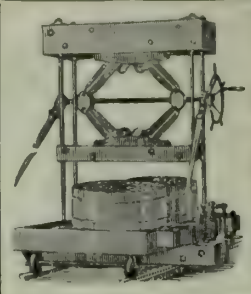


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Although I have at present only ten acres of vines, would not part with the press at any price.—WILLIAM PFEFFER, Gubserville, Cal.

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We regard the wine press as superior to any other press we know of; in point of simplicity, efficiency and economy of labor, in our opinion it has no equal.—P. & J. J. GOBBI, Healdsburg.

I am very well satisfied with the toggle lever and screw wine press. It has worked well during the season.—WM. ALLEN, Mountain View Wine Co., San Gabriel, Los Angeles Co., Cal.

The Wine Press gives satisfaction; it works well and is easy to operate.—W. METZGER, Santa Rosa.

Have much pleasure in stating that the press has given every satisfaction.—J. LAWRENCE WATSON, Glen Ellen, Sonoma county.

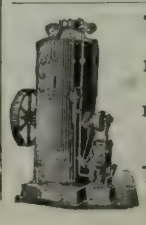
J. M. WELSH, President. M. D. BAKER, Secretary.

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Iron cut, punched and formed, for making pipe on ground. All kinds of Tools supplied for making Pipe. Estimates given. Are prepared for coating all sizes of Pipe with a composition of Coal Tar and Asphaltum.

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FRENCH COOKING RANGES
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Kitchen and Bakery Outfits, Grate Bars, Bake Ovens and Furnace Castings.
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Made of the very best material.
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Nurseries, four miles east of Ventura

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Calochortus, Lilies and Brodeiaes

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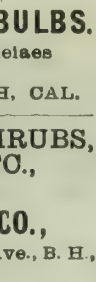
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BEST TREE WASH.

"Greenbank" 98 degrees **POWDERED CAUSTIC SODA** (tests 99 3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by

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ENGINE and BOILER.

The Best, Lightest, Cheapest Engine in the world. Can be arranged to Burn Wood, Coal, Straw or Petroleum. 5 or 8 H.P. Mounted on skids or on wheels.

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OUR SPECIALTIES:

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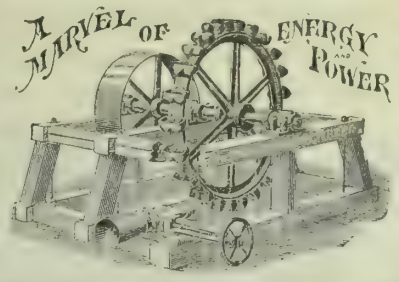
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Affords the cheapest and most convenient power for Ranch, Vineyard or Dairy purposes, as well as for running dynamos for electric lights, pumps and every other variety of machinery

It possesses in the same degree the wonderful energy and power that has made the Pelton Wheel famous in all parts of the world.

These motors are made of varying sizes, with capacities ranging from the fraction of one up to 15 and 20 H. P., enclosed in iron cases, all ready for pipe connections, and are warranted to develop a given amount of power with one-half the water required by any other wheel.

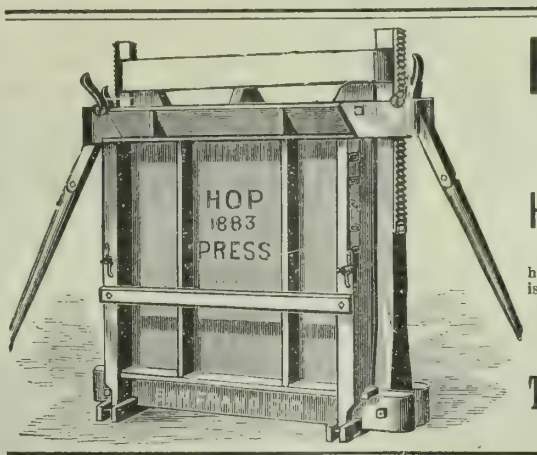
The cost, considering capacity and efficiency, is fully 50 per cent less.

Circular, giving full information, sent on application.

Parties writing for information should give full particulars as to power wanted, source of water, supply, with head or pressure. Address

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HOP PRESSES!

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HAND HOP PRESS.

This press is used very extensively in the hop districts of Washington and California. It is very durable and cheap. **Price, $80.00.**

Hay, Hide, Hop and Wool Presses

Of Every Description.

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Home Mutual Insurance Company,

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INCORPORATED A. D. 1864.

Losses Paid Since Organization	$3,033,420 31
Assets, January 1, 1890	821,517 09
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	244,384 14

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Water, if containing 60% of Mud or Sand, can be pumped from wells or streams with **one-fourth less fuel than any other known method.** No machinery to wear out or require constant attention.

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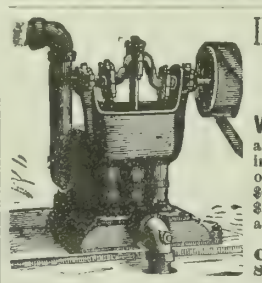
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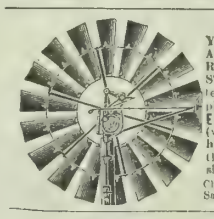
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We have the Latest Improvements in

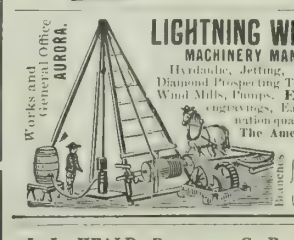
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Hydraulic, Jetting, Revolving, Artesian, Diamond Prospecting Tools, Engines, Boilers, Wind Mills, Pumps. **Encyclopedia,** 1,000 engravings, Earth's Strata, Determination quality water, mailed, 25c.

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Stationary Engines and Boilers,

TRACTION ENGINES,

Portable Straw-Burning Boilers & Engines.

IRON AND BRASS CASTINGS.

Machinery of all kinds furnished at shortest notice.

Heald's Patent Wine-making Machinery,

Including Grape Crushers and Stemmers, Elevators, Wine Presses and Pumps, and all appliances used in Wine Cellars. Irrigating and Drainage Pumps. Heald's Patent Engine Governor, Etc.



1890—THE STATE FAIR—1890

OF 1890 AT

SACRAMENTO,

SEPTEMBER 8th TO 20th INCLUSIVE.

CALIFORNIA'S ANNUAL EVENT!

Showing Progress Made in Agricultural, Mechanical and Industrial Arts.

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IT IS AT THESE EXHIBITIONS the Manufacturer meets the Merchants of the interior.

IT IS AT THESE EXHIBITIONS the Merchant views progression made in all mechanical and industrial callings. Hence it behooves the Manufacturer to be up and stirring.

AT THESE ANNUAL EXHIBITIONS the visitor may combine business with pleasure, as the Board of Directors provides for all kinds of recreative amusement in the varied program of events.

THE CONTESTS OF SPEED showing advancement made in the breeding of high-class horses, will be a feature.

THE GRAND PARADES OF LIVE-STOCK will embrace the various classes of horses, and all the improved breeds of cattle.

OPEN-AIR AMUSEMENTS FOR THE DAY and MUSICAL CONCERTS FOR THE EVENING will afford ample entertainment for all who visit the State Fair.

Every attention will be rendered exhibitors by the Board of Directors.

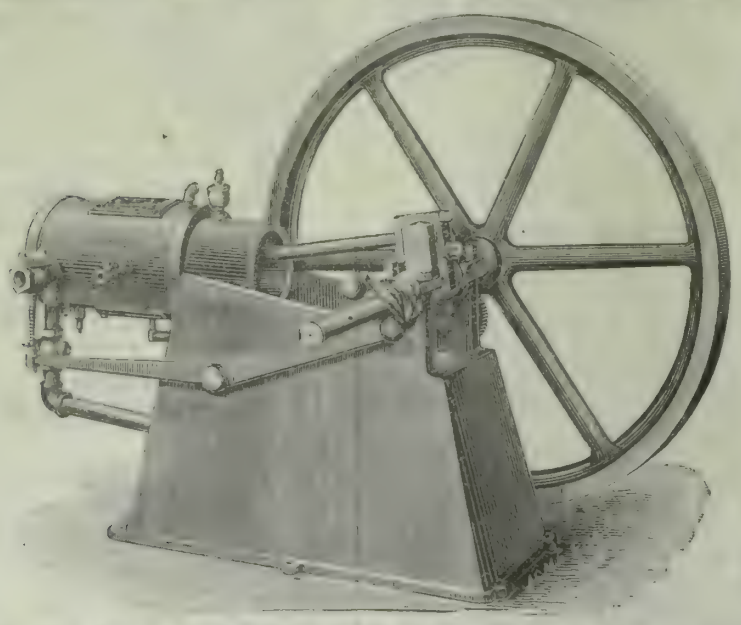
Premium lists are now ready, and will be furnished upon application to the Secretary, who will also furnish other necessary information that may be desired. Apply at once for space.

Remember, the Southern Pacific Company TRANSPORTS ALL EXHIBITS FREE OF CHARGE to and from the Fair, and gives EXCURSION RATES TO ALL THAT ATTEND.

CHRISTOPHER GREEN, President.

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NO BOILER, FIRE, EXPLOSION, STEAM, ASHES OR ENGINEER.

STARTED INSTANTLY WITHOUT EVEN A MATCH.

The Moment Engine Ceases to Run, all Expense Stops.

Upright and Horizontal, Stationary and Marine Engines from ¾ to 60 Horse Power.

OUR STATIONARY ENGINES are especially adapted for PUMPING and IRRIGATING.

OVER 150 IN USE.

POPE & TALBOT, Lumber, Office, 201 California Street. P. O. Box 2215. San Francisco, Feb. 25th, 1890.

REGAN VAPOR ENGINE CO., Gentlemen: The 3-H. P. Vapor Engine I bought of you last May has been in constant use ever since, and has given entire satisfaction. I have found the engine to be all that you claimed for it, and more too. You can use my name for reference if you so desire. I am, yours truly, H. TALBOT.

We carry a full line of Thos. Kane & Co's Famous Racine Launches, fitted with our New Compound Engines. SEND FOR CIRCULAR.

REGAN VAPOR ENGINE CO.,

221-223 First Street, San Francisco, Cal.

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THE

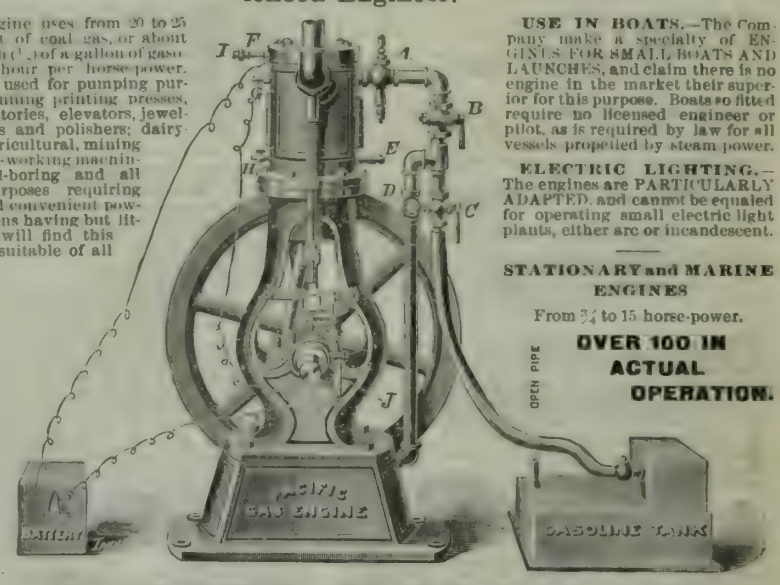
PACIFIC GAS OR GASOLINE ENGINE.

PATENTED JUNE 17, 1890 — NOS. 430,504, 430,505, 430,506.

Also in Great Britain and other foreign countries.

Starts Instantly Without the Necessity of Boiler, Fire or Experienced Engineer.

The engine uses from 20 to 25 cubic feet of coal gas, or about one-eighth (⅛) of a gallon of gasoline per hour per horse-power. It can be used for pumping purposes, running printing presses, small factories, elevators, jewelers' lathes and polishers; dairymen's, agricultural, mining and wood-working machinery; well-boring and all other purposes requiring cheap and convenient power. Persons having but little space will find this the most suitable of all motors.



USE IN BOATS.—The Company make a specialty of ENGINES FOR SMALL BOATS AND LAUNCHES, and claim there is no engine in the market their superior for this purpose. Boats so fitted require no licensed engineer or pilot, as is required by law for all vessels propelled by steam power.

ELECTRIC LIGHTING.—The engines are PARTICULARLY ADAPTED, and cannot be equaled for operating small electric light plants, either arc or incandescent.

STATIONARY and MARINE ENGINES

From ¾ to 15 horse-power.

OVER 100 IN ACTUAL OPERATION.

OPEN PIPE

READ THESE TESTIMONIALS.

ALAMEDA, April 8, 1890.

PACIFIC GAS ENGINE CO., GENTLEMEN: Permit me to add my testimonial to the many you have received indorsing your engine. As you are aware, in me was a Regan engine which gave me considerable trouble. I had to remove the head and raise the tappet valve every time I wanted to start the engine. I sent you the engine; you removed all the Regan appliance except the cylinder and stand. You put in your appliances, head, sparking device, inlet valve, and, in fact, changed it to the Pacific Gas Engine, which now works splendidly. I have not had to remove the head for any cause since you made the change (over two months). It gives me no trouble; my boy, 14 years old, attends to it.

The change from the Regan to the Pacific is a decided improvement. I can also get a third more power since the change, and I cheerfully recommend your engine as being simple, effective, and cheap. Respectfully yours,

B. S. HILL, S. W. Cor. Encinal Ave. and Morton St.

MAYFIELD, March 26, 1890.

PACIFIC GAS ENGINE CO.—We have given your little 1-H. P. engine a splendid advertisement. A fire broke out at 2:30 o'clock this morning, in a tenement house on my premises. I started the engine, connected the hose, and by it have saved at least $3000 worth of my property. I saved my blacksmith shop, lying 12 feet from the burning building, my barn and my dwelling. Three times the fire started in these buildings, and I extinguished it every time. The engine never faltered, and threw water between 50 and 60 feet high. The whole town was astonished, and they acknowledged that I saved at least $20,000 worth of property.

A fire department is being organized here, and I think they will have one of the engines on a truck for fire purposes. The engine to be beaten.

Hoping that all of your customers will be as well pleased with the engine as I am, I remain, Yours truly,

JOS. P. PONCE.

PACIFIC GAS ENGINE CO.,

Send for Circular and Price List. 230 FREMONT STREET, SAN FRANCISCO.

STATE LIBRARY

PACIFIC RURAL PRESS

STATE FAIR EDITION—THIRTY-TWO PAGES.

Vol. XL.—No. 10. SAN FRANCISCO, SATURDAY, SEPTEMBER 6, 1890. DEWEY & CO., Publishers, Office, 220 Market St.



2D DUKE OF WILD FLOWER, Sire, BARON LAVENDER 3D, 78,854 (Cruickshank).
WATER SPARKLE, (TARR & BOOTH.)

MAYFLOWER 3D (Vol. 32, p. 633), Sire, COL. BARINGTON, 55,135.
28TH DUKE OF GLOSTER, Sire, Imp. DOUBLE GLOSTER (Cruickshank). Two years old.
DUCHESS OF WILD FLOWER, Sire, 2D EARL OF ABERDEEN, 51,413. Six months old.

GROUP OF THOROUGHBRED SHORTHORNS, OWNED BY A. HEILBRON & BRO., SACRAMENTO, CAL.

Fine Shorthorns.

We give herewith a drawing representing a group of the fine Shorthorn cattle of A. Heilbron & Bro. of Sacramento, who own the Wild Flower Stock Farm, six miles southwest of Selma, in Fresno county. Messrs. Heilbron have given much attention during recent years to building up a fine band of Shorthorn cattle, both by purchase and by their own breeding. As a result of this effort and investment, they have secured excellent representatives of some of the families most famous in Shorthorn history, and thus have placed them upon the surest foundation for the upbuilding of their enterprise and for securing results most satisfactory to the breeder and valuable to the State. The names and notes of breeding attached to the engraving afford intimation of the honorable ancestry of the stock. To any one who has given any attention to Shorthorn history, the statement that the Wild Flower herd is rich in the blood of the Young Mary, Rose of Sharon, Josephine and Young Phillis tribes carries much weight, and to those unacquainted with the subject, the perusal of Messrs. Heilbron's catalogue, which gives excellent outlines of the records of these tribes, contains the most available information.

PRUNES.—The State Horticultural Society had an interesting discussion on this subject at its last meeting, which we will report in our next issue.

Dairy Organization.

The Santa Maria dairymen have perfected their organization by the adoption of by-laws which provide a name for the organization, "The Dairymen's Protective Union," and stipulate the sum of $2 as being the regular initiation fee for those wishing to join the union. The dues are rated according to the number of cows milked by each member; thus the small dairyman is asked only for his pro rata, the rate being fixed at a figure sufficient to cover running expenses of the union.

The *Graphic* gives the following note on the condition and aims of the organization: "The union is now on a good footing, with good substantial backing, and there is no reason why it should not accomplish much good for its members. The object, as stated before, is to devise ways and means by which the dairymen can secure the full market price for their produce. It appears that for years past there has been a 'systematic steal' by the commission men, and this is what the union proposes to remedy."

SEVERAL meetings have been held in Pasadena in order to provide for the formation of an irrigation district.

TEN ships have been chartered to load wheat for Europe in September, says the Port Townsend *Call*.

THE Directors of the Mechanics' Institute will attend the State Fair next week in a body.

THE APIARY.

Questions Answered.

EDITORS PRESS:—Below I give answers to a number of questions that have been asked me from time to time by various bee-keepers of the Pacific Coast and elsewhere.

Foul Brood.

Tell us something about foul brood; how to detect it, etc. Suppose a person bought honey extracted from foul broody colonies and fed it to his bees, would they be liable to take the disease? Should not a law be enacted to compel negligent apiarists whose bees have foul brood to make them destroy or get rid of the disease?—H. K. H., *Lang, L. A. Co., Cal.*

Foul brood has several different symptoms and is detected in a great many ways. The chief symptom is a decline in the prosperity of the colony, and if the brood is examined it seems to be putrefied and emits a pungent smell or stench. By taking careful notice you will see that the cappings over the diseased cells are sunken and that a small hole is perforated through the center of the capping. There are several different phases of the disease foul brood, and sometimes there are no holes perforated through the cappings and no stench is emitted. Chilled brood is sometimes mistaken for foul brood, and it is quite easy to make the mistake. Chilled brood will never cause foul brood, and if the bees have any chilled brood on hand they will soon tear it out, whereas in foul brood they seldom do this.

Yes, extracted honey taken from foul broody colonies and fed to other bees will help scatter the disease wonderfully—never do such a thing. If you buy extracted honey to feed your bees with, scald it every time.

Yes, I think a law should be enacted to compel negligent apiarists, whose bees have foul brood, to destroy or cure the disease. In Colorado, I believe such a law is in force; also in Ventura county, California, they have a foul brood inspector.

Cost of Starting in the Bee Business.

I have been much interested in your communication in the RURAL PRESS, and being desirous of more information in regard to bee culture, I write to ask you if you know of some reliable book on the subject which you can recommend to me? Would you kindly inform me what would be the cost of 25 or 30 hives, including all necessary appliances for handling the honey?—E. E. S., *Santa Rosa.*

"Root's A B C of Bee Culture," and T. G. Newman's book entitled, "Bees and Honey," are both very good books for beginners, and are fully up to the times. You can get Langstroth hives complete for $1.50 in this State. I would advise you to get the regular Langstroth and use nothing but that style. When you use two or more different styles of frames in your apiary it causes perplexities and troubles innumerable.

In regard to the appliances for handling the honey, if working for extracted honey, it would cost you maybe $4 or $5 for cans. You can get a good honey extractor for $10. If working for comb honey you would need 2500 sections, which would cost you about $12 50 delivered at your station. For 30 hives, you could use to advantage about $10 worth of comb foundation, which, in a good honey season, would pay you well. You will need a good bee-smoker, and I advise you to get one of Binghams & Hetherington's make.

Solar Wax Extractors.

What is the cost of a solar wax extractor, and how are they constructed? I have the combs from about 70 hives that failed to get through last season. The moths are after the combs now; what had I better do?—I. R., *Salinas City.*

If I were you, and wanted to continue in the bee business, I would try and buy enough bees to protect those combs; it would pay you well in the long run. You can get a good steam wax extractor for $2.50, and you can make a good solar wax extractor for about the same price. Solar wax extractors are quite simple and easy to make. Make a box of about six inches deep, of any size that suits you; nail together tightly and cover the bottom with wire screen of about five meshes to the inch; now fit a sheet of glass in a frame so as to fit the top of the box; after that is finished make another box of the same size and nail a good, tight bottom in it; now, after placing a pan (or what is better still, have the lower box lined with tin so it will not leak), you are all ready for business. Fill it up with the scraps of comb that you have on hand and locate it in a convenient spot in the apiary, and in a few hours, if the day is warm, you can refill with more scraps of comb.

With a solar wax extractor, the wax rendered is of a finer quality than that rendered by artificial heat. With the number of combs that you have on hand, you will, no doubt, get a great deal of fine wax, and if you use a solar wax extractor, you will get considerable more.

A New Beehive.

I take the liberty to write to you in regard to beehives. I do not profess to have much experience in bee-keeping. I live in Penn valley, Nevada Co., and our altitude is about the same as yours. I have about 20 stands of bees. I have been industriously engaged, for over two years, to produce a beehive that would beat the moth. I think I now have the very best hive, not only that there is in existence, but the best that can be. Now I will, if you please, offer to make you a proposition. With your consent, I propose to send you for your examination one of my beehives. I will pay all charges, etc. I will be anxious to obtain your advice regarding shape, dimensions, of beehive, etc., after you have seen mine.—J. A. B., *Grass Valley.*

Of course I wrote to Mr. J. A. B. and told him it was a waste of time to attempt to make a hive that would beat the moths, and also told him that there were very few patent hives that ever paid for the patent. A few days ago Mr. John A. Ball made me a visit and brought his patent hive along.

"Now, Mr. Watkins," said he, "let me enumerate the merits the hive contains before you give any opinion."

Well, to make a long story short, the hive has some very good merits, the principal one being in moving bees; the whole thing is clamped together in such a way that it would be impossible for the frames to move. Still, I think that there is room for considerable improvements. Next spring I will try the hive and inform the bee-keeping world what desirable merits the hive contains.

El Dorado County for Health and Honey.

I noticed in the *American Bee Journal* of June 28th an article copied from the PACIFIC RURAL PRESS, entitled "Honey Plants of the Sierras," written by yourself. The article interested me very much—not so largely on its honey-producing qualities as what you say of the climate; and of course where there is an abundance of flowers there will be a mild climate. My health has been poor for some years, and I have been for some time looking for a climate that will suit my condition. I wish you would give me a detailed account of the principal industries of your county. How far are you from Sacramento, and what railroad have you, if any?—L. M., *Auburn, Ill.*

We have as good a climate here as in any section of California. Apples, peaches, pears, grapes, cherries, figs, plums and all varieties of small fruits grow to perfection. The eastern part of El Dorado county is heavily timbered with dense forests of sugar pine, fir, spruce and several different varieties of oak. We have a railroad to Placerville. It is 69 miles from Placerville to Sacramento. The principal industries of El Dorado county are fruit-raising, mining and the lumber business, this latter being carried on the most extensively. I suppose that there are about fifteen sawmills in active operation in the eastern part of El Dorado county. For further particulars I would refer you to the county papers, the two principal ones being the *El Dorado County Republican*, published by G. A. Richardson, Placerville, and the *Mountain Democrat*, published by the Democrat Publishing Company, Placerville. By getting a sample copy of those papers they will give you more definite information than I can give of the various resources of El Dorado county. S. L. WATKINS.

Grizzly Flats Cal.

ENTOMOLOGICAL

Popularity of the Fumigation Method of Killing Scales.

Hiram Hamilton reports the following as a part of the proceedings of the Orange County Board of Horticulture at its meeting July 30th:

Mr. Preble of the Tustin district reported that the work of red-scale killing was going bravely on; that no compulsion was necessary to get men to work; that every rig for fumigation was in demand; that orchardists were each anxious to secure their turns; that a large number of groves had been completed; that the results of the work were not entirely uniform, owing, in part, to inferior cyanide used. A uniform grade of this article is necessary to secure the best results. The Commission has opened correspondence with every known manufacturing establishment in the United States to ascertain the percentage of cyanogen indicated by each brand.

Mr. Hamilton reported the same condition of things in his district. No compulsion has yet been found necessary. Each grower is anxious only to learn the surest and most economical method of destroying the scale.

Mr. Keith reported a very different state of public sentiment obtained in his district (Anaheim). He stated that there were about 50 men in that district, the owners of trees badly infested with red scale, and that no one was willing to do anything for their destruction. Some claim that a perfect killing of every scale on every tree must be done, and that if the Commissioner would furnish such a remedy, then, and not till then, they would employ him to kill them. But no such remedy has yet been found and probably never will be. But the scale are on the trees just the same, and it is only a question of time when the trees will be destroyed, and that time is very short.

Others claim that they cannot afford to kill the scale on account of the expense, unless their neighbors do the same; and so each makes excuse and nothing is done.

The unreasonableness of the demand of a perfect remedy needs discussion. If a remedy were ever so perfect the application of it must necessarily be imperfect. The causes are various and need no discussion. The red scale has come, and that to stay. The best that can be hoped for is to so reduce it as to make orange-growing profitable. This can be done either with spraying or with fumigation. But skillful and thorough work must be done, no matter which remedy is used.

To Kill Ants.

EDITORS PRESS:—"I'd like to know how anybody can live in such a country as this, with ants in everything you have to eat, drink, wear, or sleep on!" These words greeted me as I approached a house in my travels a few days ago. The language wasn't addressed to me but I answered it. "They're sent as a punishment, because you don't take the RURAL PRESS," I answered. "Well! if that will keep away ants we'll take it." Being fearful that you're not keeping so necessary information before the people, I wish to tell my "ant" experience. We had always been troubled with ants. Last winter my kitchen floor wore through, beside the stove. There were more ants than dirt under the floor, as one of my family expressed it. I had read in the RURAL about poisoning ants, so I placed among them under the floor a big dish of flour, lard, syrup, and arsenic thoroughly mixed; result, the pest of ants, which has grown worse every previous year, has been unknown this summer. Here in my office, 60 yards from the house, I keep a dish of the same "ant mixture."

Sanders, Cal. W. A SANDERS.

HORTICULTURE.

Grafting the Prune on the Apricot.

EDITORS PRESS:—The prune crop at this place, at Pomona, and in fact all through this section where trees are old enough to bear, has been a paying crop, and it has created quite a prune boom. Apricots have also borne quite well this season, though many of the trees had light crops, and the general opinion is against that fruit. Many apricot orchards had to give way the past season for the orange, and many more will the coming season. As most of these apricot trees are in a thrifty, vigorous condition, having been set in most cases only from four to six years, I would like to ask if they could not be grafted to the prune, and if so, at what time the operation could be most successfully performed. In my Eastern experience, we budded the apricot on the plum stock, also the peach stock; we also often change large plum trees to the apricot by the common method of cleft grafting, but in my experience have never grafted the plum or the prune on large plants of apricots, and I would like to ask through your paper whether it can be done successfully here, or whether there is any instance when it has been done.

I wish also a receipt for a grafting wax that will stand in this warm climate without running off in summer. We make a wax in New York of one part resin, two of beeswax and three of tallow, all warmed over a slow fire until melted. When thus melted, the mass is turned out into cold water and worked like candy until it is thoroughly mixed, after which it is made into balls and laid away in a cool place until wanted for use. If a little too hard when wanted for grafting, a ball is dropped in a pail of lukewarm water, when it will soon be in a fit condition for spreading over the wound made in the operation. If the wax gets too soft and sticky, grease the fingers before handling it. I. C. WOOD.

Ontario, San Bernardino Co.

[The advisability of using the apricot root for the prune in nursery propagation is a vexed point in our horticulture, for cases are frequently shown where the tree breaks off at the union, even after attaining considerable size, and shows that a good intergrowth of the two woods had not been made. On the other hand, some growers have prune trees on apricot roots which they find very satisfactory. Of the top grafting of the prune on the apricot, we would like to hear from those who have had experience. The question is, as our correspondent says, of much importance in his part of the State.

The method of making grafting wax is a good one. To prevent the wax from running in the sun, some of our growers in the hot valleys powder over the wax with fine brick-dust after the waxing is finished. This is said to fix the wax firmly. The use of waxed bands or strips of cloth dipped in wax is also satisfactory in hot localities.—EDS PRESS.]

A Fruit-Ladder.

As many of our readers are now busy picking fruit, and it is not always possible to reach all the fruit with an ordinary step-ladder, the following description of a fruit-ladder from one of the agricultural reports may prove useful:

Take a pole of any desired length, but not of large diameter, sharpen it at the top to a slim point, and several feet from the top put a flat iron band about it, or in case a band is not at hand it may be securely wrapped with wire to keep it from splitting. But the band should not be thick nor have sharp edges, else it may cut or chafe the bark of the tree. If the grain is straight it may be split with wedges from the butt to this band, or it may be split with a rip-saw. Now spread it at the bottom to several feet in width—if the ladder is to be quite tall this should be from five to six feet or even more. Nail a brace temporarily across the butt ends to hold them apart, and bore holes at proper distances and at proper angles; or if the spread is not too great they may be bored before the pole is split. Rounds of tough, strong material may now be inserted, beginning at the top, first removing the brace.

Such a ladder can be thrust upward into a tree and placed in a fork or against a branch without danger of falling or being unsteady, and it has the additional advantage of being very light at the top and easy to handle. If desired, a third leg or brace can be added by hinging it to the top round through a hole, thus making a step-ladder.

Eastern Report on Strawberries.

J. H. Hale of South Glastonbury, the well-known Connecticut fruit-grower and special agent of the census on fruit subjects, gives the following notes on his trial of strawberry varieties:

Of the well-known market varieties, Bubach clearly held first place as it did last year. The plant shows no sign of disease; very productive; fruit large and fine color; fully double as many large berries were obtained as from any other variety. Haviland ranks close up to Bubach in every respect except size; yet while it is not quite so large, it was so smooth and fair that on the whole it sold at rather higher prices than Bubach. Both were extremely early, and had no small berries at the last picking.

Warfield follows next in point of value, and for a shipping berry it will head the list. It certainly is now in all respects as good as the Wilson ever was in its best days.

Windsor Chief still holds first place as the most productive and profitable late market variety. During the rush of the season, berries sold in our markets at from 6 to 8 cents; but later, when the Windsor came on, it sold for 20 to 25 cents wholesale.

Crescent grows less productive and the fruit smaller in size each year. It is only a question of a very short time now before it must give place to Bubach, Haviland or Warfield, any one of which paid us more than double what the Crescent did this season.

For good family berries, Downing and Miner still hold leading place. Hampden, Monmouth and Pineapple prove to be of such little value that they will have to be discarded.

Of the newer varieties, Michel's Early is a wonder of plant growth. The bloom is perfect, the berries very abundant, are borne on string fruit stalks, are of good size and firm, and ripen earlier than any variety yet known. It is sure to be very profitable aside from its great value to plant with the early imperfect flowering varieties.

Yale is growing finely and promises to be a valuable *very* late sort.

Eureka is indeed "Beautiful Eureka." The plant is superb, quite prolific, the fruit of good size and form, and of such bright, glossy, scarlet color as to lead one to think they had been varnished.

Gandy is healthy and vigorous in plant; produced a moderate crop of very large, beautiful berries that sold for very high prices late in the season. We have planted it largely with the Windsor.

Summer Pruning of Deciduous Fruit Trees.

J. M. Edmiston of El Cajon, San Diego Co., writes for the *Great Southwest* as follows:

What, then, is the theory of summer pruning?

First. To make the branches short and stubbed so they can bear a heavy load without breaking.

Second. To increase the number of fruit-bearing branches and develop the fruit-buds near the trunk of the tree, where the weight of fruit can be supported, and where the fruit will be better shaded and better nourished.

The horticulturist who has practiced fruit-growing in the East, and who came to this coast with his former methods well fixed in his mind, must remember that here the conditions are very different. In the East, rains and cloudy weather prevailed to a great extent and sunshine was essential to the perfecting of the crop. Here, sunshine and dry air is the rule, making it essential to prune for shade instead of for sunlight. This principle will apply alike to all deciduous fruits, though the extent to which it should be carried will vary with the kind and with the several varieties of each kind.

Pruning does not make a tree more vigorous, or grow faster, but rather retards growth, and for that reason should be practiced so as to require but a slight pruning at any one time. If trees were constantly watched and any protruding branch pinched back, it would be better than a general pruning at set times.

If our heroic horticulturist, who thinks he must cut out great branches that the remaining ones may draw a double supply of sap, could realize that he is weakening and lowering the vitality of the whole tree, there would be less

stovewood made from our orchards. Against such butchery most earnest protest should be made.

Allow me to suggest to such person that if the next time he feels impelled to cut and slash his trees, he first take a shovel and pick, and fill up ruts in the public highway until his ardor is worked off, both he and the public will be the gainers thereby.

Some, however, insist that such pruning is all right if put off until winter. A better way would be to put it off until the tree is dead and make it all into stovewood at once.

This reminds me of a fruit-grower who, a few years ago, remarked to the writer that he had prunings enough from his orchard every year to supply him with firewood, and rather congratulated himself on his thrift and thrifty orchard. But a little later on he dug up his trees because they would not bear. He had pruned all vitality out of them.

How, then, should pruning be done? Simply shorten in the long branches.

If a tree throws out long, slender branches, like the apricot, prune, peach and some varieties of the pear, it should be cut back often, so as to avoid heavy pruning at any one time. It is better to clip such trees once in winter and twice in summer—say, as a general rule, in March, June and August. For trees that make a short growth, once in winter and once in summer would perhaps be sufficient. But as indicated above, the better way is to constantly watch every tree and never allow a branch to get beyond its fellows, and in that way keep the head round and dense.

If a tree shows a disposition to grow to one side, or, as is common, to lean from the wind, let the shears be applied to the branches on the heavy side of the tree, thus retarding growth on that side and developing it on the other. By watching in this way, a one-sided or leaning tree can soon be forced back to an equilibrium, and a perfect and beautiful head formed instead of an unsightly, deformed one.

The writer has practiced this method for 30 years with deciduous trees, and for nine years with orange trees, and does not hesitate to say that, as a rule, a leaning or one-sided tree is such from neglect.

It is not meant by this that small trees, while too slender to stand up against the wind, can be kept from leaning (except by staking), but that such leaning tops, as soon as the tree has size and strength, can be brought back to a perfect equilibrium by judicious summer pruning.

Should not the inside branches from the head of a peach or apricot tree be cut out? If we except dead branches and those that interfere, most decidedly no.

While visiting a neighboring apricot orchard not long ago, the owner complained that his trees would not bear, and that what fruit he did have was small, and asked what could be the matter.

A glance at his trees showed that every twig in the center of the tree had been cut out—not a fruit-bearing spur left in four to six feet of the trunk, and some great branches were bare even a greater distance. A little farther on another place was visited, and in reply to the question, "How are your apricots doing?" the answer came from a beaming face: "Oh! they are just immense." And sure enough, it was a sight worth seeing. The great branches, clear down to the trunk of the tree, were almost a solid cluster of fine, large fruit. Spurs not an inch long, on the rough side of branches two or three inches in diameter, had two or more fine apricots, and others only a few inches longer had more in proportion. The trees had been carefully shortened in in summer. The small branches inside with their fruit buds were well developed.

The other man had pruned the inside branches all off and with them his best fruit, and left the long ends untouched. He had admitted the sun to scorch the bark and dry the sap in its long journey to reach the fruit. The one had pruned off his best fruit buds, the other had preserved and fed them. A distinction *with a difference.*

Plant ng Too Deeply.

A correspondent (J. W. B.) writes as follows concerning the recent recommendation of a writer in the Santa Rosa *Democrat*, to plant trees so that the union of graft or bud is well below the surface: "It is said that the remedy is 'simple and easy' to prevent grafted trees from breaking off, by strong winds, namely, 'grafting or budding low and planting deeply so that the union will be well under the surface.' Now if he means by that to advise that a tree should be planted more than an inch and a half (certainly not more than two inches below the surface) deeper than the tree was before it was transplanted, then I say, however simple his remedy is, he may save the graft from breaking off, but the chances are he will lose his tree. I have had a great deal of experience in tree-planting. No matter what kind of soil, whether it be a new, loose loam or a rich old loam, if you plant too deeply you will lose your trees; indeed, there is more danger from deep planting than a little shallow planting. I was passing by, in the month of March, this present year, where they were planting trees. I looked on for a few minutes. I remarked: 'You are planting your trees too deep.' The answer I got was: 'The soil is dry and we must plant deep.' I said: 'You will smother your trees.' One month ago I saw the same trees, and more than half were dead and the balance were struggling hard for life.

"If your soil is light, tread the surface or press the soil around the trunk well and put some old straw or old manure around, which will help to retain the moisture. I took up one of those trees mentioned, while it still had some life, and examined the roots. The bark or skin of the roots sloughed off like the flesh of a bone that had been scalded. By my advice they scraped some of the soil away from those that were still living, and the trees showed signs, soon after, of a better growth, and put forth new leaves. I have seen trees that were nearly full-grown sometimes filled around the trunk by grading the ground, but even then they would not do well unless they were protected by boxing, keeping the soil from the trunk of the tree. A pear tree will stand a greater depth than any fruit-tree I know of."

AGRICULTURAL ENGINEER

The Future of the Sacramento Valley.

Hon. George Ohleyer of Yuba City writes for the *Evening Bulletin* as follows: The Sacramento valley and its drainage and navigable streams is growing to be a matter of deserved solicitude. For 15 years or more the cry for justice and for help has filled the air, and while at first it was weak and disunited, the unmistakable menace to the integrity of the rivers and to a matchless agricultural region has created a union of sentiment and feeling as widespread as the nation itself. That the thought should ever have found lodgment in any one's brain that we could better afford to sacrifice this fair domain to the demand of "Slickens" than to sacrifice the gold in the hills, is so astounding as to challenge belief, and yet an ex-Governor of California many years ago contended that it were better to sacrifice agricultural land than gold-bearing soil. Said he to the writer: "Since gold-bearing soil is limited and agricultural soil is not, there would be plenty of room for the agriculturists elsewhere than in the Sacramento valley." What a horrible idea! It is pleasant to know that such thoughts are no longer entertained anywhere, not even by those recently engaged in casting the mountains into the rivers. What the local public and press feared and predicted would happen to the country and navigation is found too true, and both State and National Governments have agents in the field to examine the situation and report conditions. It is a relief to observe that no scheme is advanced having for its object more than the correction of the evil existing—that the State and General Governments are not to be called on to legalize the further construction of debris dams for the use of private parties and to the detriment of public interests. Restraint may be useful, may possibly be imperative, but as a license to a further use of the public streams as dumping-ground, cannot be tolerated, and dare no longer be suggested by any one in authority. The people who have made such a self-sacrificing struggle, and who have been victorious at all points, watch with much interest the reports and suggestions of River Commissions, who are to say how the rivers shall be treated to furnish the relief demanded. Since, through natural causes, the lands from the Sutter Buttes to Suisun Bay are highest on the banks of the rivers, it follows that the displacement of water in the channels by sand threatens to engulf the borders and the lands beyond. The great tule basins, or storage reservoirs of surplus waters, were created for a wise purpose, and any interference with nature's plans will cause serious consequences to arable regions. The flood waters must be held in the channels as much as possible for scouring purposes, but at a certain elevation they will spread, whether barred or not by levees; hence relief-ways must be provided where they can do least harm, or they may escape by way of towns and cities or valuable farming sections.

That the great tule lakes exist is evidence that the valley is too flat to drain out to sea while the draining-in process is in operation, therefore their reclamation as a whole is an impossibility. The best that can be done is a partial reclamation, such as along the borders, leaving the greater and deeper areas, as nature intended them as reservoirs for the safety of arable land and to furnish a replenishment to the rivers when they require it.

The channels must be deepened by throwing the artificial fill on to their banks, or by scouring them out into the bays. This and the cessation of hostilities at the head-waters must go hand-in-hand, and is the first work to be done by the Federal Government. The whole of it is in the interest of navigation, and not for the purpose of reclaiming swamp or private lands, which has so often frightened away Federal engineers. The Government can't do less and do its duty; the plan cannot conflict with swamp-land owners. They have a right to demand a restoration of the original channels for the purposes of drainage, since they cannot drain their lands into an artificially raised channel. Occasionally it is intimated that the State must aid in the scheme of restoration, but this is fallacious. The General Government should, as it certainly will, restore the rivers to their original usefulness as far as possible. The State should not interfere with the plan or aid in the expense; she should busy herself in pressing the necessity on the higher power, and not rest until the demand is fully granted. A State interference, while it could do no good, would complicate responsibilities, if it did not drive the United States from the field; besides, State operations have resulted disastrously on more than one occasion.

Reclamation of swamp land is a separate question, and should not be confounded with river reclamation. The lands do not belong to the State, but are wholly in the hands of private parties, who stand obligated to reclaim them at their own expense. As already intimated, these owners have equities, possibly against the United States, but they have none against the State, and when it is bruited about that the next Legislature is to be asked to enter into another drainage scheme, by whatever name, the general taxpayer should be on the watch-tower and be ready to enter his solemn and emphatic protest. No arable soil should be taxed to reclaim private property, especially if such property consists of swamp land, and the State should go very slow in the attempt to reclaim its own swamp land. Something should be left to posterity, as the present burdens of the people are sufficient unto the times. Occasionally some one suggests the idea of reclaiming the tule basins by making them the receptacle of the mining sands now on their way to the bays, and possibly of those not started on their downward course. No scheme yet invented is fraught with greater mischief, were it practicable from a financial standpoint. As well might one attempt to break the fall of Niagara as to swing these rivers about at flood-time. But granted that it was done; for reasons already advanced, the basins are necessary for the life of the valley, and to raise them to the general level would send the floods from mountain to mountain and render the valley uninhabitable. It is a wild scheme, as impracticable from a scientific standpoint as from a financial view, and undeserving of a serious thought.

THE BOTANIST.

The Grasses of Washington.

SECOND ARTICLE.

The orchard grass, *dactylis glomerata*, is not so common in this State as it ought to be, though it is popular as meadow grass. It is about three feet high, with rough light-green leaves and a three inches long panicle. The spikelets are three or four flowered, and the glumes pointed and unequal. It adapts itself to any soil, climate and treatment, though it prefers not very moist, but clayish soil, and can be mowed three or even four times a year. It will also grow in forests if the underbrush is cleared off. Sheep prefer this grass to all others. Its remarkable power of enduring drought ought to recommend this grass to all the farmers. It is also less exhaustive to the soil than timothy, and when sown thickly, it forms a close and durable turf. The soil in the vicinity of Seattle is especially adapted for the growth of the orchard grass, and on Vancouver island it produces better pastures than timothy.

The genus *poa* is largely represented in this State. *Poa pratensis*, or Kentucky bluegrass, spear grass, and sometimes also called June grass, is used as a pasture grass and for lawns. Its growth depends, however, very much upon the condition of the soil. In some States, as, for instance, in Kentucky, it has met with great success in cultivation; in some others, again, it is less highly esteemed. It starts very early in the spring, and grows rapidly after being grazed off; it can also endure more frost and bad weather than most of the grasses. The Kentucky bluegrass is about two feet high, with numerous soft and long leaves, and sends many running shoots from the base. The panicle is from two to four inches long, and the spikelets are on short pedicels. In the famous bluegrass district of Kentucky it reaches the hight of three feet, and then the root throws off numerous long and creeping rootstocks, forming thus a dense matted tuft. It prefers sandy or gravelly fields, where in a short time it takes complete possession. Besides *poa pratensis*, there also grows in this State *poa serotina*, or fowl meadow-grass, with culms three feet high, and with five inches long leaves. It grows in the low lands and in the mountains, though it prefers rich, moist soil and wet, swampy places. This grass thrives best when combined with other grasses and adds much to the value of a sward. It makes a more soft and pliable hay than timothy. Another species, *poa tenuifolia*, is very common in this State, the Indians using its seed for food. It grows in bunches. *Poa andina* grows in dry localities, is about a foot and a half tall, and has short, rigid, pointed root-leaves. The empty glumes are large and broad. Other species growing in Washington are: *Poa Californica*, *poa cuspidata*, *poa nevadensis* and *poa occidentalis*, though there may be other species to be found.

The fall meadow grass, reed meadow grass, *glyceria arundinacea*, is found in the eastern portions of Washington. Its culm is stout, leafy and sometimes two feet long, and the leaves are often two feet long. The leaves are rough on the edges and its panicle is sometimes nearly 15 inches long. The rattlesnake or fall quaking grass, *glyceria Canadensis*, is found toward the boundary line, and it is a very ornamental grass. *Glyceria fluitans*, or floating manna grass, is very common in ditches and muddy places. Its seeds are very valuable in some countries, and are considered a great delicacy in soups. The birds and even fish are also very fond of these seeds, and the trout are always found waiting to catch every seed that falls in the water. This grass is about four feet high, thick and leafy. The nerved meadow grass, though sometimes wrongly called fowl meadow grass, *glyceria nervata*, is found in Eastern Washington. It is similar to the *glyceria arundinacea*, but it is smaller, with smaller flowers and a lighter panicle. It adapts itself to all kinds of soils and possesses very valuable properties as grass. It can stand a great deal of frost.

Of the genus *festuca*, the sheep's fescue, *festuca ovina*, is found in the eastern counties, and the bunch grass, *festuca scabrella*, in all other parts of the State. The first one is densely tufted, with numerous short and narrow leaves. The culms are slender and a little over one foot high, the spikelets from three to five-flowered. The second one, that is, the bunch grass, is much taller and has rigid leaves. It can grow at a very high altitude, sometimes at 7000 feet, and it is a good grass for cattle and horses, though perhaps too hard for sheep. It grows in strong clumps, and for this reason is rather a difficult grass to mow with a machine. *Festuca occidentalis* and *festuca microstachya* are also found in Washington.

The genus *bromus*, or the brome grass, is represented by a few species in this State. The chess or cheat (*bromus secalinus*) is regarded, though wrongly, by some farmers to be nothing else but a degenerated wheat. It is, however, not a very good grass. The spikelets are five to many flowered, outer glumes unequal and shorter than the lowest flower. *Bromus mollis*, *bromus pumpallianus* and *bromus hookerirnus* are other species found in this State.

The Italian rye grass, *Lolium parenne*, is introduced from Europe. It is a tall grass and very leafy, the culms terminating in a loose, spike-like panicle of about six inches in length. The Italian rye grass derives its name from the plains of Lombardy, Italy, where it grows in abundance. It is esteemed very high as a grass. Though it prefers inundated meadows, it can also stand a great deal of drouth. The poison darnel, *lolium temuteatum*, is found in grain-fields and is worthless as grass, the seeds enjoying a reputation of being poisonous to stock.

The so-called blue joint or blue stem, *agropyrum glaucum*, is very rarely to be met with in this State, though it is found here and there in the eastern counties. This is very good grass for hay or pasture, and it prefers saline soil. It grows single. Its culm is erect and rigid, and so are the leaves. The spike is short with large spikelets. The couch grass or quack grass, *agropyrum repens*, is abundant on the shores of San Juan de Fuca. Usually it forms a dense sod and has an abundance of foliage. Its culm is three feet high and its narrow spike of flowers over five inches long. It is not regarded as a good grass, but there is a diversity of opinion. The *agropyrum tenerum* is found everywhere in the Columbia valley, especially in moist meadows. It grows in clumps and is a good grass for hay. Another species, *agropyrum violaceum*, is found in the Cascade mountains and *agropyrum caninum* in the Columbia valley.

Hordeum jubatum, the wild barley, or squirrel-tail grass, is everywhere in this State, and it is regarded as a pest. Its barbed seeds are dangerous to the eyes and throats of animals and they penetrate the wool and flesh of sheep and lambs. *Hordeum murinum*, equally dangerous as the previous one, was introduced as ballast on this coast. *Hordeum pusillum* and *maristinum* were also introduced as ballast. *Hordeum pratense* is eaten by cattle when in a young state, but when mature it is worthless.

Of the genus *elymus*, the wild rye, rye grass, or lyme grass, *elymus Canadensis* is common in this State, especially in the gravelly banks of the Columbia valley. It must be cut early for hay to be of any value. Still more common is the giant rye grass, *elymus condensatus*, a strong coarse grass, sometimes over ten feet high, and with culms half an inch thick. Its leaves are also very long, but they are smooth. It makes an excellent hay. *Elymus triticoides* grows singly and is also a valuable grass. *Elymus Vancouverensis* and *elymus Columbiana* are found in Western Washington, and *elymus dasystachus* in the high mountains. The American rye grass, *elymus Americanus*, is found near Seattle.

Thus we have given a short description of some of the grasses growing in this State. We left out many of the species which we do not regard as being of any value for the agriculturist. Only the most useful or those which can become useful are mentioned here.—*M. Lopatecki, Ph. D., in Seattle Intelligencer.*

WHAT IS INVENTION?—The late Judge Hall of the Circuit Court of the United States said: "An invention, in the sense of the Patent law, means the finding out, the contriving, the creating, of something which did not exist and was not known before, and which can be made useful and advantageous in the pursuits of life, or which can add to the enjoyment of mankind. In other words, the thing patented must be new; and it must be useful to an appreciable extent, though the measure of that usefulness is not material. Any degree of utility appreciable by a jury is sufficient, upon the question of utility, to sustain a patent."

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

A Farmers' Platform.

The following platform, which the Farmers' and Laborers' Unions of St. Louis Co., Mo., will pledge candidates to support unqualifiedly before voting for them, is too good to pass unnoticed. Why cannot all farmers and anti boss voters unite in one grand non-partisan body and sweep the State on such issues?

The Platform.

1. That the public lands, the heritage of the people, be reserved for actual settlers only, not another acre to railroads or speculators, and that all lands now held for speculative purposes shall be taxed at their full value.

2. That measures be taken to prevent aliens from acquiring title to lands in the United States and Territories of America, and to force titles already acquired by aliens to be relinquished to the National Government by purchase and retain said right of eminent domain for the use of actual settlers and citizens of the United States, and that the law be rigidly enforced against all railroad corporations which have not complied with the terms of the contract by which they have received grants of land.

3. That we demand the rapid payment of the public debt of the United States by operating the mints of the Government to their full capacity in coining silver and gold, and the payment of the same without discrimination to the public creditors of the nation, according to contract, thus saving the interest on the public debt to the industrial masses.

4. That we demand the abolition of National banks, the substitution of legal-tender notes in lieu of National bank notes, issued in sufficient volume to do the business of the country on a cash system, regulating the amount needed on a per capita basis as the business of the country expands, and that all money issued by the Government shall be a legal tender in payment of all debts, both public and private.

5. That we demand that Congress shall pass laws that shall effectually prevent the dealing in futures of all agricultural and mechanical productions, preserving a strict system of procedure in trial as shall secure prompt conviction, and imposing such penalties as shall secure the most perfect compliance with the law.

6. That we demand a graduated income tax, as we believe it is the most equitable system of taxation, placing the burden of government on those who can afford best to pay, instead of laying it on the farmers and mechanics, exempting millionaires, bondholders and corporations.

7. That we demand a strict enforcement of all laws prohibiting the importation of foreign labor under the contract system, and that all convicts be confined within the prison walls, and that all contract systems be abolished.

8. That we demand that all means of public communication and transportation shall be owned and controlled by the people and equitable rates everywhere be established on the same basis as the United States postal system.

9. That we demand the election of all officers of the National Government by a direct vote of the people, and that all willful violations of the election laws be declared a felony and a part of the punishment be the prohibition of the party convicted from voting in all future elections.

10. That we demand a repeal of all laws that do not bear equally on capital and labor, the strict enforcement of all laws, removal of all unjust technicalities, delays and discriminations in the administration of justice.

11. We demand such a revision of the tariff as will lay the heaviest burdens on the luxuries and the lightest on the necessaries of life, and as will reduce the income from imports to a strictly revenue basis.

12. That we demand that the Government shall protect the civilized Indians in all of their inalienable rights, and shall compel railroads and other wealthy syndicates from overriding the law and treaties now in existence for their protection.

13. That we are unqualifiedly in favor of the education of the masses by a well regulated system of free schools.

14. That we demand that no patents shall be renewed after the expiration of the time for which they were originally patented.

15. That this body will not support any man for Congress, of any political party, who will not pledge himself in writing to use his influence for the formation of these demands into laws.

16. That the chairman of this County Union shall present these resolutions to all candidates for the Legislature and Senate and ask them to pledge themselves in writing to the demands herein, and if any candidate refuse to pledge his support, then it shall be our duty to defeat said candidate regardless of what party he may belong to.

Form of Pledge.

I hereby pledge myself to work and vote for the above demands, irrespective of party caucus or action.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

The grain and fruit harvests are fairly over for 1890, but is the Grange harvest finished? O no! Now is the time to "gather them in." Let old Granges be reorganized and new ones be chartered. For the next 90 days the California farmer, in most sections of the State, has his leisure time. Why not all hands join in booming Grange-work? If the members of the Order will put forth some little effort, the results will be more than gratifying. The farmers are ready for some organization that will bring relief from overtaxation and at the same time offer considerable reward in the way of social and mental culture. Such an organization is the Grange, and such are some of the rewards it offers. Try it, fellow-producer! Help the Grange by your influence and membership. It will help you in return. Remember, this is the day of reciprocal relations!

Get thoughts! They are useful companions and profitable investments. Good thoughts are always in demand.

The coming State Grange session promises to be one of great interest. There will be an amendment or two proposed to the Constitution of the State Grange, and one or two to its By-laws; then the question of amending the National Grange Constitution, so that each State Grange may determine for itself the membership fee, will be considered. To these important subjects, add the BALLOT REFORM LAW, which has been proposed, and will, no doubt, be brought before the Grange for approval. Then, too, comes a plan for Mutual Fire Insurance; the Trade-Card plan, as proposed by the Executive Committee, ought to be considered; the usual reports; election of a member of the Executive Committee and conferring of degrees. From this, it seems we will have something to talk about and something to do. Let us then be up and preparing for the work of the session.

Sister Alling, of Stockton Grange, has given us a program which is truly grand. If that sort of work will not make a Grange succeed, then a Grange will not succeed. All honor to such "Woman's Work" as is outlined by the fair and thoughtful sisters of Stockton. May the good work go on. "May brotherly love prevail and every moral and social virtue cement us."

Railroads organize their forces; why not have as complete an organization among the farmers?

Brother C. G. Luce, Past Master of Michigan State Grange, hit a big nail square on the head when he said: "The Grange was organized and is maintained for five distinct, though kindred, purposes, to wit, (1) to improve the farmer, his wife, sons and daughters intellectually; (2) to improve him morally and to strengthen and unify the moral forces found in rural homes; (3) to elevate and improve socially; (4) to protect and benefit him financially; (5) to increase his political power." There are very few persons who have kept themselves well posted about Grange affairs but will admit that the Grange has done wonders in the directions above referred to by Bro. Luce. The farmer of to-day is one whose patronage and influence are everywhere courted. His presence is welcome; his opinion is considered; his credit is sought; his name is honored, and his family respected and intelligently received by the best part of society. For all this the Grange ought to receive a large share of credit. Why not pay honor to whom honor is due? Why not respect an organization that helps to educate, to elevate and to dignify labor and laborers?

The General Deputies are rounding up their work in good shape. By the time the State Grange convenes, few, if any, of the subordinates will not have been visited by some one representing the State Grange.

Two Rock Grange, Sonoma county, is to dedicate a new hall Sept. 18th. This is the first hall dedicated to the uses and purposes of the Order in California during the year 1890. Everybody who loves the Grange is invited. A big crowd is expected and a good time is assured.

It will not be very surprising, the way our sisters are taking hold of Grange work, if, in a short time, the best work done for the Grange will be done by the sisters—"Woman's Work in the Grange" is being well and energetically done. May the brothers emulate their example!

Don't you feel that farmers appreciate the value of the Grange? They may not appreciate its worth to the fullest extent, but that they do value it is proven by the fact that more new Granges have been organized thus far in 1890 than were organized in the whole of the year 1889. The world moves forward, and the farmer is in line!

FARMER VS. LIQUOR.—Geo. T. Elliot, a Hollister Patron, called on us early this week. Bro. Elliot is a worker in behalf of prohibition, and had engagements to speak at Suisun, Tuesday, Sept. 2d; Dixon, 3d; Woodland, 4th; Williams, 5th; and Cuss, 6th.

The Country Aroused.

The *American Grange Bulletin* for Aug. 14th has a good deal to say editorially of the general uprising among agriculturists. We quote as follows:

The air is full of rumors concerning the Farmers' Movement in various sections of the country and politicians are stirred up as never before. A new political party and the smashing of old ones are hinted at, and in some sections a new party is not only advocated, but actually placed in operation. Everything, upon every side, so far as the farmer is concerned, shows unrest and dissatisfaction with the present state of affairs.

Now, what does all this mean? What cause has the farmer for being so stirred up and dissatisfied? If one had a complete cyclopedia of the causes before him, he could not more accurately tell than can the farmer who has thought and studied over passing events and felt the heavy shadow of poverty coming over him through merciless and unjust class legislation. It is foolish for any one to assume that American agriculture is in good and improving condition, as did a reputable U. S. Senator not many days ago upon the floor of the Senate. We do not assume that agriculture is upon its last legs, or that the farmer is so much of an imbecile that he cannot right all wrongs; but we do assert, without fear of successful contradiction, that for the past 25 years legislation, both National and State, has been vicious, for the few against the many, and the farmer generally made the pack-horse.

Class legislation is one of the curses of the age and must be stopped; *partisanship* is another and deserves the condemnation of all farmers, for through it they have too long been separated; but the day is breaking and by this uprising of the farmers of the nation will come the unification of the people, with the one object of purifying all corrupt places and securing a Government "of the people, by the people and for the people."

This movement *means* that the old guard has been called into service, and as did Cincinnatus of old so are the farmers of to-day leaving their plows standing in the furrows and responding to the call of patriotism and the cause of freedom.

It appears to us that every intelligent farmer must realize at this time the foolishness of the past, and be ready to subordinate partisan prejudice (too often mistaken for principle) to the necessity of the farm and home. None but foolish farmers sacrifice their personal interest on the altar of party. We hope their number is rapidly growing less. For farmers, successful action means relief and freedom; for machine politics and rascality in high places, death. There can be no further compromising with these evils. The farmer means business in this movement, and will not cease until successful. The spirit of independence is abroad in the land and is an inspiration from God.

The most thoughtful farmers, however, realize that class political organization cannot succeed, and would not promote the welfare of our country. Votes usually decide elections, and the farmers have not a majority of the votes in this country; hence, if we would succeed, we must put our votes where they will do most to promote our welfare. Nearly all the farmers are now associated with existing parties, and it takes a severe wrench to sever the connection. It ought not to be a difficult matter to get them earnestly at work in their party organizations to secure a fairer representation of farmers in legislative bodies. The farmers never will be fairly treated until they secure full representation.

It is highly probable that some radical steps will be necessary before the politicians will deal fairly. A few farmers nominated by the minority party will have to be elected before a needed lesson will be perfectly learned. This lesson will have to be taught by the intelligent, brave men among the farmers. The Grange and its members have been for 20 years the trusted leaders in this movement, and to-day ask for unity among farmers, to the end that agriculture may be placed in its proper position among the callings of men. She asks not for new parties, but purification of old, and points with pride to the Grange Declaration of Purposes as a document covering remedies for all evils.

From Kibesillah.

EDITORS PRESS:—Past Master Coulter has come and gone, and the members of this Grange thank the brother for the compliment he gave us for the work of the past year. He attended our Grange meeting August 9th, and at the appointed time (the day following) we had the pleasure of hearing him speak. He defended our cause as a true Patron should. The duty of a farmer's wife was the subject of a part of his address, which I hope will take effect in this vicinity. Come again, Worthy Brother; your assistance is what we want, and a good lunch awaits your presence at all times.

How often farmers ask: "What benefit would the Grange be to us?" when it is the only organization that points to protection, where their wives and daughters have a chance to demand justice and their voices can be heard as good Matrons, working to exterminate their evil surroundings. I should ask those same old farmers what good have *they* done the last quarter of a century? They have done nothing, with all their hard labor, but oil the wheels of political machinery. I wish they were as willing to come to the Grange and see what good it can do for them as they are to loaf in a gin-mill or perch themselves on a dry-goods box in front of some shop, waiting for some machine to make a noise that will arouse their patriotic sentiments. Let them come to the Grange with their wives and daughters and all become good Matrons and Patrons, and they will go home convinced that the Grangers need no political machine in their fields.

Remember, you poor brow-beaten farmers, that impressions are often mistaken for principles. Individuality is needed. The great want of our cause is men who both think and act for themselves, studying how they may become more and more useful. The gates of our fields will be opened to all those who are worthy. Come and see what we have done and what we are doing, then you can tell what is the good of the Grange!

Reviewing the work of the past year in our Grange, it is a pleasure to state that we have gained in membership on an average one a month.

Noting the progress we have made, the subjects we have had before us for consideration, and the interest the officers and members have taken in the advancement of our Order, I hold to my opinion that the Grange is the only protection the farmers have. It has proved to be a plant that never fades, and has stood the test where others failed. Matrons and Patrons! don't forget the Grange motto, but let us all press onward together.

We are under many obligations to our Worthy State Master and Secretary for the interest they have manifested in our welfare. We hope to repay them by laboring faithfully, to make the Grange a success. Fraternally,

L. L. WOODROME, Sec'y.

Kibesillah, Aug 17, 1890.

Going to State Grange.

[Written for the PRESS by MRS. MARA B. LANDER.]

Now comes our annual question: Who and how many are going to the State Grange? Watsonville has made her call, and every good Patron's desires and interest ought to respond favorably. Political reverberations are filling the air, while the snowy heads of our Pioneers are conferring with the bright, unfaded locks of Native Sons and Daughters how best to make known their thankfulness that "Westward Ho!" made the 9th of September, 1850, Admission Day, and on this day was set the Bear Flag's seal to the brightest, fairest of all fair States—the doubly favored one whose auriferous shores were laved by Pacific's splashing waves and christened the Golden State. All hail! say we to the Pioneers who braved hardship and danger to plant the stars and stripes above our grand mountains and fertile valleys, and all success to their sons and daughters who are fostering and building a Statehood beyond the conceptions of our revered 49-ers. Pioneers found gold; years later their children planted these same shining sands, and in conformity with agricultural law courted sunshine and dew by scientific manual labor until now the whole United States reaps the products of our golden soil in the rich and fragrant orange and lemon, luscious grapes, varied with the peach, apricot and pear; supplementing these are the olive, with fruits and nuts of the tropics. Fostering such growths, comparing and balancing the needs of the north, south, east and west, is our Grange mission to Watsonville; and that our pilgrimage may be successful, fathers, mothers, sons and daughters are needed to bring about that unity of action which is the condition of strength.

Brothers, you need recreation; your wives, daughters and sons should follow in the footsteps of Mother Nature and seek such rest as in her gracious beneficence is given to flower, shrub and tree. Can you find a more profitable or pleasurable outing for the year than to go to State Grange? There may you compare notes, brother with brother, and fix upon best methods not only of maintaining your rights, but how to demand them. Sisters! can we not leave stitching, mending, cooking, preserving and cleaning for a week's airing? To go near the coast and breathe that invigorating, bracing air—oh! what does that not mean to the tired housewife! Does it not betoken almost a new lease of life, nay, a brightening of the present hot days even to think of it? Patrons of California! let thoughts of going be but a forerunner of the flitting, and our State Master and National Steward will answer for California this winter in Atlanta: *Well done. Well done* Ho for Watsonville!

Martinez.

A GRAND NOMINATION.—The Republican Convention of the Sixth Ohio Congressional District has placed in nomination for Congress our worthy brother J. H. Brigham. If he is elected—as we hope he will be—agriculture will have a most able advocate in the National Legislature.

YUBA CITY GRANGE expects that eight and perhaps ten of her members will attend State Grange—so W. Sec. Walton writes officially—and Bro. B. F. Frisbie has been duly chosen alternate.

Notes from the Fairs.

Petaluma—4th District.

The fair of the 4th District (Sonoma and Marin) Agricultural Association, held August 25th to 30th, proved one of the most successful that has ever taken place at Petaluma. Stall room and pavilion space alike were in great demand, and many visitors attended; but the *Bulletin* scribe, on the 29th, reported three-card monte men and fakirs conspicuous by their absence, and the crowds good-natured and orderly throughout, not a single disturbance nor arrest having occurred so far.

At the stock parade Friday morning, Percheron and Clydesdale stallions, blooded mares, roadsters and farm horses to the number of 100 or more filed past the grand stand, to the admiration of beholders. One of the stallions, born and raised in Petaluma township, a cross between a Norman and a Clydesdale, is a magnificent gray, standing fully 18½ hands high and weighing 2100 pounds. His sire, Pointsman, was the largest horse ever known, weighing 2500 pounds.

The paddocks were given up to cattle, and there was a great display of Holsteins, Jerseys, Red Polls and graded cattle, whose sleek coats and plump sides testified to excellent care and feeding. The high standard of the district was fully kept up in this respect, as also in the pigs and sheep, some fine examples of the latter being shown. There was also a fair display of poultry.

The interior of the pavilion was tastefully decorated with the national colors, interspersed with the banners of the different counties. In the center was a fountain surrounded by ferns of different varieties, and directly in front, embowered by exotic plants, was a ferocious-looking Sonoma county bear (stuffed), said to have been slain by Sup't Elder.

For several reasons, chief of which was last season's protracted wet spell, the exhibit of farm products was rather smaller than usual, and hardly up to the standard of former years. At the same time, whatever was shown, whether vegetables, fruit or cereals, presented a very fine appearance.

A notable feature was the exhibit of John Ennis of Petaluma, who, on his five-acre lot in the town limits, has raised a crop of almost every variety of fruit, from the proceeds of which he more than comfortably supports himself and a large family. (A relation by Mr. Ennis of his methods in bringing about the results attained would doubtless be welcome to many.)

The largest individual display of farm products was made by Mr. Andrews of Two Rock. It embraced apples (10 varieties), barley, beans (shelled, seven varieties), beets (blood, sugar, Tankard), Briza grass, citrons, cantaloupes, castor beans, catalpa tree, caterpillars (vegetable), cotton, carrots (two varieties), endive, Egyptian corn, figs, flax, Georgia cane, grapevine (*vitus Davidi*), hemp, husk tomato, Momordica, mesquit grass, melons (water and musk, Florida alligator, hybrid), okra, passion vine, peaches (six var.), pie-plant, pumpkins, pears (five varieties), peanuts, pomegranates, radishes, salsify, Sainfoin hay, squashes, turnips, tobacco, tomatoes and wheat—34 different products, tropical and temperate, grown on one farm in Sonoma county!

The Petaluma cannery had a model exhibit of fruit in jars, arranged in the shape of a pyramid. The famous Petaluma incubators, and the churn with "a patent back-action, reverse and turn-around movement" attracted much notice. The ladies as usual made a grand showing of culinary productions and needlework.

Chico—3d District.

Butte, Colusa and Tehama counties make up the Third Agricultural District, whose fair came off at Chico the last week in August. The correspondent of the *Bulletin* says: The live-stock show this year is much smaller than last. Judge Bridgeford's fine herd of Durhams was not sent down from Colusa, nor is there any of Senator Stanford's or Gen. Bidwell's stock. As is well known, Gen. Bidwell will not display fruit or stock at the fair, because he does not approve of the gambling which is thought a necessary part of the horse-speeding, and he will in no way aid the exhibition while the directors permit the feature he considers objectionable. The space at the park made for fat cattle and stout pigs is taken up with horses, more speeders being here than ever before. The races have been fairly good, as races go.

As to the horticultural output, it was remarked that ever since cherries and apricots began to ripen, Butte's best fair has been in progress in the markets of Chicago and other Eastern cities. The fruits of these prolific orchards are "too well known to need displaying and too valuable to keep for home showing," and so the pavilion exhibit was not up to the standard of preceding years. And yet, says the same reporter, "if a Connecticut farmer could see the fruit show at the pavilion he could not well see anything in the quality to criticise. Clusters of luscious Muscat grapes, neatly packed boxes of figs, big fragrant peaches and red-cheeked apples are piled up carelessly, as if to give the impression that their production is so common as to be unworthy of comment. There are dried fruits also, fine as any brand, choice prunes, huge melons and samples of choice cereals. Inquiry would tell the stranger that all these marvels of profitable fruits came from the hills and valleys near; much of it from lands which, only a few years ago, could have been bought inside of $10 an acre, and some for less—land that old-timers always thought fit only for sheep-grazing."



J. H. SETTLEMIER, PROPRIETOR WOODBURN NURSERY, WOODBURN OR.

Among the finest displays were those from the orchards of B. F. Allen, W. V. Groves, John H. Guill, James Hegan, Mrs. Wookey, John Shannon and J. G. Curtis.

A few excellent specimens of Black Tartarian cherries, picked from the trees August 25th, were shown by Miss May Cox of Forbestown.

James Finlay, living near Chico, showed a lot of choice cocoons. He has large mulberry trees and would make more of sericulture were there encouragement to do so profitably.

A striking display of rare plants was made by Mrs. C. G. Warren, and lovely flowers in great variety were exhibited by Mrs. Guill, Mrs. Snook and Miss Maggie Shannon.

Placerville—8th District.

The 20th Annual Fair of the Eighth Agricultural District took place last week at Placerville. The exhibition was formally opened on Tuesday by Hon. G. J. Carpenter, president of the society. On Wednesday evening, Hon. Thomas Fraser delivered the annual address.

The *Mountain Democrat* says: Owing to the dropping of a race program from the lists this year, few outside people are in town, and the place is very quiet. When the Opera-house was thrown open to the public, the few who were in attendance were greatly surprised to find one of the most varied and extensive displays of the products of the soil yet made in El Dorado county. As the fact became noised abroad, the attendance increased, and during the past two days the usual number of visitors have been at the hall.

Several new exhibitors put in appearance this year, one notable one being Louis Rieber of the Six-Mile House, whose display is one of the most comprhensive, thorough and best-arranged of any in the hall. It included 4 varieties of nectarines, 4 of prunes, 10 of plums, 25 of peaches, 12 of pears, 34 of apples, 2 of cherries, dried fruits, 4 varieties of watermelons, several of muskmelons, a sack of hops, several sacks of cereals, a fine box of assorted seeds raised on the ranch, tobacco, squashes, pumpkins, and all sorts of vegetables, besides dressed deer skins.

Lack of space forbids more extended notice—at least in this issue.

Farmers in Council.

A dispatch from Council Bluffs, Iowa, announces that the 10th Annual Session of the National Farmers' Congress opened in that city on the 26th, with 200 delegates in attendance from 23 States.

The Opera-house, in which the convention is held, was packed to overflowing. Gov. Boies welcomed the Congress on behalf of the State of Iowa. John Scott delivered an address of welcome on behalf of the farmers of Iowa, and Rev. G. W. Crofts of Council Bluffs read a poem reiterating the welcome. Hon. A. W. Smith of Kansas and F. L Nesbit of Alabama spoke on behalf of the Congress, after which Pres. Kolb delivered his address.

At the afternoon session a resolution from the Wichita, Kansas, Board of Trade, demanding the passage by Congress of the Anti-Option bill, was presented, and after a heated discussion referred to the Committee on Resolutions.

Fifty more delegates, raising the number of represented States to 30, were expected on the 27th.

In his address, Pres. Kalb reviewed the condition of the farmers. He spoke of the decrease in agricultural wealth and said: "This decrease is all the more shocking because the aggregate wealth of the country has immensely increased." He followed the history of the last 40 years and blamed the protective tariff as being responsible for the farmers' present condition. Referring to the Farmers' Alliance, he called it a grand body, the object of which is to free agriculture from its thralldom.

Prof. W. T. Chamberlain of the Ames, Ia., Agricultural College, read a long paper on "Existing Facts and Laws that Injure Agriculture," and Prof. Atwater of the experimental station at Washington, D. C., spoke of the work of that institution.

Fairs to Come.

In the following list of fairs, occurring this week and yet to be held, some additions and changes of dates have been made since its last publication in August.

Oakland (1st Dist.), Sept. 1-9
Marysville (13th Dist.), Sept. 2-6.
S. L. Obispo (16th Dist.), Sept. 2-6.
Auburn (20th Dist.) Sept. 2-6.
California State Fair, Sacramento, Sept. 8-20.
Bishop (Eastern Slope), Sept. 10-13.
Santa Maria, Sept. 10-13.
Oregon State Fair, Salem, Sept. 15-20.
S. F. Mechanics Institute, Sept. 18-Oct. 25.
Nevada State Fair, Reno, Sept. 22-27.
Stockton (2d Dist.), Sept. 23-Oct. 4.
Rohnerville (9th Dist.), Sept. 22-26.
Quincy (11th Dist.), Sept. 22-27.
Lakeport (12th Dist.), Sept. 23-27.
Nevada City (17th Dist.), Sept. 23-27.
Independence (18th Dist.), Sept. 23-26.
Concord (23d Dist.), Sept. 22-27.
Redding (27th Dist.), Sept. 23-26.
Southern Oregon, Central Point, Sept. 22-27.
No. Pac. Industrial, Portland, Sept. 25-Oct. 25.
Salinas (7th Dist.) Sept. 30-Oct. 4.
Fresno (21st Dist.), Sept. 29- Oct. 4.
Escondido (22d Dist.), Sept. 30-Oct. 2.
Yreka (10th Dist.), Oct. 1-5.
Watsonville (24th Dist.), Oct. 1-4.
Spokane Falls (N.W. Ind. Exp.), Oct. 1-Nov. 1.
Walla Walla, Oct. 6-11.
Susanville (Lassen Co.), Oct. 6-10.
Visalia (15th Dist.), Oct. 7-11.
Arroyo Grande, Oct. 8-10.
Los Angeles (6th Dist.) Oct. 14-18.
Santa Cruz (14th Dist.) Oct. 15-18.
Santa Barbara (19th Dist.), Oct. 21-25.

KERN COUNTY PEACHES.—We have received from the Land Department of J. B. Haggin a fine sample of Orange Cling peaches grown in Kern county. They are of grand size, belting from 11 to 11¼ inches, and carry their own demonstration that Kern county has good peach lands.

An Enterprising Nurseryman.

With the rapid development of the fruit-producing interests of the Northwest that has been in progress during the past few years, and is gathering force from its own momentum, there has grown up a demand for first-class nurseries to provide stock for the young orchards. The Pacific Coast has had nurseries ever since it began to raise fruit, and the mildness of the climate tended to encourage the establishment of fruit-propagating farms, but the number of nurseries that have an extensive business and a standing reputation is limited. Clearly at the head of the list stands the well-known nursery of J. H. Settlemier, at Woodburn, Oregon.

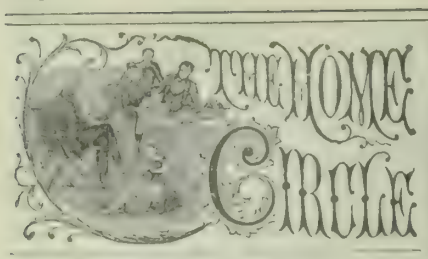
Mr. Settlemier was born in Jersey county, Illinois, Feb. 5, 1840, and at the age of nine years removed to California with his parents, who were attracted there by the gold excitement of 1849. They crossed the Missouri river at St. Joseph, and at that time there was not a settler between the Missouri and the Sacramento valley; there was not a wood or brick building in Sacramento, and San Francisco had scarcely attained the dignity of a village. The mother and one of the boys died in California shortly after arriving there, and the rest of the family came on to Oregon the next year and took a donation claim in Marion county, where Mount Angel now is, and where the father still resides at the age of 83 years. Oregon City was then the metropolis of this uncertain empire, and Milwaukee and Portland were rivals for second position, with the chances of success in favor of the former. Young Settlemier spent his youth on the farm and in the small nursery which his father had. The nursery absorbed the attention of the young man, who obtained a thorough knowledge of the business and at length started on his own account. Going to Woodburn, in the same county, he laid the foundation for what has since grown to be by far the largest nursery in the Northwest.

Woodburn Nursery is the name Mr. Settlemier has given his fruit-propagating plant. It occupies the whole of 115 acres of ground situated on both sides of the railroad track at the pleasant little village of Woodburn, which is south of Portland 35 miles and at the junction of the Southern Pacific main Oregon line and the Oregonian narrow-gauge railway. Mr. Settlemier is the founder and proprietor of this town. It is six miles from the Willamette river. It has the best public school outside of Salem in the county, and, though it is quite an important shipping-station and a local trading-center, the nursery of Mr. Settlemier constitutes the most extensive enterprise there. This is constantly being enlarged, increasing about 50 per cent annually.

There are now in the Woodburn nursery one and three-quarter millions of trees and plants. These consist of a full line of fruit, shade, ornamental and nut trees, and vines and plants from different sections of America and Europe, including a most extensive assortment that could not be enumerated in anything short of a voluminous catalogue, and the quality of the stock is the choicest on the Pacific Coast. Last season Mr. Settlemier imported from France 70,000 young trees, mostly of the *plumora formosa* family, one of the finest evergreens known. Among them are the most popular trees of foreign nativity—double white and red flowering horse-chestnuts, Italian chestnuts and Norway maples. His importations also include 11 varieties of apples and 20 varieties of winter pears. Mr. Settlemier cultivates many rare and curious plants for his own enjoyment, among which are Asiatic and South American specimens, and it is well worth one's while to look through the very interesting collection of this class, as well as the general stock of the nursery. Mr. Settlemier personally receives visitors and is always pleased to show the nursery to those who may call. Catalogue mailed free upon application.

The trade of Woodburn nursery extends throughout California, Utah, Oregon, Washington, Idaho and British Columbia. Supplying nurserymen and dealers is a specialty of the business, and it is rapidly increasing. The removal of the tariff on trees shipped to British Columbia has opened an important field there for this business. Many California orchardists and nurserymen buy their stocks of the Woodburn nursery, because the trees are found to be superior to the California production and free from pests. Trees and plants propagated by means of irrigation, which is the rule in California, are of inferior quality and never yield as satisfactory results as those grown where the natural conditions are entirely favorable. The climate of Oregon is peculiarly adapted to the successful prosecution of the nursery business, as well as the general cultivation of fruit. The prices prevailing here for first-class nursery stock are about one-fifth less than those quoted by Eastern catalogues, and Eastern competition cuts no figure in the business.

This summer 450,000 trees are being budded in Mr. Settlemier's nursery, this method being preferred to the more common one of grafting. Budding serves the same purpose, is more quickly and easily done, and is attended with less risk. Grafting is done in the spring, when any defective buds are attended to. Mr. Settlemier has made a study of his business, and his long experience and unexcelled facilities for keeping up with the times in all improvements place him in the front rank of nurserymen.—*West Shore, Aug., 1889.*



Where She Comes.

With heavy elders overhung,
Half hid in clover masses,
An old fence rambles on, among
The tangled meadow-grasses.
It makes a shade for lady-fern
Which nestles close beside it;
While clematis, at every turn,
And roses almost hide it.

In shade of overhanging sprays
And down a sunny hollow,
By hazel copse, and woodland ways,
The winding fence I follow;
By rose, and thorn, and fragrant dew,
In search of something sweeter—
The orchard-gap, where she comes through,
And I go down to meet her!

The sunlight slants across the fence,
Where lichens gray it over,
And stirs a hundred dreamy scents
From fern, and mint, and clover;
But though the air is sweet to-day,
I know of something sweeter;
That she can only come this way,
And I am sure to meet her!

And so, while chipmunks run a match
To tell the wrens who s coming,
And all across the brier patch
There sounds a drowsy humming—
The hum of honey-seeking bees—
I seek for something sweeter;
A gap, among the apple-trees,
Where I am going to meet her!

—*C. B. Going in Scribner's Magazine.*

The Life Worth Living.

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A man is to be measured by his ability and desire to contribute to the well-being of society. Almost all our best possessions take their richness from the fact that we are linked to others by the social tie.

Gold, fine homes, grand attainments, would mean but little if we dwelt alone. A man is great, not by any fictitious rank of birth but by his ability to do his part, to render some adequate equivalent in the transactions of life. The true man's self-respect will forbid him to accept the bounty of society, offering nothing in return.

No possible exaltation can exempt a man from his obligations to his fellows. Each one, however humble, who can contribute a feather's weight of influence toward the weal of society may more deserve our regard than the titled prince.

"All are needed by each one,
Nothing is good or fair alone."

In this broad land we are free and equal. We are entitled to "life, liberty and the pursuit of happiness." We reach the loftiest conception of our greatness when our deepest satisfaction is found in our ability to aid the world.

Mere love of acquisition without a noble purpose is but an animal instinct. However poor in gold, each one of us has his personality to offer to the welfare of the world. Benedictions will not be wanting from the army of toilers for the manly man of even wide estates whose great heart and sympathetic spirit keep him close to the weal of men. What word have we to say to the vast multitudes in our land toiling and struggling in "the rage to live," which makes all living strife? The poet, the philosopher who isolates himself from the throbbing life of man, is a poor failure; is tracing the laws of social life in a humanity that has no being. It should be easy to tell the boy, when historic names are in the mind, that he who floats to glory on some "tide in the affairs of men, taken at the flood," is less a hero than the grimy toiler who simply does his best.

The girl, dreaming of castles and splendor just a little beyond, should be taught to see the nobler fact that the spirit of queenly womanhood is the ambition to be useful as well as to be easily pleased with what life can bring.

"Work without hope draws nectar in a sieve,
And hope without an object cannot live."

For ourselves, we ought to look with a genuine and hearty respect upon the man who toils; help him to respect himself; count ourselves among the great army of laborers, with loyal love for the great families of the earth; forbid the narrow spirit of feudalism to taint the free air of this Western Continent; seek to lift society to that inspiring conception of labor, live in hopeful and helpful and willing action—the *only* life worth living.

THE Indiana Republican who wanted to horsewhip Harrison is dead. He got over the horsewhip mood and took the President nearer where he lives. He gave him a span of horses, so he could do his own horsewhipping.—*Alta*

"SHOULD we keep our vests in the vestry?" asked Gilroy. "Yes," replied Larkin, "and our coats in the coterie and likewise our trousers in the pantry."—*Bazar.*

Tobacco—A Short Essay.

By a Boy Who Knows All About It.

Tobacco grows something like cabbage, but I never saw none cooked. I have heard men say that cigars that was given them election days for nothing was mostly cabbage leaves.

Tobacco stores are mostly kept by wooden Indians, who stand at the door and fool little boys by offering them a bunch of cigars which is glued into the Injun's hands, and is made of wood also.

I tried to smoke a cigar once, and I felt like Epsom salts.

Tobacco was invented by a man named Walter Raleigh. When the people first saw him smoking they thought he was a steamboat, and were frightened.

My sister Nancy is a girl. I don't know whether she likes tobacco or not. There is a young man named Leroy who comes to see her. I guess she likes Leroy. He was standing on the steps one night, and he had a cigar in his mouth, and said he didn't know as she would like it, and she said: "The perfume is delightful!" But when my big brother Tom lighted his pipe, Nancy said: "Get out of the house, you horrid creature! The smell of tobacco makes me sick!"

Snuff is Injun meal made of tobacco. I took a little snuff once and then I sneezed.—*Sel.*

The Vestals.

Although much has been written to show that woman is held in higher esteem in this than in former centuries, yet history records that certain honorable rites and ceremonies were assigned to woman to perform, even in the olden times. Our engraving shows the "vestal virgins," priestesses of the old Roman goddess Vesta, at their occupation of maintaining the sacred fire in the temple of their goddess.

None can contemplate otherwise than with pleasure, gratitude and commendation, the mighty practical results accomplished by the mothers, wives, daughters and sisters of the present age, in furthering the mission of true humanity and ameliorating the condition of thousands who without their aid would be friendless and forsaken. Let the women of our land be encouraged and indorsed in their associated efforts. No matter about the title of their organizations. Leave that to them. The world is blessed, not by titles, insignia or symbols, but by actual results for good.

A FINE ODOR FOR ROOMS.—If you want a lovely odor in your rooms, break off branches of the Norway spruce and arrange them in a large jug well filled with water. In a few days tender, pale-green branches feather out, soft and cool to the touch, giving the delightful health-giving odor.

Factory Children.

At a musical entertainment given before the Alameda Nationalist Club at Tucker's hall, Friday evening, Aug. 22d, by Prof. James G. Clark, and richly enjoyed by an appreciative audience of ladies and gentlemen, DR. ARTHUR GORE read the following selected prose (by E. H. Sanborn, in *The Nationalist*,) and original verses:

Child Labor.

The woes of the mine-workers have been often told, but there has been hardly a word about the little toilers, and yet the blackest upon Pennsylvania's fair name, and upon that of Philadelphia, her greatest city, and the greatest textile center of the United States, is the slavery of the little toilers of the mills. An incident of the visit of the members of the Pan-American Congress to Philadelphia spread the knowledge of this disgrace to the world as nothing had ever done before.

In showing to the Pan-American visitors the extent of the city's industries, the committee of citizens conducted the guests through one of the great carpet-mills, where about 4500 operatives were employed.

This factory was presented as an exponent of Philadelphia's greatest industry, and as the largest establishment of its kind in the country. Instead of spacious, well-lighted and well-ventilated buildings, such as they had seen in some parts of New England, the visitors found a miscellaneous collection of tall buildings grouped together with no indication of system or of thought that the employes would have need of such elements as light and air.

But more appalling by far than this flagrant disregard of all the requirements of sanitation, was the presence of hundreds of little children in these dark, pestilential mills. It was not here and there a child, but the pale faces of the little toilers peered out of every corner and they gathered in groups to gaze at the visitors from the far South. Some of the Pan Americans patted the little ones on their heads and asked them how old they were, and from children who could not yet have seen ten years of life came the surprising response, "twelve years" or "thirteen years;" and as they left the foul air of the mills, the visitors said: "We have nothing like this in our countries, and we have not seen anything so



THE VESTALS TENDING THE SACRED FIRE IN THE TEMPLE OF VESTA IN ANCIENT ROME.

disgraceful anywhere else in the United States."

The Factory Children.

On the hill over yonder,
A city quiet lies,
Where men walk and ponder
Of far and fairer skies,
And con the legends o'er.
Head-boards roughly painted
Mark where each dweller dreams.
Little ones are sainted
The oftenest, it seems,
Among the hopeless poor.

Down below, the river
Flows surging slowly past;
Where factories roar and shiver,
And human lives are cast
In ceaseless, mad turmoil.
Down the hill, at daylight,
Go trooping little feet;
Up the hill, at gray-light,
Their weary task complete;
From late to early toil.

Little lives are budding
On sad and wasted stalks.
Little mounds are studding
The silent city's walks,
And only death is free.
Still the ceaseless trooping,
Till farther up the hill,
In a holier grouping
Their weary feet lie still,
And rest, O God! in Thee.

Still the wheels go humming,
The shuttles flutter swift,
Heart and brain benumbing,
And all is Mammon's gift,
The Juggernaut of gold.
Little lips are sobbing,
And parched like flowers in drouth;
Little hearts go throbbing
To fill the idol's mouth,
Midst horrors rarely told.

Oh! how can ye bear them
To be thus trodden down?
Oh! how can ye spare them,
The jewels of the crown?
Of man and womanhood.
Vilely mire bespattered,
And spurned by beastly heels,
Lie they marred and shattered
'Neath Mammon's chariot wheels.
Deprived of every good.

None to save and love them;
E'er toiling starved and low;
Merciless above them
There tramples sure and slow
The cloven hoof of greed.
Have ye eyes to see them?
And ne'er a heart to feel?
Spring ye up to free them!
Your welfare's in their weal!
Your woe is in their need!

Can we be called human?
Dare we God's image claim?
Comes there man or woman
To lift this baleful shame,
And let God's spirit in?
O men! be ye brothers!
Your little brothers see.
And, O women! mothers
To these your sisters be
And wipe away our sin.

Childhood guides the nation;
By it we rise or fall;
Till, by God's equation,
To judgment He shall call
And balance all arrears;
Or to higher being
Through childhood's loving care,
Faith shall change to seeing,
And we breathe Heaven's air
With joy too deep for tears.

Chaff

The wickedest man in Austin being questioned by a census enumerator about his infirmities, said he was suffering from clergymen's sore throat.—*Texas Siftings.*

McCarthy: Is McAdoo an Irishman, do ye think? O'Flanagan: He do be calling himself an Oirishman, and he have an Oirish name, but do yez know, I be thinking he be an impostor, for do yez moind his American brogue, I don't know?

Hyde: Mrs. Campaner is a clever housekeeper. She has a large family, and they are not rich, but she manages to husband her resources very cleverly. Barker: She has also managed to husband four of her seven daughters.—*Light.*

She: It will be a pleasure for me to share your troubles and anxieties. He: But I haven't any. She: Oh, you will have when we are married.—*Life.*

Cornell University has decided to give up its "School of Journalism." It is understood that its Chair of Base Ball will be retained.—*Norristown Herald.*

The large number of proposals of marriage made at the seashore is accounted for. The beach provides the young men with the necessary sand.—*New York Commercial.*

Deafness.—Dr. Dowling says that between the ages of 10 and 40 at least one person in three is subject to partial deafness. The great majority of cases of impaired hearing are hereditary, and are largely owing to a too close consanguinity of the parents. Deafness is more prevalent among males than females, owing to the fact that the male is more exposed to the vicissitudes of climate. There is much more deafness in America than in Europe, and this is due to a more general use of scientific instruments, such as telephones, where one ear is used to the exclusion of the other.

Young Folks' Column.

Mattie's Garden Party.

[Written for the Rural Press by Addie Archer.]

"Don't you wish, mother, we were rich enough to give parties and to get invited to some in return?"

Mattie Harwood had closed the book she was reading with a dissatisfied sigh, and looking dreamily out of the window, added "to go to Florida winters?"

"It would be nice, dear," answered her mother.

"We needn't have to be rich to have a party," said her brother Melville, who was placing a puzzle together on the floor. "I can get you up a s'prise party next week if you say so. Oh, I forgot, I mustn't tell you when it will be 'cause you are to be s'prised about it."

"You need not bother yourself one bit, Mell Harwood. I would not be guilty of having a horrid old surprise party where all bring their own cake and peanuts. It seems a very cheap way of entertaining one's friends, I say."

"It's better than not entertaining them any. I guess you are afraid of getting kissed, playing games with forfeits."

"I wouldn't play such a silly game; nobody does now but some poor things who don't know any of the nice new games. They are much more *stylish*, I think."

Mattie was two years older than her brother and liked to impress him with her superior ideas.

"Pooh, who cares for style? You're the proudest girl round."

"There, children, don't quarrel. You are both partly right and partly wrong. I have often thought that you need some lesson in receiving company of your very own, if only to invite a boy or girl in to tea."

"That's it, daughter; let them have a tea party."

They had thought grandpa asleep, for his head rested back in the easy-chair, and the paper slipped from his hand.

"Tea parties are for girls. I don't want any part in it."

"I don't think this house is fit for a party of any kind. It is too old and we haven't any china, silver or servants," said Mattie, glancing contemptuously around the big old fashioned sitting-room.

"Well, Mattie," said her mother decidedly, "you must make up your mind to be contented with what you cannot help and make the most of your situation. You will make yourself and every one around you unhappy by having too high ideas. Emerson, that grand philosopher, said: 'Don't hitch your wagon to a star.' Now, my dear, think not that because you cannot provide elegant entertainment you won't offer any. Simply do the best you can."

"That is right, daughter. Children nowadays get too many proud notions. They won't sing or play on the piano in company unless they can do it like a professor. No matter if every one coaxes them, it doesn't make any difference; but it isn't polite, I say."

"No, father, it isn't. I hope my children wouldn't do so."

"There," pouted Mattie, "I wish I hadn't said a word about a party. I wouldn't have one unless I could have it in style."

"Didn't I say she was proud! I guess her wagon is hitched to the highest and biggest star in the sky," said Mell.

"Hush, Mellie dear; I think Mattie will change her mind soon."

Mrs. Harwood sewed in silence for a few minutes, thinking of the best means of helping Mattie to overcome her false pride, and for both children to know how to receive some young friends; also, to learn that good breeding and happiness are not confined to wealthy ones, but are free gifts to all who will accept.

She waited until the evening lamps were lighted, the dishes washed, and Mattie had heard Melville recite his spelling lesson for the third time.

"Now we will talk some more about the party. I am very much interested in the subject, and think you will be, too, Mattie, when you hear it planned for you."

Mattie felt in better humor this evening, for her papa had brought a pearl pocket-knife home with him, telling Mattie that it was for his Sunbeam to use at school when she sharpened lead-pencils. So she gave him a loving kiss and then wound her arms about her mother's neck, saying: "I know it cannot help being nice if you have thought about it."

"Thank you, dear; but as you said, we haven't any silver."

"Don't say it, mamma. I'm sorry."

"I'll forgive you, but let us see what our resources are. What have we that few in town possess?"

"A cow?" asked Mattie.

"I know," answered Mell, "we have the best lawn of any one in this part of the town. I was picking currants one day last summer, and I saw two men driving by. They looked like rich old fellows too, and they were driving so slow I could most see their eyes wink. One of them said, 'That's the prettiest situation for a house I've seen in this village; that lawn and those trees are magnificent. Wonder they don't move that shanty of a house away and sell the lot to some one who can afford to put up a respectable residence.'"

At this they all laughed.

"Perhaps we will when some one is willing to pay what it is worth," said papa from behind the newspaper.

"We can have our party outdoors, that is what you mean, isn't it, mamma? Why didn't I think of it? A garden party it will be, and that sounds so stylish, too! Oh, can't we have paper napkins and some wooden plates?"

"Perhaps so; we will decide about it later. It will be a tea party outdoors, father," explained Mrs. Harwood, who liked to please grandpa by following his ideas whenever possible.

This was how Mattie's garden party happened to be planned, even if it was now windy March weather.

Never did the spring seem so long or the grass so slow about growing green to impatient Mattie, although the older members of the family predicted a forward season.

Mrs. Harwood planted flower-seeds in boxes, that the gardens might have an early start. Grandpa and Mell trimmed up the trees and shrubs. Papa brought home some red and green paint to touch up the *shanty* a bit. He could paint it himself after supper, when the days were lengthening.

"It will look like a summer cottage in the country, for I've seen them with sloping roofs like this," exclaimed Mattie as she watched her father apply the first brush of color to the dark boards.

It was decided to have the garden party the first week of the summer vacation. The invitations should be given to the members of Mattie's and Mell's class, including also some six or seven boys and girls in their immediate neighborhood; also allowing for chance visitors, the number would be about forty five, and no one could reasonably feel slighted. The notes of invitation had been carefully copied from a form found in her mother's magazine, and delivered by Mell.

Grandpa, who had always been "handy with tools," made three long tables which he said would be nice to lend when the church folks had a picnic.

"Now if we only had a piano or organ!" exclaimed Mattie the day before the party, as she was making lovely bouquets for the tables indoors and outdoors. "It seems as if we ought to have some music," she added, forgetting her resolve to be contented.

"That's so, dearie," piped a shrill voice which belonged to Miss Sallie Perkins, a little woman who lived alone. "I've hearn a good deal 'bout this garden party, an' come to offer my services. Your ma will have her hands full, I reckon. See here; how will this do for music? It will kinder liven things up a bit to set this agoing." Here Miss Sally quickly turned the crank and comically skipped around the room with her music box playing a lively tune. "Lor sakes! I should be dreadful lonesome if it wasn't for this. Why can't you ask Charley Day to bring over his cornet and play a tune for ye's? Lor sakes! You needn't be without music if ye haven't a piana."

"Thanks for the music-box; I am glad you thought of it and of Charley's cornet. I think he will oblige us. And O mother, we might have Mell drum occasionally for us!"

"I am glad you and Mattie have thought of something to add to the pleasure," said Mrs. Harwood. "I think a good drumming might give some animation in calling the tennis-players and when marching to the tables."

The next morning Mattie woke very early to see if any dreaded rain-drops lurked in the sky. She was happy to find the sun shining brightly, and peeped into the pantry on her way downstairs to see the tempting good things that could be prepared the previous day. There was yet a lot of work to do that forenoon, but Mattie had proved herself quite a help. Even Mellie had beaten eggs and creamed butter and sugar for cake. He was also to pound the ice and turn the freezer for the ice-cream.

"It's lucky for us that we own a cow and a dozen hens," said practical Mell.

"Yes, fortunate, too, that we have all outdoors to find decorations for the house," said mamma.

At the hour mentioned in the note of invitation, Mattie and Mellie stood at the garden-gate ready to receive their guests. Mamma was sitting on the bit of piazza, ready to give them the second word of greeting.

"Let's guess who the first one will be that comes," said Mellie.

"Lucy Jones, of course. She is a little lame, you know, and always starts in good season. Poor thing, I wonder what she will wear. I hope she has something decent."

"Hush, there she is now; and look down the street, there's a crowd of them. I'm glad they're all coming at once. I shall have this hat-lifting business soon over."

Mellie was at that age in every boy's life when any extra touch of politeness as raising his hat was a positive torture.

The boys and girls at once entered into the enjoyment of the afternoon, some selecting swings, hammocks or croquet mallets.

Mattie, who had dreaded some awkward moments at first, felt greatly relieved. She did her best to make all have a good time and see that none missed a share in the games. To Lucy she was especially kind, for she remembered that only a very few bothered to say much to shy, retiring Lucy Jones.

Lucy, as a result of Mattie's kindness, had one of the happiest days of her life, and she certainly never before looked so pretty, even though her new dress was, as she confided to Mattie, only a five-cent print. But a happy heart always makes one's face more attractive.

At six o'clock the tables were ready, and very tempting they looked to the forty-six hungry children, whose healthful games in the pure air had given excellent appetite.

To Mattie's surprise, there were several things on the tables that she had not heard planned in the *menu*. But a few kind neighbors had insisted on sending something that would help Mrs. Harwood "feed that troop of hungry children, as they could never undertake such a task alone." Then grandpa, like others bearing that dear name, wanted to do his part, and quietly ordered a quantity of fruit and bonbons from the city.

"I'm glad we thought to have a garden party, mamma," said Mattie after the last one had gone. "I mean to have another next year. Don't you, Mellie?"

"Of course I shall, I mean we shall if mother will let us."

"I hope we will, dears," said Mrs. Harwood, never once hinting how very tired she was.

Domestic Economy

Roll Jelly Cake.—Three eggs, one-half cup of white sugar, 1½ teaspoonfuls of baking powder sifted twice with one level cup of sifted flour; bake in a moderately heated oven.

Apple Fritters.—Make a batter of one pint of milk, two eggs and flour enough not to make too stiff; add four tart apples chopped fine; put in lard, and serve with powdered sugar sprinkled over them.

Cake Without Eggs.—Two-thirds cup each of sugar, water and milk, two cups of flour, two teaspoonfuls of baking powder, one-third cup of butter, flavor to taste. This is excellent for layer cake.

Ginger Snaps.—Two eggs, two cups sugar, one cup butter, two teaspoonfuls ginger, one teaspoonful cinnamon, flour to make a stiff dough. Roll into a thin sheet, cut into rounds, and sprinkle with granulated sugar before baking. Watch closely, or they will burn.

Smothered Beef.—Have chopped fine one pound of lean beef, put a tablespoonful of butter in your chafing-dish, when hot put in the beef, and stir constantly for about two minutes, dust with salt and pepper, and serve at once. This, if prepared nicely and served very hot, is both delicious and wholesome.

Delicate Biscuit.—One quart of sweet milk, two teaspoonfuls of baking powder, half a cupful of best butter, one teaspoonful of sugar, and flour to make a soft dough. Roll out half an inch thick, and cut out tiny biscuits with a small baking-powder can. Bake in a very hot oven.

Foamy Sauce.—Beat the yolks of two eggs and one cupful of powdered sugar well together and set the bowl into boiling water and stir until quite hot, then add the whites beaten stiff; add a small piece of butter and a tablespoonful of brandy or extract after taking from the stove and serve immediately.

Scalloped Cod.—Two cupfuls picked codfish, one cupful drawn butter, with an egg beaten in it, one teaspoonful minced sour pickle, one tablespoonful Worcestershire sauce, fine breadcrumbs. Have the drawn butter hot, stir the fish into it, add the pickle and sauce, pour into a buttered baking dish, sprinkle with crumbs, dot with bits of butter, and bake.

Whipped Cream Sauce.—Set one cupful of cream on the ice for two hours before using, beat or whip it until it will stand alone, return to the refrigerator while you beat the whites of three eggs to a froth, add three tablespoonfuls of sugar, then the whipped cream and flavor to taste. Nice with the fruit pudding above, blanc mange, or nearly any sweet pudding.

Raspberry Shortcake.—Rub three tablespoonfuls of butter or lard into a quart of flour sifted with three teaspoonfuls of baking powder, until it is fine, then add milk until it is as soft as it can be rolled out. Roll it about half an inch thick, and bake. Invert the bottom of the cake for the layer of berries. Pile them on about an inch thick, with bits of butter, dredge with sugar, and put on them another crust, made and baked like the first. When cut for serving, pour over each piece sweet cream or whipped cream; or, in place of it, use a sauce made by creaming together three times as much sugar as butter, then adding an egg, white and yolk beaten stiff, and then stirring in slowly half a cupful of rich milk.

The Human Toe and Mouth.—In the anatomical institute at Strasburg, it has been found that the small toe of the human race is retrograding and losing one of its joints. Among 50 small toes dissected, 14 had two joints instead of three. The Springfield *Union*, under the head of "Will the mouth ever bite the ear?" says: A Frenchman has discovered that the human mouth is gradually working its way around toward the left ear, and accounts for it by the invariable tendency of men to eat chiefly with the teeth on the left side of the mouth. This wears out the teeth on that side and gives the jaw a cant toward the left. In the course of a few ages it is believed that the mouth will approach the left ear, and there is some danger, if the process keeps on long enough, that it may get around to the back of the neck.

PACIFIC RURAL PRESS

A. T. DEWEY. W. B. EWER.

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A. T. DEWEY. W. B. EWER. G. H. STRONG.

SAN FRANCISCO:

Saturday, September 6, 1890.

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Agricultural Implements—Frank Bros.
Agricultural Implements—H. C. Shaw Plow Works, Stockton.
Agricultural Implements—Bull & Grant F. I. Co., Sacramento.
Agricultural Implements—San Jose Agricultural Works, San Jose.
Agricultural Implements—Stanton, Thompson & Co., Sacramento.
Angora Goats—C. P. Bailey, San Jose.
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Buckeye Drills add Harrows—P. P. Mast & Co.
Chautauqua Literary and Scientific Circle.
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Furniture—F. W Kreling & Sons.
Guns—Powell & Clement, Cincinnati, O.
Gas Fixtures—Thos. Day & Co.
Nursery Stock—W. R. Strong Co, Sacramento.
Nursery Stock—J. H. Settlemier, Woodburn, Or.
Pawnee Indian Remedies.
Poultry—Madison H. Critcher, Alameda.
Roofing—J. F. Wyman.
Rubber Goods—Goodyear Rubber Co.
Sheep—Mrs. E. McC. Wilson, Elk Grove.
Swine—Thos. Waite, Brighton, Cal.
Swine—Jos. Melvin, Davisville, Cal.
Spray Pumps—Bean Spray Pump Co., Los Gatos.
Washing Machines—E. W. Melvin, Sacramento.
Windmills & Pumps—Pacific Manufacturing Co.

See Advertising Columns.

The Week.

The current week in city circles is largely one of expectancy and preparation. We are on the eve of another of the great events in the history of San Francisco; an event in which all parts of the State will participate, thus making more apparent its broad significance. It will be 40 years on Tuesday next since California attained her Statehood in the Union, and the Native Sons of the Golden West propose to make the 40th birthday of the State memorable.

The celebration will cover four days and will open with a torch-light parade on Saturday evening, September 6th. On Monday there will be a regatta for all sorts of water craft, and on Monday afternoon the welcoming exercises, literary and musical, in the Grand opera-house. On Monday evening there will be a grand entertainment and reception in the Mechanics' pavilion. Tuesday will be the great day of the celebration, and a grand parade, in which it is expected 20,000 will take part, will move up Market street at 10 A. M. Most elaborate preparations have been made to render this parade gorgeous and significant.

On Wednesday there will be an excursion around the bay, which will close the exercises. According to the Governor's proclamation, Monday and Tuesday, Sept. 8th and 9th, are public holidays.

The city is gaily decorated and there is a general disposition to participate in the festivities, which will no doubt deeply stir the patriotic heart.

A Hint from Hungary.

The London *News* has a letter from Vienna, telling how a farmer's wife, in the Hungarian village of Moor, was ironing in her kitchen, when a spark flew out and set fire to her muslin dress. In her fright she ran into the yard, where her husband and his people were thrashing. The barley caught fire from her, and the wind blew the sparks in all directions, setting fire to the thatched roofs of the houses which formed the village street. All was so sudden and the people were so dumfounded that at first they could not even call for help. Most of the heads of families were in the vineyards, and their aid was not available until recalled by the alarm bell. The old people and children in the houses had not presence of mind enough to save themselves.

It had not rained for a long time, and the wells contained no water, so that nothing could be done to stay the spreading of the flames. In all, 109 houses were destroyed and 134 families left without a roof above their heads. The harvest was over and the corn in the barns was consumed in the general conflagration. At last accounts 10 bodies had been found, and nearly everybody in the neighborhood was suffering from burns received in rescue work.

This sad story has in it a timely warning for us Californians. Grass, fallen leaves and outdoor trash in general are now dry and inflammable as tinder; and, until the autumnal rains commence in earnest, the least carelessness about dropping a match or a cigar-stump, throwing out embers or leaving an unquenched camp-fire—not to speak of kindling a brush-heap—is liable to result in such raging and wide-spread conflagrations as have too often laid waste our fields and woodlands, and destroyed barns, implements and homes.

In this connection, the following circular from the Commissioner of the General Land Office will bear repeating:

The attention of the public is called to the fact that large quantities of timber are annually destroyed by forest fires, which in many cases originated through the carelessness of hunting, prospecting and other camping parties, while in some instances they may occur through design. I take this method of warning all persons that hereafter the cause and the origin of all summer fires will be closely investigated, and where the fire is ascertained to have originated through carelessness or design, the parties implicated will be prosecuted to the full extent of the law. Special timber agents are hereby directed to proceed against the offenders under the local laws of the States and Territories, relating to the unlawful setting out of fires, in which the same may occur. The public generally are requested to aid the officers of the Government in efforts to check the evil referred to and the punishment of all offenders.

It is an old, old story, whereof both we and long-time readers alike are weary; yet the sermon must needs be preached again each recurring season: Beware of sparks! Behold how great a matter a little fire kindleth!

THE Society of California Pioneers object to the proposition of the Regents of the University to remove the remains of James Lick from their resting-place beneath the pier of the great observatory on Mount Hamilton.

The State Fair.

Next Monday the State Fair will open in Sacramento. Indications are that the exhibition will be notably fine and well patronized. Secretary Smith announces a greater number of exhibitors than usual and greater effort to display material in pleasing ways. The floor of the pavilion will show several unique structures for exhibition purposes. County exhibits will also be features of the exhibition, although some of those which have in years past secured first prizes are not expected to compete, as counties, this year. What is lost in this way, however, will be more than made up by an increased number of individual exhibits of agricultural, horticultural and other products. The art and decorative features of the pavilion exhibit will be many and varied, and the music especially during the last week of the fair will be notably fine.

The outdoor branches of the fair will contain novel features. The applications for stall-room already number upward of 1000, which insures an aggregation of horses and cattle that, in point of numbers, would do credit to any State. To meet the demands of the exhibitors, more accommodations have had to be provided, including a new building with 48 stalls for fine cattle. The yearly increase in entries of live-stock for exhibition and competition for the liberal premiums offered by the society, convince the Directors that the space and accommodations at their command will soon have to be materially enlarged. Even now, there would be more live-stock shown if there were accommodations for them.

More attention has been paid this year to the matter of outside attractions than heretofore. Beginning on Friday of the first week, there will be special attractions of some sort at the Park on each morning during the remainder of the fair. The State Fair program, which we publish on another page, indicates the nature of these exercises.

There is every prospect that the races this year will exceed in interest those of any preceding fair. The entries are more numerous than ever before, and the district races are developing young trotters and runners of unusual merit. Many young horses that went into the circuit at the opening of the season, without reputations, are likely to trot in less than 2:20 at the State Fair races.

There will be the usual throng of people bent on amusement, with a grain of instruction thrown in, and the occasion is one likely to well repay all who have means and leisure for its enjoyment.

Government Irrigation Work.

Reports in Washington correspondence bring more definite information concerning the outcome of the issue between different groups of Congressmen on the provisions for Government irrigation and the character of the work. The statement is that "the conferees on the Sundry Civil Appropriation bill have at last come to an agreement on the bothersome survey and irrigation question." The result is a complete victory for the Senate, its action in striking out the irrigation appropriation of $720,000 having been fully sustained. What the irrigation survey loses, the topographic survey partially gains, the allowance for this branch of Major Powell's work having been increased from $200,000 in the House bill to $300,000 in the Senate's amendment and to $325,000 in the conference report. The amount voted by the Senate for the public-land survey is reduced from $600,000 to $425,000. The House originally gave only $200,000. A compromise is also effected as to the land-entry question. The legislation of 1888, withdrawing from sale lands west of the 100th meridian, has been so modified that all entries made in good faith up to the time of the passage of this Act have been validated, except entries on reservoir sites which have been selected. The reservoir sites which have been selected are reserved, as under the law of 1888; and the reservoir sites hereafter to be selected are reserved from the date of their selection. In the future, whenever public lands are occupied by claimants with a view to obtaining title, the claimant can obtain title from the Government, under all the land laws, to only 320 acres.

The report of the Conference Committee was agreed to by the House and probably marks out the future course of events. It can be considered under the circumstances as fairly progressive and much can be accomplished. It will, we hope, result in a better knowledge throughout the country of the needs of the West in the direction of irrigation, and thus prepare the way for future undertakings. It is also encouraging to know that the great progress being made in irrigation will be brought out by the new census, as the "number of acres irrigated," and "number of artesian wells," were among the questions on the general agricultural schedule carried by all the enumerators. Before the life-giving waters of irrigation "the great American desert," which occupied so large a place on the maps 30 or 40 years ago, is disappearing, and truly the wilderness is coming to "blossom as the rose."

Raffia.

We have received from our old horticultural friend, Thomas Meehan of Germantown, Pa., a sample of the raffia which he is now sending to plant and tree propagators as a material for tying buds and to horticulturists generally for all ties except perhaps the matrimonial. For such ties it probably would not be more divorce-proof than the bonds now in use. The sample we receive shows that it is admirable for nursery and garden use. It is extremely tough and even a shred of it is quite strong. Mr. Meehan writes:

We are using it in our nursery here for every purpose that we ever used "bass" for and find it superior in every way. Our foreman was a little slow in using it, but he now says that he would use nothing else. That slippery feeling which it has is a benefit in several ways; one and the greatest is that it prevents a bunch of it from getting knotted and tangled. Every one who ever used "bass" will see in a moment that that alone will commend it to nurserymen. For use in tying up plants we find it better than string, and we notice that several large firms who deal largely in greenhouse plants use it entirely for tying paper around their plants when preparing them for mailing.

It is interesting to note how many ties can be made from a small bundle of raffia. Taking a roll of a trifle more than three-fourths of a pound, we find that it contains about 375 pieces averaging five feet long. Each piece can be cut into four lengths, which we find of ample size for all uses, and the four lengths can again be split ten times. Taking 375 pieces, in a little over three-fourths of a pound, it would yield enough to tie 3750 buds or grafts, at a cost of less than 25 cents.

It would be interesting to have a little discussion on tying material by our nurserymen and amateur propagators. We will welcome any statement based upon experience, and we can assure contributors that such statements will be eagerly read.

The Orange Industry.

B. M. Lelong, Secretary of the State Board of Horticulture, during a recent visit to the south, was interviewed by a reporter of the Los Angeles *Herald* and undertook to set himself right in an interview with him by a San Francisco reporter on the amount of oranges shipped from the State, in which he had been incorrectly reported as having said that 3400 cars of oranges had been shipped during 1890. The facts, he says, were these: A reporter sought to interview him upon the orange production, and he being in haste to take a train, told him that the production of the State was about 3200 or 3400 cars, valued at about $2,000,000. Of these, about 2600 were shipped and the balance were consumed at home. The reporter made a botch of the statement.

In speaking of orange-growing and prospects for the future, Mr. Lelong said that the markets for California fruit were never better, although the orange crop of the State will be somewhat smaller than it was at first estimated, but it will be of excellent quality. In answer to the question about orange-growing in Sonora (Mexico) he said that while considerable had been done of late, orange-growing had received a setback there owing to the defective titles to the lands and the scarcity of water to irrigate. Of the orchards planted in the northern part of the State, Mr. Lelong stated that the experiment so far had proved a decided success, that the orchards planted in the past two years had experienced the coldest of winters ever experienced in California, and that notwithstanding all this they have made splendid growth. In Butte county there are about 3000 acres planted to citrus fruits, and all are doing well. In Yuba county an orange-grove planted two years ago, of 12,200 trees, is doing well.



YOUNG COMET, AN ALL-PURPOSE HORSE, OWNED BY J. C. BOWDEN, STOCKTON, CAL.

Young Comet.

We have shown many horses of thoroughbred or standard trotting status, and many others of imported breeds of carriage or draft fame, but few of the all-purpose class, developed with care from good foundation blood with the idea of meeting general uses. We give on this page a portrait of an excellent animal of this class, one in which his owner takes justifiable pride, and one who is leaving his mark upon the horse-stock in his region. The horse is Young Comet, owned by J. C. Bowden of Stockton. He was four years old April 27 last. His weight is 1200 pounds; color, almost black; he has a fine form and good action, kind disposition, and it is claimed that with training he will show 2:35 or 2:40 speed. Young Comet has been awarded two premiums at the San Joaquin Valley District Fair for an all-purpose horse.

Young Comet was sired by Smith Acker's Comet of Oakdale, Cal.; he by Old Comet of Iowa; he by a pacing-horse owned by a Mr. Williams; he by Rattler; he by Bigert's Rattler of Orange county, N. Y.

Comet's dam was Black Bets; her dam Morgan and Kentucky Whip; her sire was Iowa Chief; he by Hill's Black Hawk, half-brother to Ethan Allen.

Acker's Comet was never driven in a race, but could show a 2:35 gait, and was one of the best all-purpose horses in the State, and his colts are all stylish and good roadsters, some of them going in 2:35.

Young Comet's first dam was by L. U. Shippee's Henry Clay; he by Dave Hill; he by Black Lyon; he by Vermont Blackhawk. His second dam was by Black Weazel; Weazel's dam was Messenger and Duroc by American Eclipse.

Young Comet's third dam was a Bertrand mare raised in Knox county, Ill., and driven across the plains by Mr. Bowden in 1860.

There are in the neighborhood of Stockton ten three-year colts by Young Comet, and they are claimed to show as well as the colts of any horse in the county.

State Fair Program.

Monday evening, Sept. 8: Pavilion opens and remains open until close of the fair, Saturday evening, Sept. 20. Hours of exhibition, 9 A. M. to 5 P. M. and 7 to 11 P. M.

Thursday, Sept. 11: Display of livestock at the park opens. Racing begins at 1 P. M. and continues each afternoon until Sept. 20.

Friday, Sept. 12: First ladies' equestrian tournament, at 10 A. M.

Saturday, Sept. 13: First livestock parade.

Monday, Sept. 15: Vaquero exhibition at 9 A. M. Livestock judges begin work and continue until Thursday. Signor Liberati's evening concerts begin in pavilion and continue during the week.

Tuesday, Sept. 16: Second livestock parade.

Wednesday, Sept. 17: Amateur athletic tournament at 9 A. M.

Thursday, Sept. 18: Third livestock parade at 9 A. M.

Friday, Sept. 19: Second ladies' equestrian tournament. Gold medals awarded.

Saturday, Sept. 20: Final stock parade; only prize-winners appearing. Premiums paid at 10 A. M. Fair closes.

THE VETERINARIAN.

Sore Mouth, Ringworm, Lameness.

Sore Mouth.

EDITORS PRESS:—I have a horse which is continually frothing at the mouth, and does not eat his grain and hay well. What must I do for him? I had him examined by a quack veterinary, and he gave him something, but did not do him any good. —B. A., *Antioch, Cal.*

The molar teeth (grinders) of a horse wear beveling, the upper rows stand down and out; the lower rows stand up and in, and they are so arranged that they never get dull like an old mill-stone, but get sharper and sharper the more they wear, so that the grinding surfaces are always in a good, sharp grinding condition. But on account of the beveled form of the surface, the edges must naturally get sharp, which they do so often as to almost prevent mastication by cutting the cheeks and tongue. The treatment is obvious. Have the edges of both upper and lower rows filed off, so as to make them round and smooth instead of sharp, like a saw; *but never touch the grinding surface*, which is so often done by these so-called veterinary dentists.

Ringworm.

EDITORS PRESS:—Will Dr. Buzard please give me the definition and nature of ringworm in cattle? —G. L. D., *Santa Maria, Cal.*

Ringworm (*tinea tonsurans*) is an affection implicating the hairs, the hair-sheaths and cells of the epidermis (cuticle or scarf-skin) in different parts of the body, usually assuming a circular form. The hair becomes brittle and dry, having a tendency to crack or break across. Itching accompanies the primary eruption.

The nature of this disease is closely connected with the life and development of the peculiar fungus which is associated with it. This parasitic fungus (*achorion vel tricophyton tonsurans*) apparently develops between the epidermis and true skin, and invades the interior of the root and shaft of the hair. This fungus is of a white or light-gray color. The cause of this disease is the implantation of the spores of the fungus into the hair follicle, and under certain conditions, such as youth, dampness and darkness, tend to favor the growth of the seed.

The treatment of ringworm must consist in first destroying the parasites; if this can be done, the disease is cured; and, secondly, we must render the soil in which they grow less fitted for their implantation and development. First of all it is necessary to remove the scales by soaking and washing with soapy mixtures, following this with a moderate painting of the compound tincture of iodine, or a solution of the bichloride of mercury, or the ointment of the biniodide of mercury. Sir William Jenner recommends as a parasiticide sulphurous acid, diluted with equal parts of glycerine, or with two parts of water.

Lameness.

EDITORS PRESS:—I have a fine gray horse that strained the leaders in his left hind leg. I blistered his leg several times and turned him out to pasture, but he does not seem to improve. Please tell me what to do for him through your veterinary column, and oblige—A HORSEMAN.

The most important part of the treatment of lameness is to locate it beyond a doubt. It may be that there is another injury besides the one you have been blistering. If the lameness does not lie in the tendons, the blistering is lost time and much useless suffering is imposed upon the horse. If it is a bad case of sprained tendons, and will not yield to rest and repeated blistering, you will have to have him fired and blistered, and give a long rest. I would advise you to employ a competent veterinary surgeon to perform the operation.

A. E BUZARD, M. R. C. V. S. L.
11 Seventh St., S. F.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

ROUNDING UP HARES.—Haywards *Journal*, Aug. 30: D. S. Smalley has a greyhound that is the champion jack-rabbit catcher in this section. Hardly a day passes but that he runs down one or more hares, and we frequently see him trotting along the depot road with a victim. He invariably brings it home, and will allow no one to take it but one of the family.

Butte.

GROWING POTATOES.—Oroville *Mercury*, Aug. 29: On the Oayett ranch, below town, 1800 sacks of Irish potatoes have been gathered and sold this summer. S. B. Oayett says they were excellent in quality, and the company realized an average of $1.50 per hundred. These potatoes were grown between the rows of fruit trees in a 30-acre orchard. Thus the land was made to pay from the start, and that is the way to farm.

HORSES POISONED.—During the past month several horses pastured on the slough below Yuba City have been taken sick with a peculiar malady, and in a few days have died. The animals have been examined after death, and it is thought that they were poisoned by eating some kind of weed that grew in the slough. Most of the farmers have taken their stock from the pasture in consequence of the above circumstance.

GOOD SUGGESTIONS.—Gridley *Herald*, Aug. 21: We hold that every producer, as well as every taxpayer, in the county ought to feel a personal interest in fair exhibition and do everything in his power to insure a thorough and complete display of every product of the county, either vegetable, mineral or manufactures, and also endeavor to have his neighbors and sojourners in the county attend. There is not a township in the county from which cannot be sent an exhibition worthy of space—there is not one that should not do so.

Colusa.

APRIL BARLEY.—*Sun*, Aug. 30: Some years ago H. C. Stanton, while walking over a field of young barley, noticed a stalk that was already ripe unto the harvest while the vast field was yet in its infancy, so to speak. "A bonanza," thought Mr. Stanton, and he plucked the ripened head and walked the whole field over and was rewarded by finding ten stalks in all. These he carefully preserved for seed and has each year planted and harvested it, until this season his crop reached 2000 sacks.

Contra Costa.

GOOD PRICES.—Martinez *Gazette*, Aug. 27: We learn that a large portion of the Muscat and Tokay grapes produced in Alhambra valley this year are already contracted for. The Martinez Canning Company takes about half the crop of John Swett, the other half being previously contracted for to other parties. This company also takes the Muscat and Tokay grapes from the vineyards of Dr. Strentzel, John Muir and H. Raap. The price paid for Muscats is $30, and for Tokays $50 per ton.

SAND LAND FOR FRUITS.—Antioch *Ledger*, Aug. 30: G. J. Turton, a fruit grower of Napa, has recently purchased a tract of the chaparral or sand land east of Antioch. He is of the opinion that there is no better fruit land in the State, and inasmuch as he is a practical and experienced fruit-raiser, his opinion carries some weight.

El Dorado.

FRUIT-GROWERS ORGANIZING.—Placerville *Democrat*, Aug. 30: The fruit-growers of the Granite Hill and Coloma fruit belt have become tired of endeavoring to secure some person of means to erect a fruit-house at Placerville, and have taken hold of the matter themselves and will organize a joint-stock company for that purpose.

Fresno.

CREAMERY.—Fresno, Aug. 28: The first creamery ever erected in Fresno county has just been placed in operation in the Liberty settlement. It is owned and conducted by A. T. Johns, who has spared neither pains nor expense to make it equal to any in the State.

BIG CROP OF RAISINS.—Fresno *Expositor*, Aug. 28: The largest first crop of raisin grapes ever grown in Fresno county or in California can now be seen by driving through A. B. Butler's vineyard. The crop is being cured under the management of R. R. Paulini. Mr. Paulini was born and raised in the grape-growing section of Italy. He is thoroughly acquainted with the raisin industry.

Lassen.

A BIG DRIVE OF SHEEP.—Susanville *Advocate*, Aug. 30: Within two or three days there has been driven past Susanville, through the hills to the south and west of town, a band of 13,000 mutton sheep, destined for the Stockton market. These sheep were purchased in Oregon by the Bauch Bros., and are to make their way by easy drives through the mountains, where feed and water may be had, to the nearest point before a descent is made to the valley. Their route will probably be by way of Lone Rock into Sierra valley, and on into the vicinity of Truckee.

Los Angeles.

OLIVES.—Pomona *Progress*, Aug. 28: While the orange is profitable, the apricot and peach quick growers, the apple hardy, the cherry a splendid bearer, the almond easy to raise and a safe tree to plant, yet to a great extent the olive combines the most excellent qualities of all these trees. It is so hardy that it can be planted up to an altitude of 3000 feet, it is so profitable that it excels any other tree we have named, and while it is as easy to raise as the almond or the fig, it yet has other properties which none of these possess. Its fruit, whether pickled or made into oil, is a staple production. It can be kept for an indefinite period. It is a condensed product, easy to transport and costing but a small sum for freight, there is no danger of loss by overproduction, it needs but little irrigation, will thrive on rocky lands, and is a long-lived tree that every poor man should set out in preference to almost any other.

PRUNE PLANTING.—Pomona, Aug. 28: It is remarkable how many prune trees are being bought in Pomona now. Fruit trees have very seldom had any sale at all in this region at this season of the year.

POTATO YIELD.—Pomona, Aug. 28: About 400 acres have been planted to potatoes at North Cucamonga this year. The average yield per acre is about 100 sacks of 100 pounds each.

DRIED PRUNES.—Pomona, Aug. 28: Nearly all the dried prunes of this valley have been sold under contract at $200 a ton, and the same is true of dried peaches at prices ranging from $360 to $400 a ton.

CALIFORNIA'S OPPORTUNITY.—L. A. *Mirror*, Aug. 29: Few persons not engaged in the handling of produce have any idea of the large amount of money which is coming into Southern California this year, not only for fruits but also for vegetables. A produce jobber of this city informs us that Los Angeles, far from importing potatoes as we did in such quantities a short time ago, is now shipping east to Texas, Colorado, New Mexico and Arkansas, while inquiries have come from as far off as Memphis. We have also been shipping cabbages as far as Kansas City. Prices are stiff all along the line for these products.

Mendocino.

HOPS.—Ukiah *Dispatch and Democrat*, Aug. 29: M. Newfield was offering 32½ cents for hops last Tuesday. J. E. Holliday sold a small portion of his hops last Monday for 31 cents per pound. The hop crop in Ukiah valley this year will average between 1300 and 1400 pounds to the acre.

Monterey.

GRAIN CROP.—Salinas *Index*, Aug. 28: The crop of grain that will go into warehouse from the neighborhood of Castroville this year will be only about half of what it has been in former years, and the volume will never be as great as it once was. The diversion of the Molera tract to sugar beets has made quite a hole in the grain output, and much of the mesa land east of Castroville has been devoted to dairy farming, and former grain-fields in San Miguel canyon have gone into orchards, so that the people about Castroville have learned, what people in other parts of the county can profitably learn, that there is something besides wheat and barley for farmers to put their trust in.

POTATOES.—Salinas, Aug. 28: The potato crop raised about Castroville this year is very fine, of excellent quality and of good yield, and brings a fair price.

SUGAR BEET.—Salinas, Aug. 28: The sugar-beet farm, viewed from the streets of Castroville, looks like a sea of green, and it is stated that the work of harvesting will commence about Sept. 10th. Notwithstanding the obstacles of water-soaked and foul ground in the planting season, it is estimated that two-thirds of a crop will be harvested this year, and the ground will be in prime condition for the next season's crop.

Napa.

GRAPE PRICES.—St. Helena *Star*, Aug. 29: C. Carpy of Napa is paying for Malvoise $12, Zinfandel $15, and Burgundy $17. The fact that there is a great scarcity of wine grapes can be no longer denied, and we have no doubt that the prices will go still higher.

Nevada.

PEAR SHIPMENTS.—Grass Valley *Tidings*, Aug. 29: Twelve hundred boxes of pears were shipped from Grass Valley on Tuesday, and between 300 and 400 boxes to-day. Large shipments will be made for the next two weeks, a heavy yield being reported. Something like 5000 boxes will be shipped from Nevada City, where, it is stated, a single tree netted the owner $15.

Orange.

PAYING UP MORTGAGES.—Ontario *Record*, Aug. 27: We learn of a number of fruit-growers in Ontario who will pay up mortgages on their places of from $1000 to $2000 from this year's fruit crop, thus putting themselves out of debt, with a good income assured for the future.

GRAIN THEFTS.—Anaheim *Gazette*, Aug. 28: Grain thefts have been frequent in the valley this season. One farmer, we are informed, has lost 1500 sacks of grain.

Sacramento.

REPAIRING CANAL.—*Bee*, Aug. 28: The Supervisors and City Trustees returned last evening from an inspection of the drainage canal. The canal was found to be in a wretched condition, and, in what is known as the "Pocket," considerable land is still inundated with stagnant water, caused by the overflow from the canal last winter. Col. McNasser informed the party that at least 6000 acres of as fine land as there is in the State has been rendered useless because of the condition of the canal. It seemed to be the general opinion of those making the investigation that the canal should be deepened and widened and extended all the way to Snodgrass Slough.

San Diego.

BIG MELONS.—*San Diegan*, Aug. 30: Knapp Brothers this morning received in their consignment of fruit a nutmeg cantaloupe weighing 20 pounds. The melon was grown by a Mr. Brown on the high lands at Chula Vista, and is besides being one of the largest specimens of that variety ever seen, a perfect melon in every respect. It was a theory that melons would only do well on low and naturally moist ground, but the largest and best melons brought to the San Diego market this year have come from high, irrigated lands.

DRYING PRUNES.—San Diego *Union*, Aug. 28: G. H. Bower is drying a large crop from 500 Petite d'Agen prune trees. This is his third year of drying, and the prunes are a fine sight spread on raisin trays in long purple rows down the edge of the orchard. He shakes the fruit from the trees once a week for three weeks, after which he gathers the balance the fourth week. Into 20 gallons of water, to which has been added one pound of concentrated lye, he dips the fruit 20 pounds at a time in galvanized buckets perforated for the purpose. The dipping of each lot requires but about 30 seconds, and it is then dipped in clear cold water to rinse off the lye. It is next spread on trays laid directly on the ground. If the weather is hot, a few days will cure it sufficiently. It is afterward taken up and dipped, in the same bucket, into clear, boiling water, in order that all dust may be removed and any eggs killed which may have been deposited. Exposed in the hot sun and breeze, on trays elevated some three feet above the ground, it will be ready in from 20 minutes to half an hour to box and sack for market.

Santa Barbara.

EDITORS PRESS:—Our warm spell has now a little check, as there is some fog to break the rays of the sun. Although it has been hot and dry, the temperature has not been above 95 degrees in the shade. Lima beans have ripened very fast of late, and some few growers have begun to cut them. The excitement about the gas continues, with so many gassy statements that it is not easy to get at the truth concerning the amount, etc. A pipe running up 25 feet or more above the well, makes a brilliant torch to light Summerland and vicinity.—O. N. CADWELL, *Carpinteria, Aug. 24, '90.*

LARGE PEARS.—Lompoc *Record*, Aug. 25: The finest Bartlett pears we have ever seen are grown in this vicinity this season. It is nothing strange to find pears weighing 1½ pounds. The great need of this county now is a cannery at which can be put up the vast quantity of fruit this region is capable of producing. What is the use of resting on our oars when the land is here to grow 10,000 acres of fruit and ought to be growing it?

Santa Clara.

FRUIT DRIERS SHUTTING DOWN.—San Jose *Times*, Aug. 29: Many of the fruit-driers on the outskirts of Santa Clara have shut down for the season, as the high prices of fruit and the crowded markets have compelled the owners to close.

Solano.

PREPARING FOR HIGH WATER.—Vacaville *Reporter*, Aug. 28: Some farmers have gathered a little wisdom from the past season's experience and propose to profit by it. They have observed that grain was drowned out and trees died where they might have gathered harvest and plucked fruit if they had prepared for the worst. Some of them had taken care to furrow drain and saw its benefit. This year they will improve in drainage. Wellington Cripps is ditching his orchard, and with a drain between each row of trees emptying into the ditch, he will be able to carry off surplus surface water and save his trees. Every orchardman can easily use preventive care and save the destruction of a year's work. W. H. Fry has been employing himself in drainage work. He has given more attention to it than others and proposes to make more ditches than ever. He has a complete drain of his orchard on the old Cooper tract, and has ditched to carry the water out of the field into the road. He has thrown up a road from the lane into his orchard and made a ditch alongside of this road.

SUMMER FALLOWING.—*Reporter*, Aug. 28: The farmers are all wishing they had their places summer-fallowed. The long, wet spring kept them from much summer-fallow plowing. The haying and summer-fallowing came together. Lewis March summer-fallowed most of his field northwest of town after the hay was stacked. Some of them got ground prepared for sowing early this fall. D. F. Parker has about 320 acres, J. McCrory 280, W. H. Fry 135, W. Cripps 40, and W. P. Owens 60.

Sonoma

HOP FREIGHTS.—Santa Rosa *Republican*, Aug. 28: Captain Guy E. Grosse, president of the Sonoma County Hop-Growers' Association, has received a letter from G. W. Fletcher, commercial agent of the Sunset route, the purport of which is that lower rates on through lines to New York and London have been secured for the hop-growers of Sonoma county. The letter was read to some of the growers, to whom it proved satisfactory and who decided to make up several carloads of hops for early shipment. By the reduced rates it is possible to ship the hops to London and have them sold at an expense of less than five cents per pound.

BIG SUNFLOWER.—Cloverdale *Reveille*, Aug. 30: The Santa Rosa papers have been publishing reports of large sunflowers growing at that place. From S. Pinschower we learn of a sunflower grown on his place that beats the record and defies competition of the State. The stalk is six inches in diameter and stands 12 feet high. The flower is as big as the sun and measures nine feet in circumference, and at a distance it is difficult to distinguish the one from the other; at least so says Mr. Pinschower. Any one doubting the above is invited to go and see the sunflower himself, and he will be allowed to bring his own 100-foot tapeline to take measurement.

FRUIT-DRIERS.—Sonoma *Index-Tribune*, Aug. 29: Henry Weyl of this place has entered into a copartnership with Messrs. Cassidy of Petaluma, with the result that four driers will immediately be erected in the vicinity of the railroad depot. The furnaces will arrive from San Francisco to-day, and the work of erecting the driers will be commenced immediately. A large quantity of apples which have already been purchased in this valley will be handled first. The starting of this enterprise is but the forerunner of what may turn out to be one of the largest canning and fruit-drying establishments in the State.

Stanislaus.

CROP ESTIMATES.—Oakdale *Leader*, Aug. 29: The reports as given by thrashing men who have recently hauled off their machines for the season would indicate that the receipts of wheat at this point this season will fall far below those of last year—perhaps one-half short. Frank Fagan, who has been extensively engaged in thrashing the grain crops in this section for a number of years, reports that the acreage sown this season was nearly one-half short of last year's crop, and the yield per acre is not quite up to that of last season. J. W. Anderson, who closed the season's thrashing last week, made a statement to a reporter which does not differ materially from that of Mr. Fagan's more than that he expressed the opinion that the yield per acre would be equal to that of last year. The greatest falling off he found was on Upper Dry creek, where but a small portion of the lands was seeded. In that locality the same area which required seven weeks' thrashing last year consumed but five days' time this season. Mr. Anderson reports the yield of barley light—not more than a one-third yield in localities where his machine operated. These gentlemen have had long experience in handling the grain crops in this section, which entitles their opinions to consideration. These reports apply largely to adobe lands.

Sutter.

SORGHUM FOR FEED.—*Farmer*, Aug. 26: C. H. Pease, a few miles west of town, has been experimenting in planting early amber sorghum, and pronounces it the best green feed for stock during the summer of any variety of corn he has ever tried. When planted in the spring it makes a quick growth, and as it is cut or fed off, suckers spring up from the roots, making good feed until late in the fall. Cows fed on the corn when it is young do well, and the cream from the milk makes clear, hard butter and lots of it. Among others who have tried it are E. W. Hixon and Chas. Weeman.

REPAIRING LEVEES.—The Levee Commissioners of District No. 1 are having the piles driven along the bank of the Feather river near the mouth of the Yuba. The old piling, where it is not wholly washed out, needs repairing and will be put in good condition. The piles are driven into the river-bed near the bank to a depth of 30 feet, and are then planked across the top and heavy cables from the bank fastened to them so as to allow of no chance of the current loosening them. The action of the water along the bank at this place during the past spring was appalling.

Tulare.

SUMMER FALLOWING.—Porterville *Tidings*, Aug. 29: Already many of our farmers are making arrangements to begin soon the work of seeding their land for another crop. Frank Howe commenced plowing on his place just south of Plano last Tuesday, using a traction engine to pull the plows, but finding they would not work properly, he quit work for several days to construct a gang plow, to be composed of ten 10-inch plows, which he believes will work successfully.

Tulare.

WHEAT LAND WANTED.—Tulare, Aug. 29: There is much inquiry at present for wheat lands to rent for next season, so we are informed by one of our real-estate men. These inquiries come in so rapidly that the prospect is that all available lands will be taken.

FIRST GRAPE SHIPMENT.—Tulare *Register*, Aug. 29: Paige & Morton to-day shipped nearly a carload of grapes to Porter Bros. of Chicago. These are the first shipped from Tulare in the fresh state. They will be followed by numerous carloads later on, and Tulare grapes will soon have as high a reputation in the East as her peaches, nectarines and pears have now.

EARLY RAINS.—Visalia *Delta*, Aug. 28: There have been heavy and frequent showers in the mountains recently. Whether this is indicative of an early winter or not we do not undertake to say, but in one respect at least the rains have done much good. They have dampened the carpet of falling leaves in the forests

(*Continued on page 204.*)

THE "NEW DEAL" SERIES OF WHEELED WALKING PLOWS.

Manufactured by JOHN DEERE & CO., Moline, Ills.

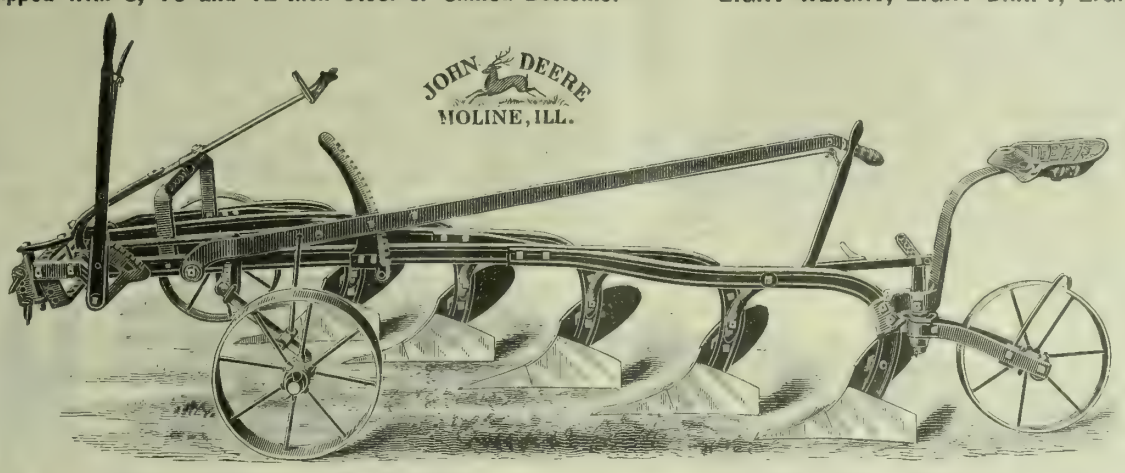
THE "NEW DEAL."

2, 3, 4 & 5 FURROW. Equipped with 8, 10 and 12-Inch Steel or Chilled Bottoms. **LIGHT WEIGHT, LIGHT DRAFT, LIGHT WORK for Man and Beast.**

Among other improvements, all 3, 4 and 5-Gang New Deal Plows are so constructed that the OUTER or REAR BEAM can be removed for use in first plowing, and READJUSTED for second or cross plowing.

For Lightness of Draft, Ease of Management, Strength, Durability, and Quality of Work,

THE "NEW DEAL" IS WITHOUT A PARALLEL.



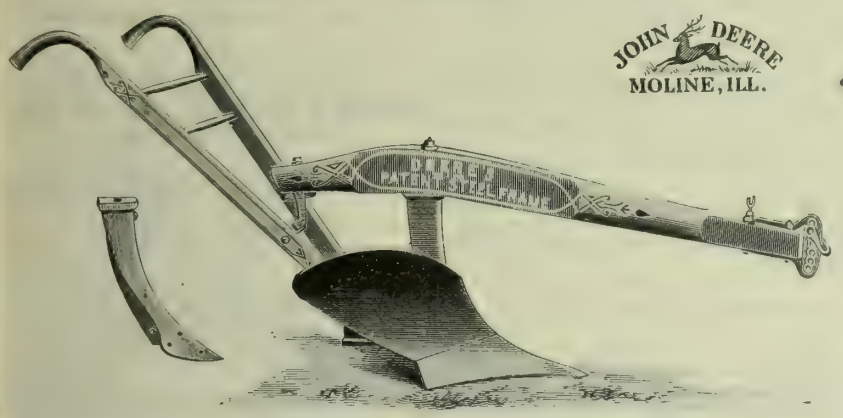
For VINEYARD and ORCHARD Plowing

THE "NEW DEAL" HAS NO EQUAL!

Having no Tongue, and the team being hitched close to the work, it is so constructed that IT CAN BE RUN CLOSER TO THE TREES AND VINES than an ordinary Single Plow.

JOHN DEERE MOLINE PLOWS.

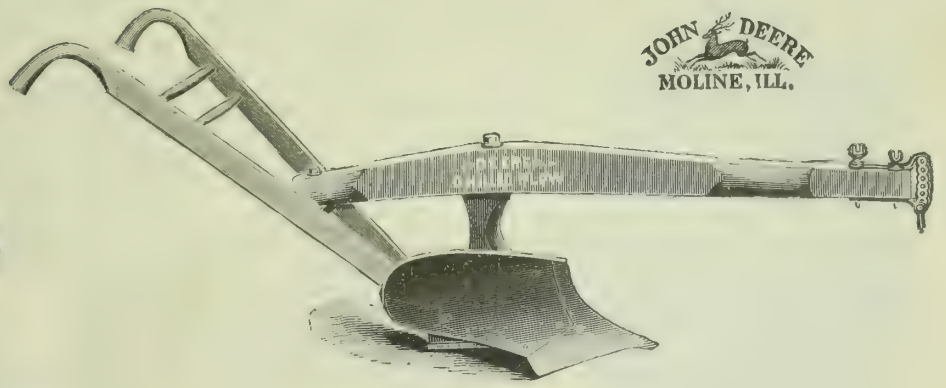
STEEL AND CHILLED BOTTOMS.



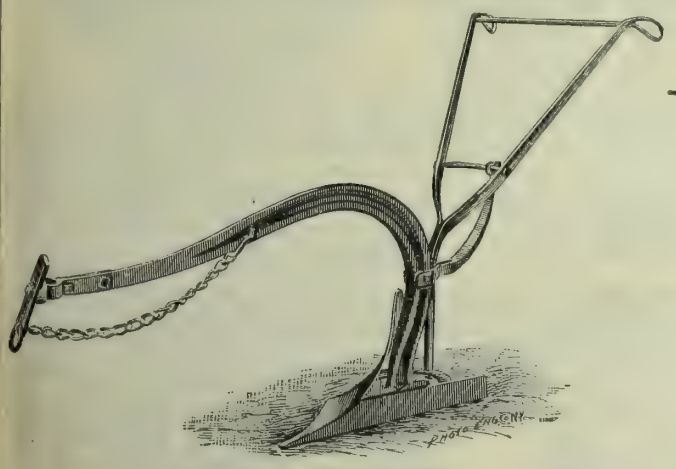
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Above cut represents our latest style of "GENERAL PURPOSE PLOW." The Standard and Frame is one piece of Solid Steel, constituting the frame work to which all other steel parts are bolted.
This Plow is adapted for use in soils where extra scouring qualities are required.

DEERE CHILLED PLOW.



We call attention of Plow dealers (and Farmers particularly) of the Pacific Coast to the "DEERE CHILLED PLOW," manufactured by DEERE & CO., Moline, Ills. The well-known reputation of the "Deere" Plow is a guaranty that any goods made by Deere & Co. possess the highest qualities of merit; and we claim for the "Deere Chilled Plow" a superiority of workmanship, durability and general adaptability to the soils of this Coast over any Chilled Plow in the market.
The Plow (as shown in above cut) has the Sloping Landside, and in all respects is made to suit the requirements of the Farmer.
We ask that you give the "DEERE CHILLED PLOW" a trial, and convince yourself of its superior merit



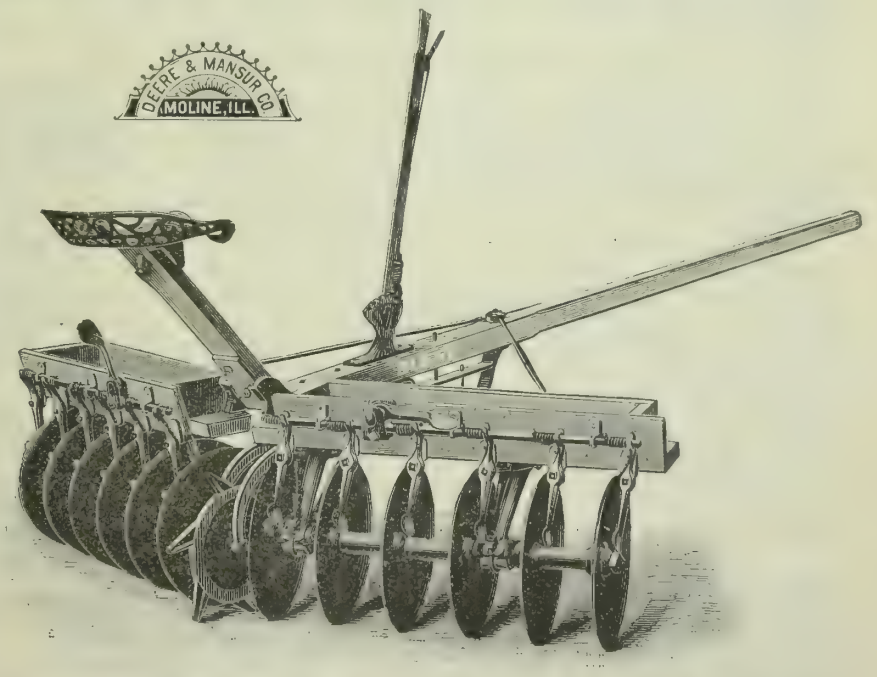
THE DEERE ORCHARD & VINEYARD PLOW.

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STEEL BEAM, ADJUSTABLE HANDLES.

Sizes, 8 and 9-inch Steel Bottoms; also 9-inch Chilled Bottoms.

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DEERE DISC HARROW.

Sizes from 5 to 12 feet with 16 or 20-inch Discs.

One Season's Experience has Proven it to be a most PRONOUNCED SUCCESS.

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Agricultural Notes.

(Concluded from page 202.)

so that fires do not spread readily, and there has been less destruction from this cause in the mountains of Tulare County this summer than during any previous dry season for a long period.

FRUIT SHIPMENT.—Visalia *Times*, Aug. 28: Twenty carloads of green fruit have been shipped from the Visalia railroad depot this season—one or two carloads for the East and the remainder to San Jose. These shipments were of the early varieties. In another week the late crop of peaches will begin to mature, and as the crop is very large, there will be from 20 to 30 more carloads shipped during September. This is the first season that green fruit in carload lots has been shipped from this point East.

DEMAND FOR PRUNE TREES.—*Times*, Aug. 28: I. H. Thomas, the nurseryman of this city, has already contracted to supply 10,000 prune trees to farmers in the immediate vicinity. B. C. Anderson states that he can make more money raising prunes, and selling them at two cents per pound after drying them, than can be made by raising wheat. But he sold his crop at five times that figure this year.

PROPOSED LARGE IRRIGATING CANAL.—Traver *Advocate*, Aug. 28: T. E Clark, one of the Board of Directors of the Kern and Tulare Irrigation District, is enthusiastic over the prospect for water. He says they can construct a canal on the line surveyed that will carry a stream of water 100 feet wide by 4 feet deep and yet not deprive any prior appropriator of one drop of water. The head of the proposed canal is located four miles higher on the stream than any other canal, and there will be no jangling over right of way; the supply of water is ample, so that it will not be necessary to condemn any other rights, or buy them off, or compromise the matter in any way whatever; the district is a prior appropriator of all the water it will ever need.

INDIANS FOR GRAPE-PICKING.—Traver, Aug. 28: Grape-picking has commenced in the California Fruit & Wine Land Company's vineyard. The Chinamen who were first employed struck for $1.75 per day and Superintendent West let them go and went to the foothills and secured Indians to do his work. This is much better for the county, for the money paid to the Indians for work is not sent out of the country as is the case with the Chinamen, but it is all spent at home. We would advise more of our vineyardists to try the same plan.

PLANTING FRUIT TREES.—Traver, Aug. 28: Thomas Boyd of the Mussel Slough country, says there will be considerable fruit put out this coming winter and spring in his neighborhood. He contemplates the planting of 100 acres on his own place to trees and vines this season and will not try to farm any more wheat there. He has leased land over by Huron for wheat, and expects to put out about 1200 acres there; but land that can be irrigated is too valuable to raise wheat, as fruit pays so much better where water can be had.

LARGE MELONS.—*Times*, Aug. 28: James Hulse of Farmersville, last week brought to this city a watermelon that weighed 71¼ pounds. He has a number of the same size in his patch, and it is probable that some of them will be secured for the Native Sons' exhibit at San Francisco.

Ventura.

ADAPTED TO CORN.—Ventura *Free Press*, Aug. 29: It has generally been understood that corn could not be advantageously raised in the Santa Ana. That idea, like a good many others of the same ilk concerning Ventura, has been practically disproven this year. One of Ventura's most successful farmers this morning informed a *Free Press* representative that there is a field of about 30 acres of as pretty corn growing in the Santa Ana as can be raised anywhere. The adaptability of this county's soil to the cultivation of cereals, fruits and beans, is beyond all question, and is proven whenever and wherever tested.

Yolo.

GRAIN CROP.—Woodland *Democrat* Aug. 28: The grain crop as reported by John Krummer, a thrashing-machine man, is fairly good. Mr. Krummer was out with his machine 44 days and thrashed out 39 ranches and traveled a circuit of 40 miles. After figuring all time out from the day he pulled out till the machine was laid up, his average per day aggregated 900 sacks of grain, averaging per sack 140 lbs. for wheat and 110 lbs. for barley.

FIRST RETURNS.—Wheatland, Aug. 31: Hoost Bros. sold the first car of California hops in New York yesterday for 40 cents per pound The hops were consigned to them by M. H. Durst, and it was the first car of the new Pacific crop to arrive in New York.

GRAIN STATISTICS.—Woodland *Mail*, Aug. 30: At present there are 35,000 sacks of grain stored in the Grangers' warehouse, and expect to swell the number to 40,000 before we close next week. There are no large lots this season; W. B. Gibson has the largest number of sacks, 8000, while O. A. & E. R. Lowe, H. E Coil, C. Hevel, R. H. Beamer, Tim Clifford, Joe Doran, Wm. Garrett, D. Clanton and M. Hays have stored from 1000 to 2000 sacks. About three-fourths of the wheat stored in this warehouse is No. 1, while the remainder is not so good. Major Freeman had 5000 sacks stored, but it has been shipped, he having sold it. The quality of the wheat is good, but the average is small. Last year Mr. Gibson stored over 15,000 sacks, and H. E. Coil had a crop of over 11,000 sacks, but this year neither has 10,000 sacks. Barley is a scarce article, as only 1500 sacks were stored in the house, and there would be 2500 more stored before the season closed.

NEVADA.

RECLAIMING NEVADA.—Reno *Gazette*, Aug. 28: Of all the men with a sack full of Nevada money, Mr. Newlands is the first to show that he takes any interest whatever in doing anything to develop Nevada's agricultural possibilities. He has invested something like $100,000 in reservoirs and reservoir sites for the storage of water in Western Nevada, and he is by no means through with the good work yet. He has used his tongue and pen most vigorously to induce other Nevada capitalists to put up something for the common cause. Mr. Newlands will put the State in a position to make capital wonder that the splendid advantages offered by Nevada have so long been overlooked.

THE STABLE.

Capt. Collier's Percherons.

EDITORS PRESS:—Your representative lately visited the Percheron breeding farm, near Lakeport, where there are the largest number of recorded animals to be found at any one farm this side the Rockies and the largest percentage of the most populous strains of the breeds. In selecting his location, Capt. Collier was thinking first of its beauties as a home, and so chose one of those magnificent villa sites that surround Clear lake. Take a ride with him, surrounded by his charming family, in his steam launch on a summer evening, and you will see why he was willing to locate away from a railroad. To make it easier for customers to see his stock, he proposes soon to establish a stable at some near point on the S. F. & N. P. railroad. This will be duly announced in his advertisement.

It seems a great shame that this stock should not be shown at the State Fair, but if you were in Capt. Collier's place you might think twice. Not less than 12 animals would fairly represent the stud, and the services of six to eight grooms would be necessary. For the 10 or 12 days away from home, one could not safely expect to spend under less than $500. When the railroad comes up to Lower lake, he will take the horses down in his barge and get them to Sacramento without trouble or delay. When buyers want to see the horses, they can combine pleasure with business and ride from the depot to the ranch in a steam launch. That railroad will fairly electrify Lake county. Where one visitor comes over the stages, they can fairly expect ten by rail.

But to get back to horse talk, many remember having seen Pablo in the streets of San Francisco last spring and hearing him spoken of as the finest horse of the breed they had ever seen. Now there are many more as good up here. To show how good these horses are at their best, we will draw upon records of some of their performances in France.

Percheron Trials in France as Reported by M. W. Dunham.

Under saddle for one and a fourth miles—Best time, 3:50, or a mile in 2:48; average 29 results, 4:12, or a mile in 3:18.

Under saddle for one and five-sixths miles—Best time, 4:38, or a mile in 3:4; average 31 trials, 6:40, or a mile in 3:38.

Under saddle for two miles—Best time, 6:2, or a mile in 3:1; average 40 trials, 7:20, or a mile in 3:4.

Under saddle two and one-half miles—Best time, 7:35, or a mile in 3:2; average 65 trials, 9:15, or a mile in 3:32.

Horses to harness, two miles—Best time, 7:17, or a mile in 3:38½; average eight trials, 7:36, or a mile in 3:48.

Horses to harness, two and three-fifths miles, loaded—At Rouen, Decide drew 386 pounds in 9:27, or at the rate of a mile in 3:39.

The Best Trial of All

M. Montreauil of Alencon drove his mare from Berney to Alencon, 55 3 5 miles, to a tilbury, over a hilly and difficult road, in four hours and 24 minutes. In '85 the animal was still hauling the omnibus at Lees. Capt. Collier says the tilbury used in France is about as heavy as our two-horse farm wagon. This was at the rate of 12.6 miles per hour.

M. Cousturer of Fleury sur Andelle drove his mare to a tilbury from Lyons la Fossette to Point Audmere, a distance of 58 miles, in one day and back the next. On the first day her time was 4 hours 1 minute and 35 seconds. On the second day she beat her own time by five seconds. Fancy driving one horse in one of Wells, Fargo's express wagons from Oakland to Elmira between 8 A. M. and noon and repeating the trip next day in same time.

Farmers have an idea that the Percheron is not a general-purpose horse, and of course they are not if chief among the farmer's purposes is to draw a feather-weight sulky around a track. But if all the family want to go to town and take along the butter and eggs and bring back a week's or a month's supplies, how can they do better than to drive one of this kind of horses? If 12 miles or 10, or even 8 miles an hour, is not fast enough for a farmer, he must be in a great hurry.

When you come to draw a load, it is a pleasure to know that it is going to be moved easily without any looking around to see what you are going to do about it. There is some fun in walking behind the plow when it turns a good, deep furrow at a lively pace, without any seesawing, panting or stopping to rest. For a farmer who keeps only one horse it is quite an advantage to have only one horse to feed or shoe, yet be able to draw a two-horse plow, or harrow or load when occasion requires, and besides this have a pet that will never harm one of the children. They are brought up that way in France, you know. Figures given in these trials are well authenticated, but often doubted for the reason that some importers have paid more attention to size than action; in other words, have bought flesh rather than muscle—more beef than horse.

In making his selections, Capt. Collier fully appreciated the importance of these points, and made up his herd from the produce of Brilliant 1271 (755) and Cesar 3526 (601).

Besides being one of the handsomest of all draft animals, and the one selected by Rosa Bonheur for her masterpiece, Brilliant is one of the most active of the breed. R. S. Judson, ex-Secretary of Minnesota State Agricultural Society, told the writer that he saw Brilliant jump clear from the ground as high as a man's head. Cesar was a prize-winner in France, in New Orleans and at St. Louis, and was never beaten on a show-ground. He was pronounced by good judges the finest draft-horse ever shown at St. Louis. He could trot a mile in four minutes, moving almost with the power of a locomotive. All work-horses are left entire in France. Many a large-grade horse has been imported and passed as a Percheron. Now those who stop to think, know that prepotency depends upon purity of blood. It is not safe to conclude that an animal is pure unless recorded in France, and in that case they are almost certain to be recorded here. In France, horse-breeding has been done by selection under government supervision for a long time, and the colts have been exercised rather than pampered, a lesson that we would do well to heed in this country. F. S. C.

A Remarkable Trotting Horse.

EDITORS PRESS:—The writer, while in Lake county lately, visited the horse farm of A. B. Rodman and was specially impressed with the celebrated horse Advocate (6543). He is a compact-built horse much of the style of the famous Vermont Morgans, round-barreled, close-ribbed, short-backed, long-hipped, broad, full chest, bright eye, intelligent countenance, 1100 pounds and all horse.

In looking up his pedigree we found the blood of Maud S., the fastest horse; Goldsmith Maid, the best horse that ever trotted, and the famous Dexter among the recent crosses. In the remote crosses we find thoroughbred Black Hawk and Messenger blood. There are two close crosses on the side of the sire and one on the dam's side to Hambletonian. His sire was Attorney (1005, sire of Atto Rex and others in the 2:30 list). Attorney was by Harold and his dam by Alexander's Abdallah.

Advocate's dam was by Green's Bashaw (50), sire of 16 in the 2:30 list and of ten sires of 20 in the 2:30 list, and of 11 dams of 18 in the 2:30 list.

Mr. Rodman has nine brood mares from such standard sires as Whippleton, Richmont, Milton, Medium, Berger, Attorney, Rob Roy McGregor, McDonald Chief and Fisk's Mambrino. We saw with these mares a fine band of sucklings and yearlings from Advocate. Mr. Rodman loves trotting horses and means to stay with them. F. S. C.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

BISHOP FAIR.—The RURAL acknowledges the compliment of a "membership ticket" to the Fifth Annual Eastern Slope Fair, which is to be held at Bishop, Inyo county, Sept. 10th to 13th. We hope the exhibition will be a success throughout.

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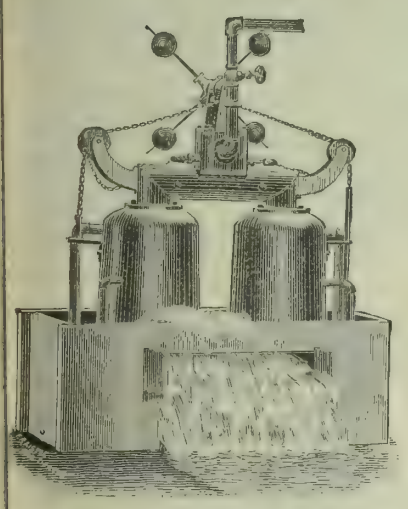
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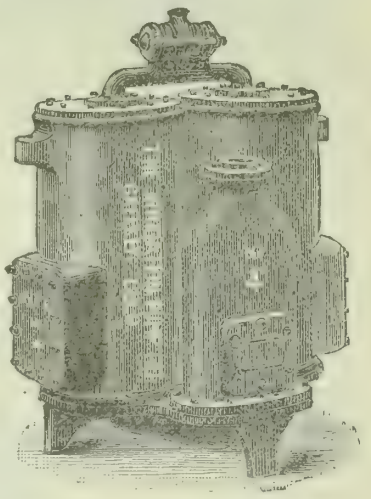
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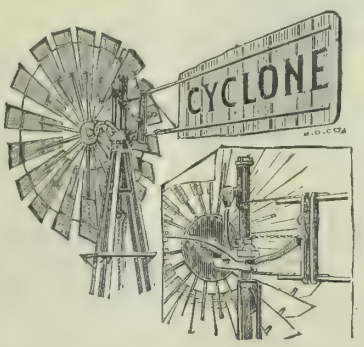
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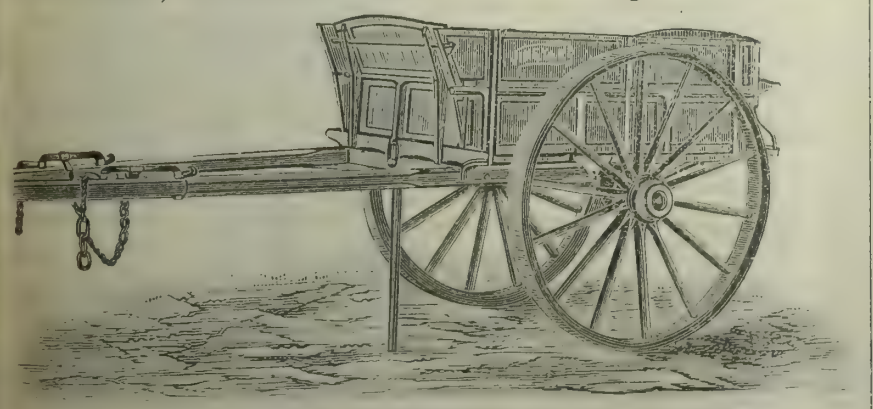
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TRACK AND FARM.

The State Fair Races.

The State Board of Agriculture met Thursday, August 6th, to make preliminary arrangements for the State Fair, which begins on September 8th and continues two weeks. The entries were opened, and it was found that all the events had filled except two, and for one of these a free-for-all race was substituted. The entries indicate that the races—which begin on Thursday, September 11th—will be equal to anything ever seen at the State Fair. The entries are as follows:

First Day Thursday, September 11th

No. 1. Trotting (The Occident Stake)—A trotting stake for foals of 1887. Entries closed January 1, 1888. Entrance, $100, of which $10 must accompany nomination; $15 to be paid January 1, 1889; $25 January 1, 1890, and $50 thirty days before the race. The Occident Gold Cup, of the value of $400, to be added by the society. First colt, cup and six-tenths; second colt, three-tenths; and third colt, one-tenth of stake. Five to enter, three to start; otherwise National Trotting Association rules. Mile heats, three in five, to harness. Closed in 1888 with 53 nominations. Value of stake January 1, 1890, $1835.

The following have made third payments:

1. Palo Alto Stock Farm, b f Wild May, by Electioneer, dam May by Wildidle.
2. Palo Alto Stock Farm, b f Coval, by Electioneer, dam Columbine by A. W. Richmond.
3. Palo Alto Stock Farm, br f Clarion, by Ansel, dam Consolation by Dictator.
4. Palo Alto Stock Farm, ch c Norris, by Ansel, dam Norma by Alexander's Norman.
5. Palo Alto Stock Farm, b f Wildmont, by Piedmont, dam Wildflower by Electioneer.
6. Jos. Cairn Simpson, b f A., by Antevolo, dam Lady Del Sur by Del Sur.
7. B. E. Harris, br or blk f Lorena, by Jim Mulvaney, dam Elmorene by Elmo.
8. Lot D. Slocum, b f Moss Rose, by Anteeo, dam Luella by Nutwood.
9. H. H. Helman, gr g Richmond Chief, by Monroe Chief, dam Eta by A. W. Richmond.
10. G. Valensin, blk f Fleet, by Sydney, dam Flight by Buccaneer.
11. P. Fitzgerald, b c Kill Ross, by Killarney, dam by Cal. Dexter.

No. 2.—Trotting—Purse $1200; 2:22 class.

1. J. L. McCord, ch m Mary Lou, by Tom Benton, dam Brown Jennie by Dave Hill Jr.
2. La Siesta Ranch, b m Wanda, by Eros, dam Accident by Elmo.
3. San Mateo Stock Farm, b m Sister V., by Sydney, dam Nettie Lambert by John Nelson.
4. G. A. Doherty, br s Victor, by Echo, dam by Woodburn.

No. 3.—Pacing—Purse, $800; 2:30 class.

1. C. W. Godard, ch Pinto g C. W. G., by Adonis, dam inbred to St. Clair.
2. John Garrity, ch g Hummer, by Sidney, dam Humming Bird.
3. Napa Stock Farm, b g Gold Medal, by Nephew, dam unknown.
4. H. Willis, b g Our Dick, by Gibraltar, dam Mattie W.
5. S. C. Tryon, blk s Costillo, by Echo, dam Bessie Turner by Fred Low.
6. John Patterson, blk m Princess Alice, by Dexter Prince, dam Mollie by General McClellan.
7. Owen Bros., ch g T. B., by Juanito, dam unknown.
8. San Mateo Stock Farm, ch h Rupee, by Guy Wilkes, dam Sable Hayward by Poscora Hayward.
9. J. G. Moran, b g McGinty, by Daniel Lambert, dam by Davy Crockett.

Second Day—Friday, September 12th.

No. 4.—Running. Opening scramble for two-year-olds. A sweepstake of $25 each; $25 forfeit, or only $10 if declared on or before September 1st; with $350 added, of which $50 to second. Winners at this distance in 1890 once to carry three pounds; twice, five pounds extra. Maidens allowed five pounds. Three-quarters of a mile.

1. Palo Alto Stock Farm, b c Nero, by Flood, dam imp. Queen Bess by Strathconan.
2. Palo Alto Stock Farm, ch f Rosebud, by Wildidle, dam imp. Rosette by Struan.
3. Undine Stables, Quena, by Kyrle Daly, dam Rachel.
4. H. I. Thornton, br f Bessie Barnes, by Darebin, dam Carrie C.
5. H. I. Thornton, ch g Arcade, by Milner, dam Nannie Hubbard by Hubbard.
6. L. U. Shippee, b c Lodowic, by Longfellow, dam Carrie Phillips, by Pat Malloy.
7. L. U. Shippee, b f May H., by Falsetto, dam Glenluine by Glenelg.
8. L. U. Shippee, b f False Queen, by Falsetto, dam Queen Victoria by Lexington.
9. William H. Frye, b f Lady Franklin, by Joe Hooker, dam by Odd Fellow.
10. M. T. Walters, b c Altus, by Billy Bolinger, dam Della Walker.
11. Dennison Bros., ch f Minnie B., by Prince of Norfolk, dam Lizzie Idle.
12. John Reavey, ch c by Joe Hooker, dam Lady Stacy.
13. O. Harrison, b c Hy Lo, by Cyrus, dam Katharine.
14. Elmwood Stables, b c Duke of Milpitas, by Duke of Norfolk, dam Gypsy.
15. Owen Bros., b s Hero, by Wildidle, dam Precious by Lever.
16. W. M. Murry, blk c Power, by Powhattan, dam Lawn Tennis.
17. W. M. Murry, b c Aristocrat, by Flood, dam Cuba.
18. L. J. Rose, b f Fairy, by Argyle, dam imp. Fairy Rose by Kisber.
19. L. J. Rose, b h Conrad, by Flood, dam imp. Goula by Exminster.

No. 5.—Running — The California Breeders' Stake—A sweepstake for three-year-olds (foals of 1887); $100 each, h f, or only $10 if declared January 1st; $15 May 1st; or $25 August 1, 1890; declaration void unless accompanied by the money; with $600 added; of which $150 to second; $100 to third. Winner of any stake race in 1890 of the value of $1000 to carry five pounds; of two or more, ten pounds extra. Maidens allowed five pounds. One mile and a quarter. Closed in 1888 with 39 nominations.

No. 6.—Running—The Rosemeade Handicap, for all ages; of $50 each, h f; $15 declaration; with $400 added; second to receive $100, and third $50 for the stakes. Weights announced by 10 A. M., and declarations due by 6 P. M. September 11th. One mile and one-eighth.

1. Palo Alto Stock Farm, b c (5) Peel, by Monday, dam Precious by Lever.
2. Palo Alto Stock Farm, ch f (3) Muta, by Wildidle, dam imp. Mutiny by Adventurer.
3. Undine Stables, ch g (5) Tycoon, by Reveille, dam Margery by Error.
4. P. Siebenthaler, ch c (3) Sheridan, by Young Bazaar, dam Lost Girl by Leinster.
5. H. I. Thornton, br m (6) Abi, by Red Boy, dam Abi by Woodburn.
6. L. U. Shippee, br m (4) Picnic, by imp. Mr. Pickwick, dam Countess by Theobald.
7. Charles Kerr, ch s (5) Jackson, by Luke Blackburn, dam Ivy Leaf.
8. J. J. Dolan, b g (4) Revolver, by Joe Daniels, dam by Partisan.
9. Captain A. B. Anderson, ch s (4) Four Aces, by Hock Hocking, dam Maid of the Mist.
10. Santa Barbara Stables, b s (4) Othello, by Hock Hocking, dam Sunday.
11. Elmwood Stables, b g (5) Nabeau, by Nathan Coombs, dam Beauty.
12. W. L. Appleby ch m (5) Carmen, by Wildidle, dam Nettie Brown.
13. W. L. Appleby, b m (3) Raindrop, by Wildidle, dam imp. Teardrop.
14. Wesley George, b g (7) Applause, by Three Cheers, dam Alice N.
15. O. Appleby, br m (4) Alfarata, by Wildidle, dam Monday Filly.
16. Matt. Storn, ch m (4) Lurline, by Longfield, dam Katy Pease by Planet.
17. Matt. Storn, ch m (4) Marigold, by Milner, dam Katy Pease by Planet.
18. N. A. Covarrubias, b s (4) Dan M. Murphy, by imp. Speculator, dam Leona.

No. 7.—Running—Selling purse, $300, of which $50 to second; for all ages; horses entered to be sold for $1500 to carry rule weights; two pounds allowed for each $100 less, down to $1000; then one pound for each $100 less, down to $500. Horses entered not to be sold to carry five pounds above the scale. Valuation to be placed on starters only by 6 P. M. the day preceding the race. Mile heats.

1. M. T. Walters, b g (4) Albatross, by Pill Box, dam Della Walker.
2. Dennison Bros., b g (2) Dave Douglas, by Leinster, dam Lilly Simpson by Newry.
3. H. D. Miller ch m (2) Ida Glenn, by Glen Ellen, dam Queen.
4. J. N. Van Winkle, b g Silverbow, by imp. Fechter, dam Belle of the Mead.
5. Albert Hiller, b g (3) Achilles, by Norfolk, dam Thetis by Ten Broeck.
6. Elmwood Stables, br m (4) Installation, by Inauguration, dam Brown Maria.
7. W. L. Appleby, b g (4) Wild Oats, by Wildidle, dam Mary Givens by Owen Dale.
8. Wesley George, b g (2) Applause, by Three Cheers, dam Alice N by Norfolk.
9. Matt. Storn, ch s (3) Larghetta, by Jils Johnson, dam Leveret by Lever.
10. C. Holloway, ch g (5) Forester, by Joe Hooker, dam Mattie C. by Specter.
11. L. J. Rose, s g (2) Mikado, by Shiloh, dam Margery by Error.

Third Day—Saturday, September 13th.

No. 8.—Trotting, Two-year-old stake—Entrance, $50, of which $10 must accompany nomination; $15 payable July 1st, and remaining $25 August 10, 1890; $300 added by the society. Closed March 15, 1890, with 14 nominations. Mile heats.

The following have made second payments:

1. San Mateo Stock Farm, ch f Vida Wilkes, by Guy Wilkes, dam Vixen by Nutwood.
2. Souther Stock Farm, b c El Benton, by Electioneer, dam Nellie Benton by Gen. Benton.
3. Souther Stock Farm, blk c Jim Sinfoot, by Figaro, dam Fanny Sinfoot by Irwin Davis.
4. Palo Alto Stock Farm, br c Almoneer, by Alban, dam America by Hambletonian 10.
5. Palo Alto Stock Farm, b f Elleneer, by Electioneer, dam Lady Ellen.
6. B. E. Harris, ch f Starlight, by Dawn, dam Lena Bowles by Ethan Allen.

No. 9. (Failed to fill.)

No. 10.—Trotting—Trotting purse, $1000; 2:30 class.

1. Palo Alto Stock Farm, rn m Hilliard, by General Benton, dam Daisy Miller by Electioneer.
2. Phillips Bros., b g Prince B., by Brilliant, dam Maud.
3. T. E. Keating, ch g Frank M., by Priam, dam by General Bena.
4. Matt. Earp, b g Jim Leach, by Inca, dam by Sacramento.
5. B. C. Holly, br m Flora G., by Altoona, dam by Conway's Patchen.
6. George Theuerkauf, ch g Lee, by General Lee, dam by George M. Patchen.
7. L. U. Shippee, b h Moses S., by Hawthorne, dam by McCracken's Black Hawk.
8. San Miguel Stock Farm, br h Balkan, by Mambrino Wilkes, dam Fanny Fern.
9. DeTurk & McGraw, blk s Silas Skinner, by Aleona, dam Fontana by Almont.
10. H. I. Thornton, b s James Madison, by Anteeo, dam Lady Patchen.
11. Hermit Stable, g s Larco, by A. W. Richmond, dam Maud Smith by Overland.
12. Owen Bros., g g Bar Barbara, by Len Rose, dam Barbara.
13. J. C. Moran, b g Wallie, by Geo. Wilkes, dam by Mambrino Patchen.

Fourth Day—Monday, September 15th.

No. 11.—Running—The Daisy D. Stake for all ages; of $50 each, h f, or only $15 if declared on or before Sept. 1st; with $350 added; of which $75 to second; third to save stake. Maidens, if three years old, allowed five pounds; if four or more, seven pounds. Three-quarters of a mile.

1. Undine Stables, ch f (3) Retta B., by Joe Hooker, dam Kate Carson by Joe Daniels.
2. P. Siebenthaler, ch c (3) King Hooker, by Joe Hooker, dam Violet by Leinster.
3. H. I. Thornton, br m (3) Abi, by Red Boy, dam Abi by Woodburn.
4. L. U. Shippee, br m (4) Picnic, by imp. Mr. Pickwick, dam Countess by Theobald.
5. Dennison Bros., ch c (3) Princes' First, by Prince of Norfolk, dam Lizzie Idle.
6. John G. Sohn, ch s (4) Wild Robin, by Keystone, dam Rifleman Gladiator.
7. O. Appleby, b f (3) Juniata, by Wildidle, dam Monday Filly.
8. Charles Kerr, b s (5) Jackson, by Luke Blackburn, dam Ivy Leaf.
9. J. J. Dolan, b g (4) Revolver, by Joe Daniels, dam by Partisan.
10. E. Pickett, ch c (5) Peregrine, by Jumbo or Joe Hooker, dam Irene Harding.
11. Santa Barbara Stables, b s (7) Consuelo, by Grinstead, dam Nina R.
12. W. L. Appleby, ch m (5) Carmen, by Wildidle, dam Nettie Brown.
13. W. L. Appleby, ch m (4) Odette, by Shiloh, dam Margery by Error.
14. Wesley George, b g (2) Applause, by Three Cheers, dam Aline N. by Norfolk.
15. O. Appleby, br m (4) Alfarata, by Wildidle, dam Monday filly.
16. Owen Bros., b m (2) Daisy D., by Wheatly, dam Black Maria by Belmont.
17. George Hearst, ch f (3) Minneola, by Warwick, dam Belle S.
18. N. A. Covarrubias, b s (4) Dan. M. Murphy by imp. Speculator, dam Leona.
19. G. H. Kennedy, b f (2) Acclaim, by Three Cheers, dam Rosette.
20. L. J. Rose, b g (3) Rico, by Shannon, dam Fannie Lewis by imp. Buckden.

No. 12.—Running—The Capital City Stake, a handicap for three-year-olds; of $100 each, h f; $20 declaration; with $400 added; second horse, $100. Weights announced by 10 o'clock A. M. Saturday, Sept. 13th. Declarations due by 6 P. M. same day. One mile and a sixteenth.

1. Palo Alto Stock Farm, ch f Muta, by Wildidle, dam imp. Mutiny by Adventurer.
2. P. Siebenthaler, ch c Sheridan, by Young Bazaar, dam Lost Girl by Leinster.
3. L. U. Shippee, b m Mabel F., by Longfellow, dam Carrie Phillips by Pat Malloy.
4. L. U. Shippee, b c Take Notice, by Prince Charlie, dam Nota Bene by Glenelg.
5. Elmwood Stable, b f Initiation; by Inauguration, dam Brown Maria.
6. W. L. Appleby, b f Raindrop, by Wildidle, dam imp. Teardrop.
7. Owen Brothers, br s Captain Al, by Kingston, dam Black Maria by Belmont.
8. Matt Storn, ch f Marigold, by Milner, dam Katy Pease by Planet.
9. W. M. Murry, b c Leland, by Flood, dam Amelia by Lowlander.
10. L. J. Rose, b g Rico, by Shannon, dam Fannie Lewis by imp. Buckden.

No. 13.—The Sunny Slope Stake, a sweepstake for two-year old fillies (foals of 1888); of $50 each, h f, or only $10 if declared on or before Jan. 1st, or $15 by May 1, 1890; declarations without money are void; with $350 added, of which $50 to second. Non-winners allowed five pounds. Five-eighths of a mile. Closed in 1889 with 20 nominations.

No. 14.—Running—Selling purse, $350, of which $50 to second; for all ages. Horses entered to be sold for $2000, to carry rule weights; one pound off for each $100 down to $1000; then two pounds for each $100 down to $500. Horses entered not to be sold to carry five pounds above the scale. Valuation to be placed on starters only by 6 P. M. Saturday, Sept. 13th. One and one-eighth miles.

1. Undine Stable, ch g (5) Tycoon, by Reveille, dam Margery, by Error.
2. P. Siebenthaler, ch c (2) Sheridan, by Young Bazaar, dam Lost Girl, by Leinster.
3. M. T. Walters, b g (4) Albatross, by Pill Box, dam Della Walker.
4. Dennison Bros. b s (3) Mohawk, by Norfolk, dam Irene Harding, by Jack Malone.
5. H. D. Miller, ch m (4) Ida Glenn, by Glen Ellen, dam Queen.
6. Captain A. B. Anderson, ch s (4) Four Aces, by Hock-Hocking, dam Maid of the Mist.
7. A. Hiller, b g (3) Achilles, by Norfolk, dam Thetis, by Ten Broeck.
8. Elmwood Stables, ch m (7) Nerva, by Bob Wooding, dam Lizzie Marshall.
9. W. L. Appleby, b g (4) Wild Oats, by Wildidle, dam Mary Givens.
10. Wesley George, b g (2) Applause, by Three Cheers, dam Alice N. by Norfolk.
11. Matt. Storn, ch g (5) Kildare, by Kyrle Daly, dam Mistake by Wildidle.
12. Matt. Storn, ch s (3) Larghetta, by Jils Johnson, dam Leveret by Lever.
13. N. A. Covarrubias, b s (4) Dan M. Murphy, by imp. Speculator, dam Leona.
14. W. M. Murry, br g (3) Oakdale, by Partisan, dam by Specter.
15. L. J. Rose, s g (6) Mikado, by Shiloh, dam Margery by Error.

Fifth Day—Tuesday, September 16th.

No. 15.—Trotting—Trotting purse, $600; for three-year olds eligible to 2:40 class.

1. Palo Alto Stock Farm, ch c Langton by Alfred, dam Laura C. by Electioneer.
2. Tietjens & Watson, b s Frank B. by Coligny, dam Casserly mare.
3. U. S. Gregory, b m Lynette by Lynwood, dam Lady Belle.
4. L. Funk, b s by Dexter Prince, dam by Nutwood.
5. L. M. Morse, br m Jessie by Dexter Prince, dam unknown.
6. San Mateo Stock Farm, b m Millie Wilkes by Guy Wilkes, dam Rosetta by The Moor.

No. 16.—Trotting—Trotting purse, $800; for four-year olds eligible to 2:30 class.

1. Palo Alto Stock Farm, b m Laureola by Benefit, dam Laura C. by Electioneer.
2. L. H. Boggs, b s Keepsake by Black Ralph, dam Bett B.
3. Thomas Smith, b s George Washington by Mamb Chief, dam Fannie Rose by Vick's Ethan Allen.
4. C. W. Woodward, b c Alexander Button, Jr. by Alexander Button, dam by John Nelson.
5. L. U. Shippee, b h Kilrain by Hawthorne, dam by Whipple's Hamb.
6. San Mateo Stock Farm, br m Chantilly by Nutwond, dam Coupon by Princeps.
7. George Hearst, ch s Clearmont by McGinnis, dam Carrie C.
8. John P. Sweeny, b s Gibber by Gibralter, dam Soonner by Breckenridge.

No. 17.—Trotting—Trotting purse, $1000; 3:00 class.

1. Palo Alto Stock Farm, b m Ariana by Ansel, dam Rebecca by General Benton.
2. B. C. Holly, br s Charles Derby by Steinway, dam Katy G.
3. D. M. Reavis, br m Vic H by Blackbird, dam Ella Sweigert.
4. F. B. Gifford, b s Bob Mason by Echo, dam Bell Mason.
5. San Mateo Stock Farm, b m Una Wilkes by Guy Wilkes, dam Blanche by Arthurton.
6. J. C. Moran, b g Ed Fay by Christian Patchen, dam by Whipple's Hamb.
7. Pete Brandow, b g Free Coinage by Abbotsford, dam Agnes.

Sixth Day—Wednesday, September 17th.

No. 18.—Running — The California Autumn Stake—A sweepstake for two-year-olds (foals of 1888); of $50 each, h f, or only $10 if declared on or before January 1st; or $15 by May 1, 1890; declarations void unless accompanied by the money; with $500 added, of which $100 to second; third to save stake. Winner of any stake race to carry three pounds; or of two or more, five pounds extra. Maidens allowed five pounds. Three-quarters of a mile. Closed in 1889 with 33 nominations.

No. 19.—Running—The Fall Stake, a handicap sweepstake for all ages; of $50 each, h f; $15 declaration; with $50 added; second to receive $100 and third $50 from the stakes. Weights announced by 10 A. M. Tuesday, September 16th. Declarations due by 6 P. M. same day. One mile and a quarter.

1. Palo Alto Stock Farm, b c (5) Peel, by Monday, dam Precious by Lever.
2. Palo Alto Stock Farm, ch f (3) Muta, by Wildidle, dam imp. Mutiny by Adventurer.
3. Undine Stables, ch g (5) Tycoon, by Reveille, dam Margery by Error.
4. P. Siebenthaler, ch c (3) Sheridan, by Young Bazaar, dam Lost Girl by Leinster.
5. H. I. Thornton, br m (2) Abi, by Red Boy, dam Abi by Woodburn.
6. L. U. Shippee, br m (4) Picnic, by imp. Mr. Pickwick, dam Countess by Theobald.
7. Dennison Bros., b s (4) Hotspur, by Joe Daniels, dam sister to Jim Douglas.
8. Captain A. B. Anderson, ch s (4) Four Aces, by Hock Hocking, dam Maid of the Mist.
9. Santa Barbara Stable, b s (4) Othello, by Hock Hocking, dam Sunday.
10. Elmwood Stable, b g (5) Nabeau, by Nathan Coombs, dam Beauty.
11. Elmwood Stable, blk g (aged) Index, by Thad Stevens, dam Gypsy.
12. W. L. Appleby, b m (3) Raindrop, by Wildidle, dam imp. Teardrop by Scottish Chief.
13. W. L. Appleby, ch m (5) Carmen, by Wildidle, dam imp. Nettie Brown.
14. Wesley George, b g (2) Applause, by Three Cheers, dam Alice N. by Norfolk.
15. Matt. Storn, ch m (4) Lurline, by Longfield, dam Katy Pease by Planet.
16. Matt. Storn, ch m (3) Marigold, by Milner, dam Katy Pease by Planet.

No. 20.—Running—The Palo Alto Stake, a handicap for two-year-olds; of $50 each, h f, or $10 declaration; with $350 added; second to save stake. Weights announced Tuesday, September 16th, at 10 o'clock A. M. Declarations due by 6 o'clock P. M. same day. Three-quarters of a mile.

1. Palo Alto Stock Farm, b c Nero, by Flood, dam imp. Queen Bess by Strathconan.
2. Palo Alto Stock Farm, ch f Rosebud, by Wildidle, dam imp. Rosetta by Struan.
3. Palo Alto Stock Farm, ch c Mosby, by Wildidle, dam Mozelle by Monday.
4. Undine Stable, Quena, by Kyrle Daly, dam Rachel.
5. H. I. Thornton, br f Bessie Barnes, by Darebin, dam Carrie C.
6. H. I. Thornton, br c Peralta, by John Happy, dam Bertha W. by Leamington.
7. L. U. Shippee, b f False Queen, by Falsetto, dam Queen Victoria by Wildidle.
8. L. U. Shippee, b f May H., by Falsetto, dam Glenluine by Glenelg.
9. L. U. Shippee, b c Lodowic, by Longfellow, dam Carrie Phillips by Pat Malloy.
10. Dennison Bros., ch f Minnie B., by Prince of Norfolk, dam Lizzie Idle.
11. G. Harrison, b c Hy Lo, by Cyrus, dam Katharene.
12. Elmwood Stable, b c Duke of Milpitas, by Duke of Norfolk, dam Gypsy.
13. W. M. Murry, blk c Power, by Powhattan, dam Lawn Tennis.
14. W. M. Murry, b c Iquacio, by Three Cheers, dam Dairy Maid.
15. W. M. Murry, b c Aristocrat, by Flood, dam Cuba.
16. L. J. Rose, b c Conrad, by Flood, dam imp. Goula by Exminster.
17. L. J. Rose, b f Fairy, by Argyle, dam imp. Fairy Rose by Kisber.

No. 21.—Running—Running purse, $400, for three-year-olds and upward; $15 from starters to go to second horse. Winners at this distance in 1890 to carry, if once, three pounds; twice, five pounds extra. Horses that have started twice in a race, one mile or over, and not won, in 1890, allowed five pounds. Maidens allowed, if three years old, seven pounds; if four, ten pounds; if five years or upward, fifteen pounds. One mile.

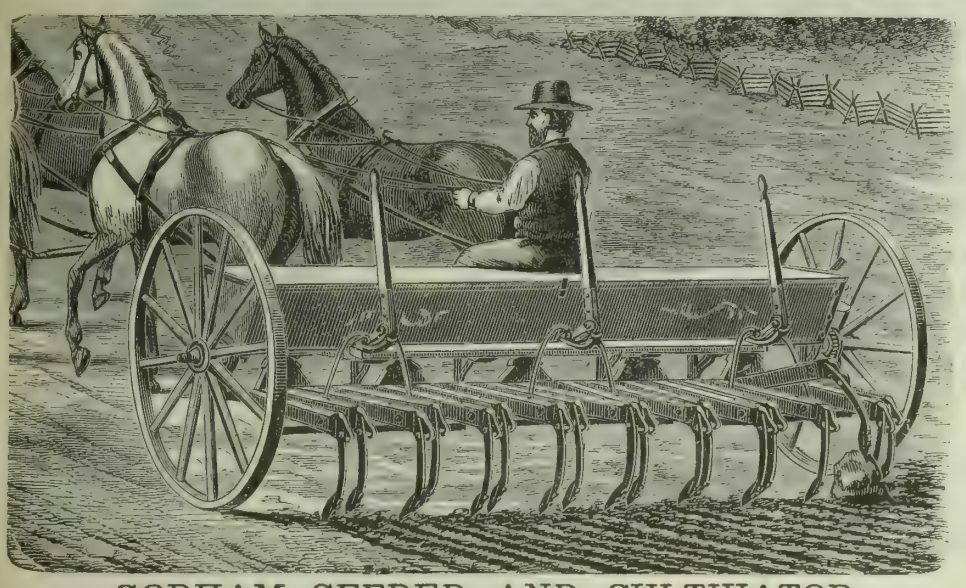
1. Palo Alto Stock Farm, ch f (3) Muta, by Wildidle, dam imp. Mutiny by Adventurer.
2. P. Siebenthaler, ch c (3) King Hooker, by Joe Hooker, dam Violet by Leinster.
3. L. U. Shippee, br m (4) Picnic, by imp. Mr. Pickwick, dam imp. Countess by Theobald.
4. L. U. Shippee, b c (3) Take Notice, by Prince Charlie, dam Nota Bene by Glenelg.
5. M. T. Walters, b g (4) Albatross, by Pill Box, dam Della Walker by Jimmy Glen.
6. Dennison Bros., ch c (3) Prince's First, by Prince of Norfolk, dam Lizzie Idle by Wildidle.
7. O. Appleby, b f (3) Junita, by Wildidle, dam Monday filly.
8. Charles Kerr, b s (5) Jackson, by Luke Blackburn, dam Ivy Leaf.
9. Charles Kerr, br m (5) Ona, by Onondaga, dam Virgie.
10. J. N. Van Winkle, b g Silver Bow, by imp. Fechter, dam Belle of the Mead.

(*Continued on page 208.*)

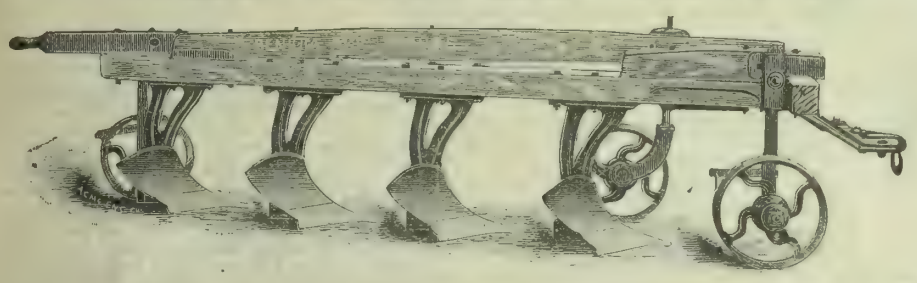
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San Francisco and Sacramento, Cal.

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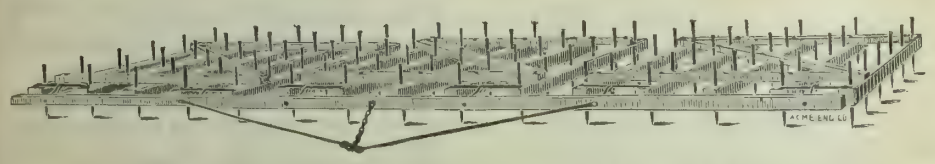
GORHAM SEEDER AND CULTIVATOR.



THE GRANGER GANG PLOW.

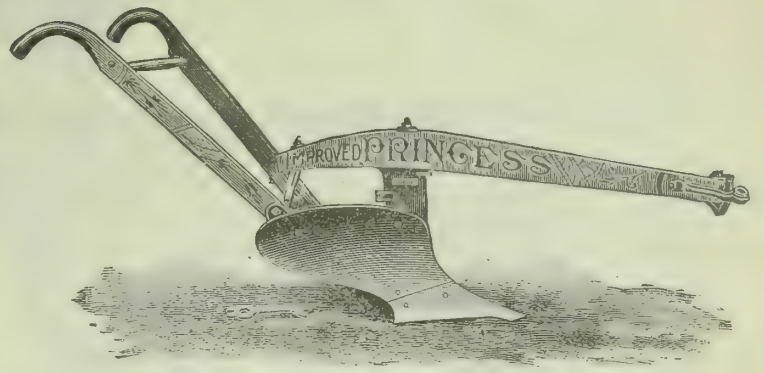


THE ANGLE STEEL HARROW.



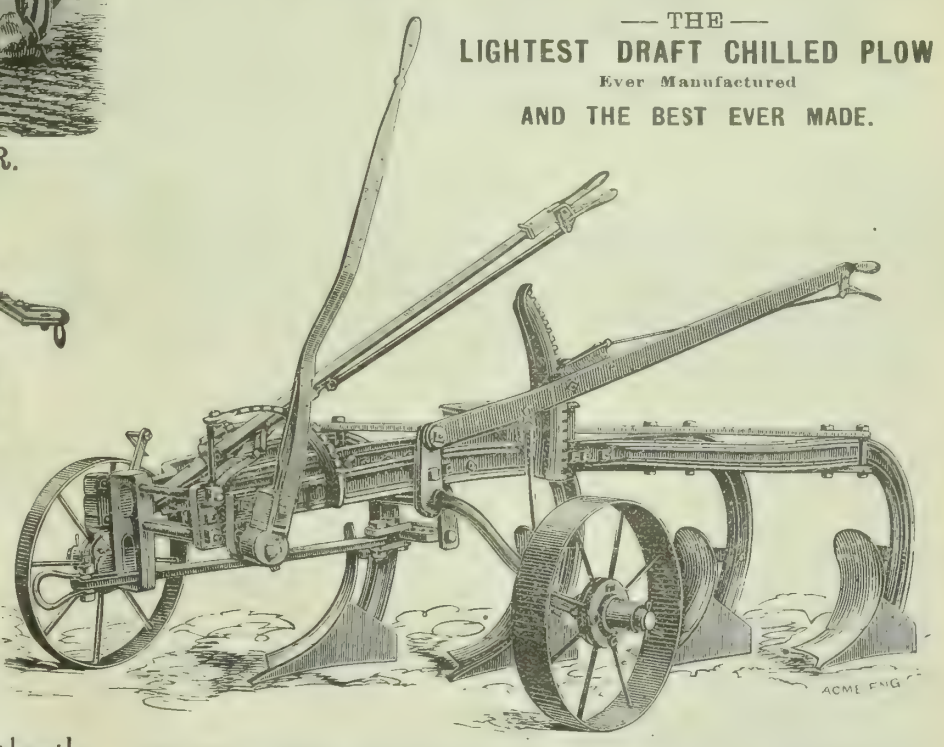
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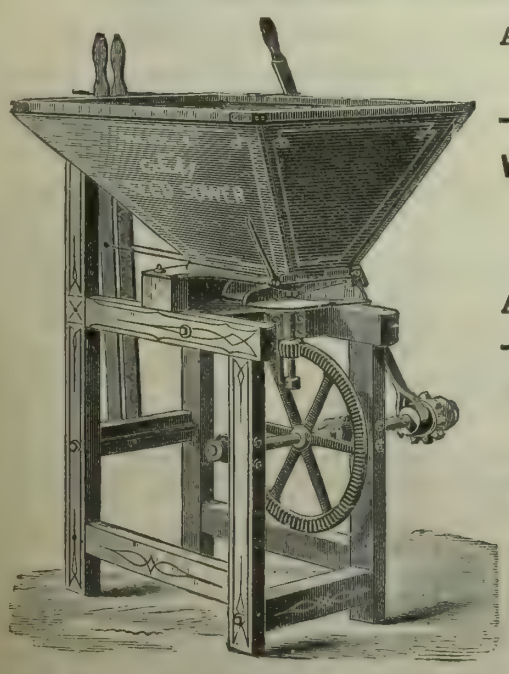
— OF —

FARM IMPLEMENTS,

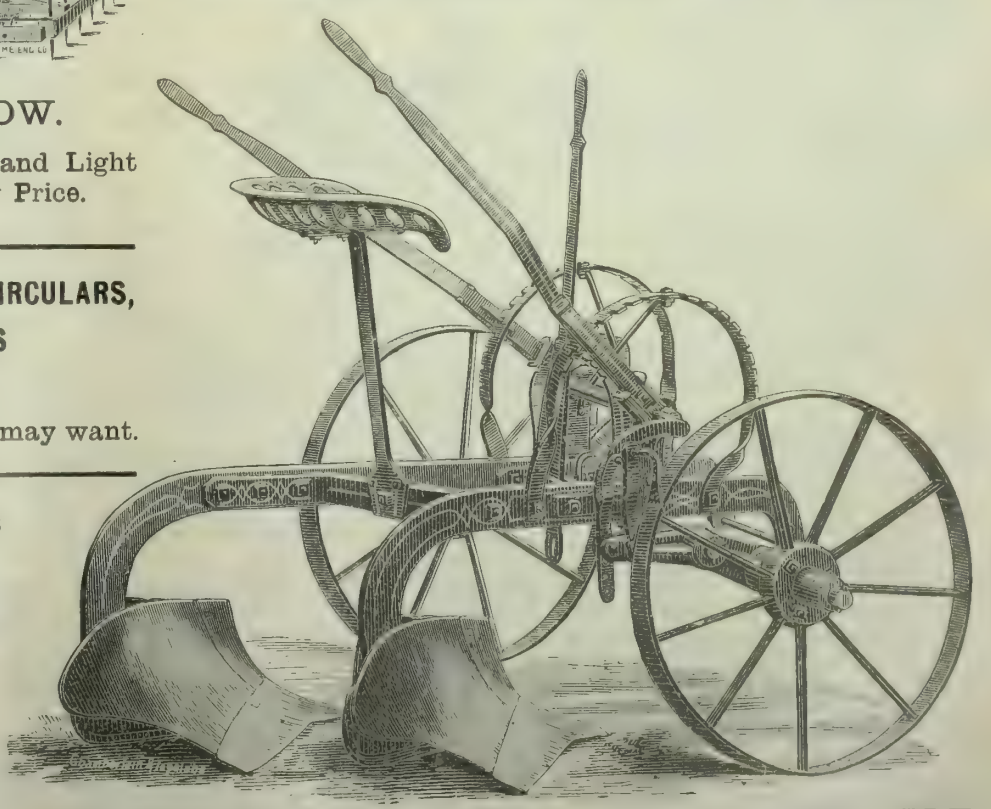
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—AND—

Wholesale Hardware.

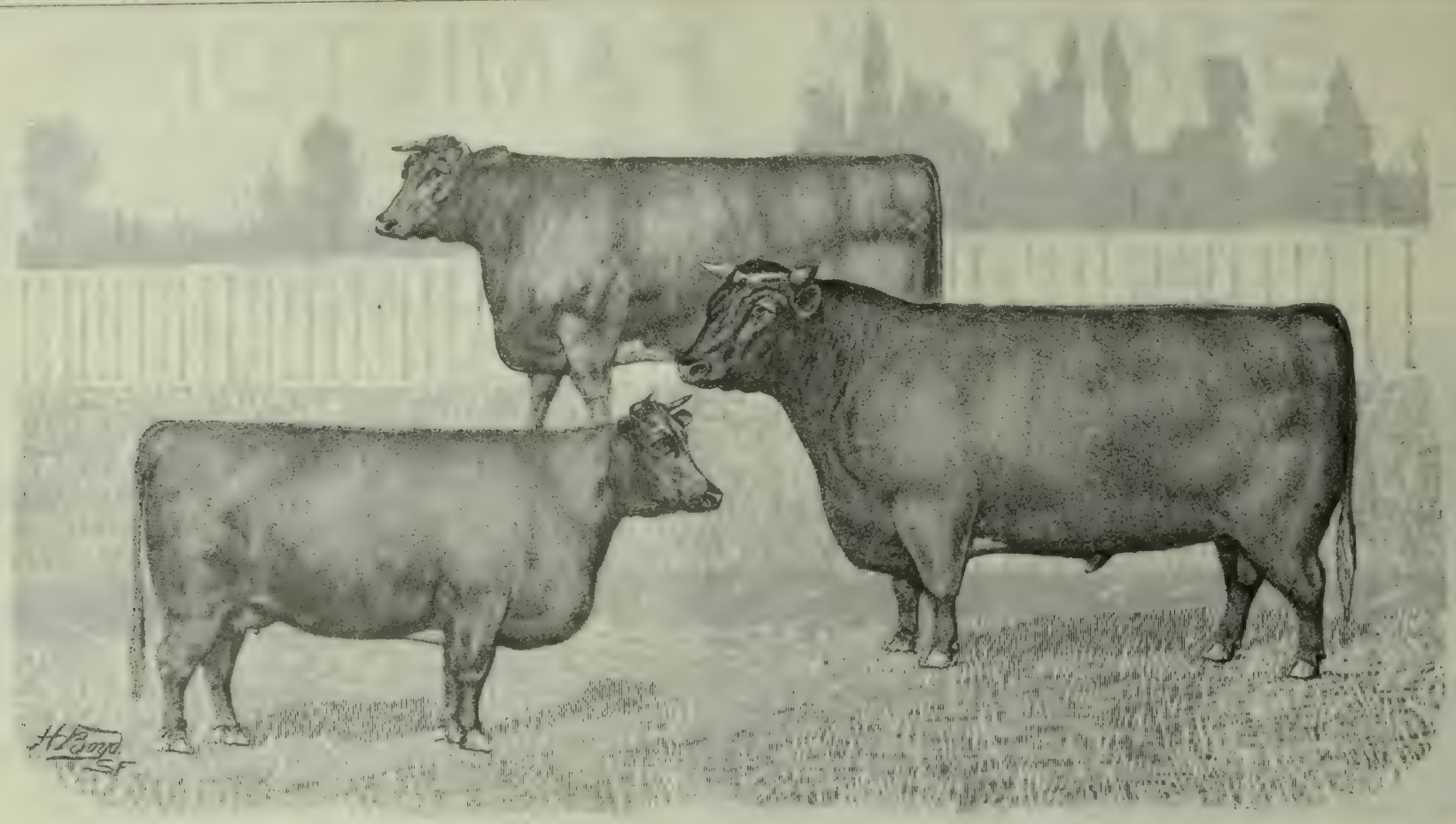


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TRACTION ENGINES & STEAM PLOWING OUTFITS.



MANUNGA 2D. MANUNGA. SCOTCH BILLY.

THOROUGHBRED SHORTHORNS, OWNED BY BRIDGFORD & BEDELL, COLUSA, CAL.

The State Fair Races.

(*Concluded from page 206.*)

11. Santa Barbara Stables, b s (aged) Consuelo, by Grinstead, dam Nina R.
12. Elmwood Stable, b f (3) Initiation, by Inauguration, dam Brown Maria.
13. O. Appleby, br m (3) Alfarata, by Wildidle, dam Mary Givens by Owen Dale.
14. Owen Bros., br s (3) Captain Al., by Kingston, dam Black Maria by Belmont.
15. Matt. Storn, ch s (3) Larghetta, by Jils Johnson, dam Leveret by Lever.
16. Matt. Storn, ch m (4) Lurline, by Longfield, dam Kitty Pease by Planet.
17. George Hearst, b g (aged) Long Tom, by Longfellow, dam unknown.
18. W. M. Murry, b c (3) Leland, by Flood, dam Amelia by Lowlander.
19. W. M. Murry, br g (3) Oakdale, by Partisan, dam by Specter.

No. 22.—Running—Free purse, $300, of which $50 to second; for all ages; to close at 6 o'clock P. M. the day before. One mile.

No. 23.—(Failed to fill.) Free for all purse, $1500 substituted. Entries to close September 8th.

Seventh Day—Thursday, September 18th.

No. 24.—Trotting—Trotting purse, $1200; 2:24 class.

1. J. L. McCord, ch m Mary Lou, by Tom Benton, dam Brown Jennie by Dave Hill Jr.
2. H. W. Cooper, b s Ira, by Piedmont, dam Irene by Mohawk Chief.
3. B. C. Holly, ch m Pink, by Inca, dam by Echo.
4. Napa Stock Farm, b m Nona Y., by Admiral, dam Black Flora.
5. R. T. Carroll, blk m Moro, by Pasha, dam by Messenger Duroc.
6. San Miguel Stock Farm, br h Balkan, by Mamb. Wilkes, dam Fanny Fern.
7. La Siesta Ranch, b m Wanda, by Eros, dam Accident by Elmo.
8. R. H. Wallou, b s Argent, by Stirling, dam Madam Buckner.
9. Hermit Stable, gr s Larco, by A. W. Richmond, dam Maud Smith by Overland.
10. San Mateo Stock Farm, b m Sister V., by Sidney, dam Nettie Lambert by John Nelson.

No. 25.—Pacing—Pacing purse, $1000; free for all.

1. J. L. McCord, blk g Ned Winslow, by Tom Benton, dam Brown Jennie by Dave Hill.
2. Corey & Hawks, br s Almont Patchen, by Juanito, dam Glidey.
3. B. C. Holly, b s St. Patrick, by Volunteer, dam by Guy Miller.
4. G. W. Woodard, br m Belle Button, by Alex. Button, dam Flora.
5. Pleasanton Stock Farm, b m Cricket, by Steinway, dam by Dolphin.

Eighth Day—Friday, September 19th.

No. 26.—Running—The California Annual Stake, a sweepstake for two-year-olds (foals of 1888); of $100 each, h f, or only $10 if declared on or before January 1st; $15 May 1st; or $25 August 1, 1890; declarations void unless accompanied by the money; with $600 added, of which $150 to second; third to save stake. Winner of autumn stake to carry seven pounds extra; winner of any other stake to carry three pounds; of two or more, seven pounds extra; maidens allowed five pounds. One mile. Closed in 1889 with 29 nominations.

No. 27.—The President Stake—A sweepstake for three-year-olds (foals of 1887); $100 each, of which $5 must accompany nominations; $10 payable January 1, 1889; $15 January 1, 1890; $20 May 1, 1890; the remaining $50 the day of race. Payments not made as they become due forfeits money paid in and declares entry out; $700 added. The entire stakes and $500 of the added money to winner; $150 to second; $100 to third. Winner of breeders' stake to carry seven pounds; of any other three-year-old stake of the value of $1000, five pounds; or two or more, seven pounds extra. Maidens allowed five pounds. One mile and a half. Closed in 1888 with 23 nominations.

The following have made fourth payment:

1. P. Herzog, b c Mohawk, by Norfolk, dam Irene Harding by Jack Malone.
2. L. U. Shippee, b c Take Notice, by Prince Charlie, dam Nota Bene by Glenelg.
3. L. U. Shippee, b f Mabel F., by Longfellow, dam Carrie Phillips by Pat Malloy.
4. George Hearst, b c Sacramento, by Joe Hooker, dam Ada C.

No. 28.—Running—The Rico Stake, for all ages; of $50 each; $15 forfeit; $300 added; of which $100 to second; third to save stake; $200 additional if 1:41¼ is beaten. Stake to be named after the winner if Rico's time (1:42) is beaten. One mile.

1. Palo Alto Stock Farm, b c (2) Nero, by Flood, dam Queen Bess by Stratheonan.
2. H. I. Thornton, br m (a) Abi, by Red Boy, dam Abi by Woodburn.
3. John G. Sohn, ch s (4) Wild Robin, by Keystone, dam Rifleman Gladiator.
4. Charles Kerr, b s (5) Jackson, by Luke Blackburn, dam Ivy Leaf.
5. G. Harrison, b c (2) Hy Lo, by Cyrus, dam Katharine.
6. Santa Barbara Stables, b s (4) Othello, by Hock-Hocking, dam Sunday.
7. Elmwood Stable, b f (3) Initiation, by Inauguration, dam Brown Maria.
8. Owen Bros., b m (a) Daisy D., by Wheatly, dam Black Maria by Belmont.
9. Matt. Storn, ch f (3) Marigold, by Milner, dam Katy Pease by Planet.
10. W. M. Murry, b c (2) Aristocrat, by Flood, dam Cuba.
11. W. M. Murry, blk c (2) Power, by Powhattan, dam Lawn Tennis by Ten Broeck.
12. L. J. Rose, b f (2) Fairy, by Argyle, dam imp. Fairy Rose by Kisber.

No. 29.—Running—The La Rue Stake, a handicap for all ages; of $100 each, h f; $20 declaration; with $500 added; of which $100 to second; $50 to third. Weights announced by 10 o'clock A. M. on Thursday, Sept. 18th. Declarations due by 6 o'clock P. M. same day. One mile and a half.

1. Palo Alto Stock Farm, b c (5) Peel, by Monday, dam Precious by Lever.
2. Palo Alto Stock Farm, ch f (3) Muta, by Wildidle, dam imp. Mutiny by Adventurer.
3. L. U. Shippee, br m (4) Picnic, by imp. Mr. Pickwick, dam imp. Countess by Theobald.
4. Dennison Bros., b s (4) Hotspur, by Joe Daniels, dam Sister to Jim Douglas.
5. Captain A. B. Anderson, ch s (4) Four Aces, by Hock-Hocking, dam Maid o' the Mist.
6. Elmwood Stable, b g (5) Nabeau, by Nathan Coombs, dam Beauty by imp. Hercules.
7. Elmwood Stable, bl g (a) Index, by Thad Stevens, dam Gypsy.
8. W. L. Appleby, b g (4) Wild Oats, by Wildidle, dam Mary Givens by Owen Dale.
9. W. L. Appleby, ch m (5) Carmen, by Wildidle, dam Nettie Brown.
10. Matt. Storn, ch m (4) Lurline, by Longfield, dam Katy Pease by Planet.

No. 30.—Running—Free purse, $300, of which $50 to second; for all ages. Horses that have started at this meeting and beaten once, allowed five pounds; twice, seven pounds; three times, ten pounds. To name and close at 6 P. M. the day before. One and one-sixteenth miles.

Ninth Day—Saturday, September 20th.

No. 31.—Trotting—Trotting purse, $1500; 2:20 class.

1. Palo Alto Stock Farm, b g Express, by Electioneer, dam Esther by Express.
2. The Agnew Stock Farm, b m Emma Temple by Jackson Temple, dam Emigrant.
3. San Mateo Stock Farm, ch m Hazel Wilkes by Guy Wilkes, dam Blanche by Arthurton.
4. G. A. Doherty, br s Victor by Echo, dam by Woodburn.

No. 32.—Trotting—Trotting purse, $1000; 2:35 class.

1. Palo Alto Stock Farm, bl m Ladywell, by Electioneer, dam Lady Lowell by Schultz's St. Clair.
2. L. H. Boogs, b s Keepsake, by Black Ralph, dam Bent B.
3. T. E. Keating, ch g Frank M. by Priam, dam by General Bena.
4. Thomas Smith, b s Mambrino Chief Jr., by McDonald Chief, dam Venus by Mamb. Patchen.
5. D. M. Reavis, bl m Mattie Solomon, by Director, dam Maria Solomon by Blackbird.
6. Walter Scott, b g Iran, by Anteeo, dam by Captain Webster.
7. T. C. Snider, b m Vidette, by Dave Hill Jr., dam unknown.
8. De Turk & McGraw, blk s Silas Skinner, by Alcona Jr., dam Fontana by Almont.
9. H. I. Thornton, b s James Madison, by Anteeo, dam Lucy Patchen.
10. J. Hastings, gr m Clara Z., by Capri, dam by A. W. Richmond.
11. E. B. Gifford, b s Bob Mason, by Echo, dam Bell Mason.
12. San Mateo Stock Farm, b m Una Wilkes, by Guy Wilkes, dam Blanche by Arthurton.
13. George Hearst, ch s Clearmont by McGinnis, dam Carrie C.
14. J. C. Moran, b g Ed. Fay, by Christian Patchen, dam by Whipple's Hambletonian.
15. P. Brandow, blk m Foxy V., by Meredith, dam Black Bess.

No. 33.—Four-year-old stake, $100 entrance, of which $25 must accompany nomination; $25 payable July 1st, and remaining $50 payable Aug. 10, 1890; $400 added by the society. Closed March 15th with six nominations.

The following have made second payment:

1. San Mateo Stock Farm, br m Lillian Wilkes, by Guy Wilkes, dam Flora Langford by Langford.
2. Pleasanton Stock Farm Co., b m Margaret S., by Director, dam May Day by Cassius M. Clay, Jr.
3. Palo Alto Stock Farm, blk f Ladywell, by Electioneer, dam Lady Lowell by Schultz's St. Clair.
4. Palo Alto Stock Farm, b f Ariana, by Ariana, by Ansel, dam Rebecca by General Benton.

No. 34.—Three-year-old stake—$100 entrance, of which $25 must accompany nomination; $25 payable July 1st, and remaining $50 payable Aug. 10, 1890; $400 added by the society. Closed March 15th, with six nominations.

The following have made second payment:

1. San Mateo Stock Farm, b c Regal Wilkes, by Guy Wilkes, dam Margaret by Sultan.
2. San Mateo Stock Farm, b f Millie Wilkes, by Guy Wilkes, dam Rosetta by The Moor.
3. Palo Alto Stock Farm, br f Alzira, by Ansel, dam American Girl by Toronto Sontag.

A Group of Colusa Shorthorns.

We present this week a cut of three Shorthorns, the property of Messrs. Bridgford and Bedell of Colusa, Colusa county, California. These animals have all been winners at the fairs of this State.

Manunga 2d bears the distinction of being the only Shorthorn cow that ever captured the sweepstake premium of the California State Fair at the age of one year. She was awarded the sweepstake premium at the California State Fair in 1888, being at the time one year old. Her mother, Manunga, has been awarded a number of premiums, and is to-day regarded by many good judges as one of the best Shorthorn cows in California. In fact, all of the Manunga family are show cattle. They are uniformly solid red in color, and are noted for their breadth of back and prominent bright eyes.

Scotch Billy is now two years old. He is a pure-bred Cruickshank, and is as handsome an animal as can be found anywhere. A Kentucky breeder of Shorthorns, who saw him at the State Fair last year, was very anxious to purchase him to ship to Kentucky to head his herd, but his owner would not part with him. Scotch Billy was awarded the first premium in his class at the California State Fair in 1889, and was also given second place in the sweepstake class, he being at the time one year old and was in competition with as fine an exhibit of aged bulls as ever graced a showyard in California. He possesses all of the characteristics of the Cruickshanks—is close to the ground, of massive build, and he is said to be remarkably easy to keep in flesh. He is proving himself to be a first-class breeder.

The State Fair will yet hear from the increase of the Manunga family and Scotch Billy. Messrs. Bridgford and Bedell do not aim to keep a large herd, but it is their aim to be excelled by no one in quality.

Shorthorn Sale at Sacramento.

EDITORS PRESS:—We respectfully call the attention of your readers to a sale of pure-bred Shorthorn cattle to be held under the management of the Pacific Coast Shorthorn Breeders' Association at Agricultural Park, Sacramento, Friday, Sept. 19th. This association, as you are aware, comprises the best breeders of Shorthorns on this coast, and that cattle come from their herds should be sufficient guarantee as to their quality. A variety as to ages is offered from calves to full-grown cattle, all registered in the American Shorthorn Herd-book. Never was such an opportunity given here before or better stock offered.

The object of this association is to place their stock before the public and represent them as they really are. Their sale held last spring gave satisfaction to all purchasers. The demand is for better cattle with individual merit, and they can be found at this sale. The introduction of pure blood into the herds and grading them up will crown the efforts of the breeder with success.

The following well-known breeders contribute stock to this sale:

A. Heilbron & Bro., Sacramento; P. H. Murphy, Perkins; E. S. Driver, Antelope; E. A. Bridgford, Colusa; Estate of C. Younger, San Jose; P. S. Chiles, Davisville.

Many of these animals have been prize-winners at the principal fairs.

Remember the date of sale—Friday, Sept. 19th.

Catalogues can be had on day of sale or by applying to

J. F. CHILES, Sec'y, Davisville, Cal.

Davisville, Sept. 1st.

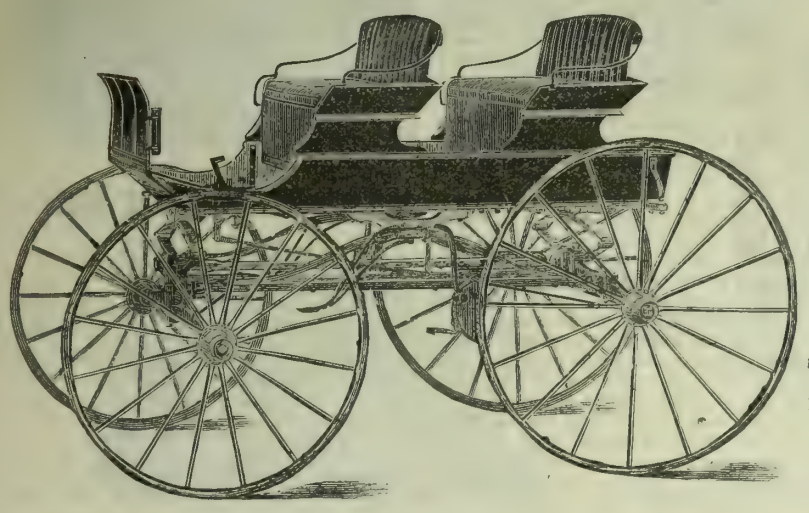
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BUGGIES, HARNESS, ETC.

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Our stock of Spring Wagons includes all the different styles, from a light Road Wagon to a Standard CALIFORNIA FOUR-SPRING. We guarantee these wagons. They are well made, of first-class material, finely finished and of great merit. Prices range from $60 up. Circulars furnished on application.

For Road Carts we have the BLUE RIBBON, the FLINT DROP BAR and the ACME, all well known and of great popularity.

☞ FISH BROS.' FARM WAGONS.

STEEL FRAME LEVER HARROW

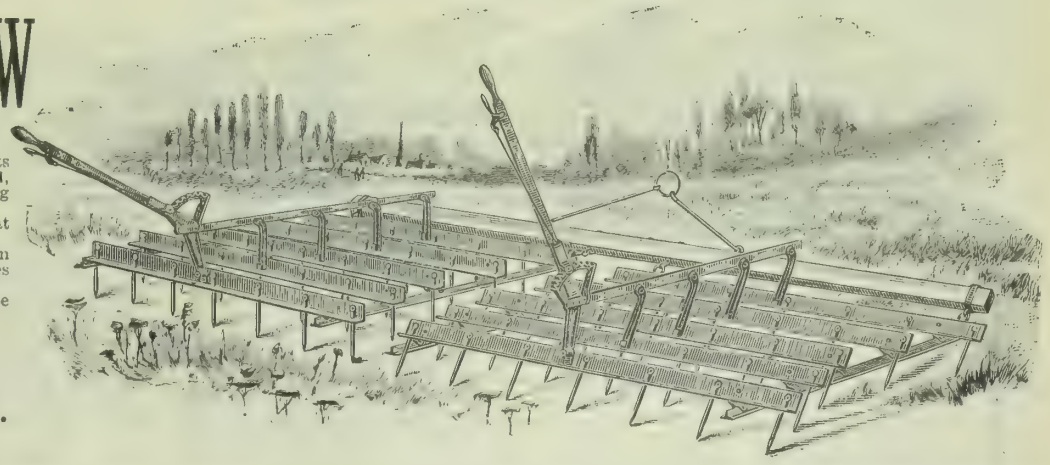
Possesses many valuable improvements over any other of like kind. Notably its RUNNERS, of T-shaped steel, hinged to the bars, with their flat surface to the ground, forming a convenient and perfect means for transporting the harrow, without loading into a wagon, besides adding greatly to the strength and rigidity of the frame.

The BARS are of ANGLE STEEL. The TEETH are diamond shaped and of great strength and effectiveness.

The LEVERS are conveniently located for adjusting the teeth from a vertical position to any desired angle for pulverizing, smoothing, or clearing off trash. These changes can be made without stopping the team.

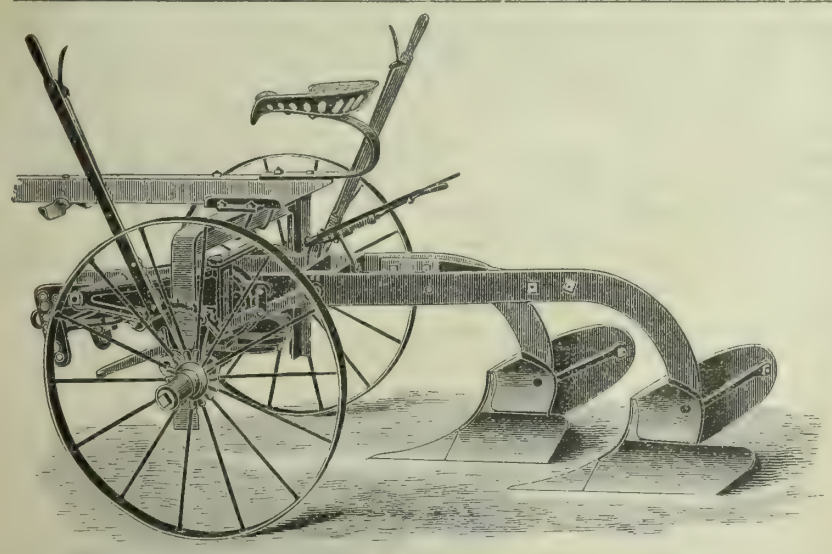
All connections are firmly made with bolts, and there are no weak castings to cause trouble

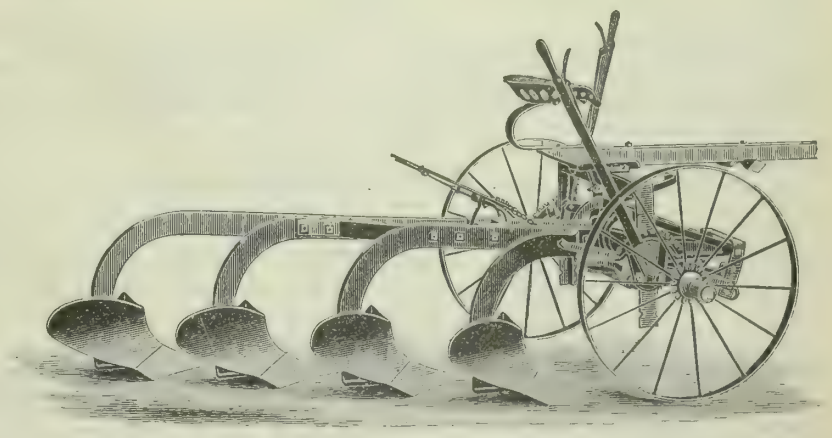
PRICE: 60-Tooth 2 Section, $25; 90-Tooth 3 Section, $37.50.



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ONE, TWO, THREE OR FOUR PLOWS ON THE SAME CARRIAGE.

A NEW PRINCIPLE IN CONSTRUCTION OF GANG PLOWS.

TURNS A CORNER AS EASY AS A WAGON, WITHOUT STRAIN ON THE WHEELS.

ONE SEASON HAS PROVED IT TO BE A PRONOUNCED SUCCESS.

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FLORIST AND GARDENER.

Suggestions for Ornamental Planting.

[Read before the Ladies' Annex to the San Diego Chamber of Commerce by C. R. ORCUTT and furnished for publication in the RURAL PRESS.]

Landscape art, that branch of horticulture that treats of the artistic planting of public or private grounds, is a science requiring peculiar qualities in the student. The artist must be free of prejudice either for or against any particular tree or plant. A geologist in public life, by the ethics of his profession is debarred from possessing any interests in mining properties lest his judgment should be influenced by his personal interests. It is also true that a landscape artist should not be engaged in any other branch of horticulture lest he should unconsciously blunt his perceptive power. To be thoroughly qualified for a position as a landscape artist, one should, however, be both a botanist and a practical horticulturist—in the cultural sense—as well.

Landscape art aims to improve the natural scenery. In the introduction of alien trees and shrubbery, great care should be taken to preserve the natural harmony of the scene. Landscape-gardening is becoming better understood than formerly. The term was once synonymous with the custom of introducing as striking and incongruous elements as it was possible for the old-time "artist" to conceive. The gardener delighted in planting flaming beds of foliage plants and brilliant flowers—beautiful in their proper places, but an eye-sore to all possessing a true sense of art; but happily, strong contrasts are no longer eagerly sought. The modern artist, if an artist in the true sense of the term, only ventures to use these brilliant colors where they will blend harmoniously with their surroundings. Trees are no longer tortured into abnormal shapes to please an equally abnormal taste in his patron. Elephants and Indians are no longer sketched in vivid life colors on our lawns, except where the proprietor of the lawn belongs to the class of the new rich. The physician does not seek to cure disease; he expends his energy to aid Nature in her effort. Thus the true artist does not attempt to improve upon Nature; his duty lies in aiding and directing Nature in her beautiful work. Only impostors in either profession claim all the credit.

Nature herself is careful to preserve an unbroken harmony. In improving and beautifying the park of San Diego, this harmony should not be destroyed. Leave the canyons and their approaches in a state of nature. Let the rocks ornamented with lichens remain. Preserve intact what little natural shrubbery that remains unmarred by man. Then utilize the balance as you may; render it more useful and attractive to the multitudes; transplant our rarest natives and naturalize the most beautiful foreigners, but do not impose on good Nature! In brief, imitate her as closely as surrounding circumstances will permit.

I have suggested the transplanting to our park of some of our rarest natives. I will add a few words regarding some of our choicest ornamental trees and shrubs, which the visitor in Southern California, if versed even slightly in either botany or horticulture, would expect to find in our midst.

The first of these is the Soledad or Torreyan Pine (Pinus Torreyana), noted the world over as one of the rarest of known trees. Until very recently San Diego possessed within her corporate limits, or closely adjoining, the only trees known of this interesting maritime pine. This pine was discovered by the late Dr. C. C. Parry—to whose botanical labors San Diego will always be deeply indebted—and was named by him in honor of our greatest American botanist, Dr. John Torrey. Only a year or two ago, Mr. T. S. Brandegee of the California Academy of Sciences discovered another small grove of this species in a little frequented part of one of the Santa Barbara islands. Thus the monopoly is broken, but San Diego still possessed practically the only trees accessible to travelers in general, and many have visited our city expressly to see this lingering remnant of a forest belonging to a past age. It can be found in cultivation in the principal European countries, where it has been successfully grown from seed. Is it not worthy of being perpetuated in its native city?

General Fremont, whose name is inseparably connected with that of California, is also identified with the history of many of our trees and plants. One of our native trees, which in cultivation is one of the most graceful and ornamental in the world, bears the significant name of Fremontia Californica. It is not rare in some of our most unapproachable, rocky canyons, where it is content to adapt itself to circumstances as best it may, and frequently never attains a size above that of a sprawling shrub. It never becomes a large tree where I have seen it, but in cultivation, seems to quickly forget its formerly circumscribed condition, and successfully vies with its cultured neighbors. Aside from the historical association, its beauty and symmetry, the evergreen foliage and large, abutilon-like flowers not only recommend it for public grounds, but private lawns as well. It can be seen on Coronado beach, and I understand one is growing in Mrs. Pierce's garden on Fourth street near Fir.

Probably few appreciate, because of its abundance, the beauty and good qualities of our "California Heather" or Adenostoma (*A. fasciculatum*), better known to many old residents as "Greasewood." Its dark evergreen foliage, finely divided and graceful branches, renders this one of our most widely distributed of the West American shrubs, also one of the most useful to the landscape artist, and if not known at home is appreciated sufficiently abroad. Formerly this formed for miles and miles an unbroken stretch of refreshing green during the forbidding dry season and greatly relieved the barren look of Southern California at that trying portion of the year. Words are useless to describe the scene when this sea of green was converted into a mass of undulating, fragrant white blossoms. This lovely shrub is rapidly giving way on mesa and hill to the orange, the apple and the vine. Is it too much to ask that it shall not be exterminated from the park, where it is still abundant, to make room for perhaps less desirable aliens?

What the Mayflower, or Trailing Arbutus, is to New England is the Manzanita to California. If each State were to select a floral emblem for itself, no more appropriate flower than this could be found for South California, and certainly no State could secure a loveller token than a spray of these blushing snow-white blossoms. It is the earliest harbinger of spring in our mountains, where I have seen the snowflakes descend on its wax-like bells, distinguishable from the snowflakes only by a delicate flush of red on its corolla. It still grows modestly in some of the canyons in the park, but needs a little encouragement before it will thrive in more public places.

Too much cannot be said in praise and commendation of that regal beauty (*Romneya Coulteri*) which has so completely captivated the attention of the English and European nations. This is one of the few things which seems to be fully appreciated both at home and abroad. If transplanted with care or propagated from cuttings under glass, I consider that it can be easily grown. To start from the seed requires experience and time. It forms large clusters, often 15 feet in hight, and has produced its delicate, wax-like flowers in cultivation in this city that were *nine inches across by actual measurement*. "The great white California poppy" (as it is described in English catalogues) should be planted abundantly in the park, and should also be seen in more of our private gardens.

Another ornamental shrub, unsurpassed for gracefulness and beauty, is the Ceanothus, or as it is called by some, the wild lilac. One of these bears in early spring a profusion of fragrant, white blossoms; another follows later with a wealth of flowers of a lovely campanula blue, passing into flax-flower blue and fading with age to a delicate pearl blue. A shrubby Mimulus challenges attention in canyon and on mesa, sometimes with red, sometimes with salmon-colored flowers, sometimes with a mixture of the two on the same branch. This I have recently transplanted with ease and success, and can therefore fully recommend it to others.

Many have noticed the native climbing plants of Southern California—the Chilocothe vine, the personification of grace itself, with its delicate green and clusters of blossoms or ripening fruit; the wild Clematis, hanging from the trees along our watercourses in graceful festoons; the *Lathyrus splendens*, or "Pride of California," with its brilliant color. To have these and many other vines adorning the trees and shrubs in reckless abandon, would seem to the writer a pleasing innovation. Nature has set the example, and no method would seem better adapted for the advantageous display either of our native or cultivated flowering vines, which could thus be induced to largely care for themselves.

Last, but *not* least, I wish to enter a plea for a cactus garden. One of the most interesting features in a public park would be what is usually called an "Arizona garden." While the prickly pear and the Cholla may not seem desirable or ornamental to those who have had to contend against them in clearing land, yet to the average stranger there are few things that possess greater attraction. When we add to the prickly pear and the Cholla, the tuna, the Turk's head, the Old Man, and the, literally, thousand other varieties of cacti that are known, many furnishing useful products to man, others odd or curious, and the most of them bearing truly magnificent tropical flowers, what an attraction the despised cactus becomes. Could you secure a carload of these desert beauties (the principal expense would be the freight), our park would become a formidable rival in this respect to the collections at Del Monte and Menlo Park which have gained such notoriety.

One Farmer's Experience.

Speaking of the value of our market and crop reports, a farmer who has taken the paper for some years writes:

"I call to mind an article which appeared in the RURAL PRESS some time ago, wherein you advised farmers to sell their barley. I heeded the advice and made $100, and warned others, who told me that they made from $300 to $500 by selling at that time."

STOCKTON owes its prosperity to its position as the grain-distributor of the San Joaquin valley. It must be unusually prosperous now, as it is experiencing a wheat blockade, the levees and warehouses being full.

How Rats Are to Be Exterminated.

The best course to take when the extermination of a colony of rats becomes a necessity, is to make them help to destroy one another in the following manner: A number of tubs, proportionate to the quantity of rats in the place which it is desired to rid of them, should be placed about, the middle of each occupied by a brick standing on end. The bottom of these should be covered with water to such a depth that about an inch of the brick projects above it. The top of the tub should be covered with stout brown paper, upon which a dainty meal of bacon rind and other scraps dear to the rat palate figures, a sloping board giving the rodents facilities for partaking of it. The feast should be renewed for several nights, so that all the rats in the neighborhood may get to know of the good food which is placed within such easy reach. When it is judged that this policy has been pursued long enough, the center of the brown paper should be cut in such a manner that any rat venturing upon it will be precipitated into the water below. It might be thought that the result of this would be to capture a rat, or at the most two, for every tub prepared, but no such meager reward for the trouble that has been taken need be feared.

The first rat to find his trust abused and himself struggling in the water at the bottom of a tub, soon recovers sufficiently from the shock to ascertain that there is a little island of refuge, on to which he clambers and squeals his loudest for help. Now the squeal of a rat in trouble attracts every one of his kind within hearing, and very few moments will elapse before the victim of misplaced confidence is joined by one of his friends. The new-comer is as quick to discover the chance of escape from a watery grave that the brick offers as was the original victim, but when he attempts to avail himself of its presence it becomes apparent that there is not room for more than one upon it. The first-comer resists with tooth and nail the efforts of his companion in trouble to dispossess him of his coign of vantage, and the squeals which form an accompaniment to the fight for a footing upon the brick attract more rats to the scene of the tragedy. The conflict waxes more and more furious as rat after rat topples into the water, and by morning bedraggled corpses in plenty will gladden the eyes of the man whose losses at the teeth of rats have induced him to adopt this means of thinning their numbers. Some years ago the plan described above was tried in a city warehouse, with the result that more than 3000 rats were destroyed in a single night.—*The Cornhill Magazine.*

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, *or beyond the time he intends to pay for it*, let him not fail to write us *direct* to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

For Sale.—Valuable land in Tulare county artesian belt. 160 acres, 1½ miles southwest of Tulare city; 480 acres, 7 miles southwest of Tulare, with large flowing artesian well, well-finished two-story horse, large barn, etc.; 160 acres, 2 miles southwest of the above; 480 acres 3 miles southwest of Pixley and about 4 from Alila. For sale by owner in lots to suit at low prices, low interest and very easy terms. For further information, address LAND OWNER, Box 2517, S. F., or A. T. DEWEY, No. 220 Market street, San Francisco, Cal.



Angora Goats at the Santa Clara Co. Fair.

One of the most interesting exhibits at the recent Santa Clara Co. Fair was that of C. P. Bailey's four pens of pure-bred Angora goats. The fact that Mohair has advanced in price fully 40 per cent over last year's prices has put new life in the "Mohair industry."

The bulk of Mr. Bailey's this year's clip of Mohair sold at 42 cents. None sold for less than 39 cents, and a small lot of pure-bred kid fleece was valued as high as 65 cents.

Mr. Bailey now has ready for sale about two hundred (200) head of fine young pure-bred bucks, and expects a greater demand for them this fall than ever before.

He has made a specialty of goat-breeding for the past 25 years, and is a most earnest and diligent promoter of the Mohair industry. He has sold nearly $70,000 worth of stock for breeding purposes, and still owns about 10,000 head, over 1000 of which are pure breeds. He has this year raised more Mohair than the combined product of any other four goat-raisers in the United States. His flocks richly deserve the popularity they have acquired.

CALL, INVESTIGATE, AND BE HAPPY.

It is said competition is the life of trade. Anyway it is death to high prices. Thus competition to be effective requires first, the goods offered must be at bottom prices and bottom prices necessitate low rates of invoices. Established in 1868, for 22 years, says Mr. Terry, we have followed this system. Our furniture, which is the best, both new and second-hand, from the advantages of our having cash capital at command, has been always offered at the lowest market rates and generally lower, our customers saving at least 20 per cent on their purchases. You can order as cheap by letter as though personally present. The finest line of rugs, carpets and furniture constantly on hand. Don't forget. Salesrooms 745 and 747 Market St. Jos. T. Terry & Co.

Let Us Know

If you fail to get this paper. We prefer to send missing Nos. Write soon and to the office direct. It is important that we should know when the paper miscarries.

DR. T. J. FRAZER, Dentist, Room 54, Flood Building, Market and Fourth Streets, San Francisco, Cal.



The Haines Gang Plows.

As the plowing season approaches it should be the business of every cultivator to note what improvements are being introduced by plow manufacturers and take advantage of the latest devices which commend themselves to experienced tillers of the soil. In this connection, the Haines Gang plows, which are offered by Stanton, Thomson & Co. of Sacramento, should be carefully examined. These Gang plows embrace a new principle of construction, consisting of a "fifth wheel" on the axle, which facilitates turning a corner and enables the plowman to turn without removing them from the ground, and with no side strain on the wheels. In other words, the beams are attached to a *fifth wheel*, which pivots on the axle, enabling the wheels and axle to swing in turning, like those of a wagon, thereby relieving the plow from much of the strain in turning, on both wheels and bottoms.

The engraving given herewith gives one style of these improved plows, and the advertisement of Stanton, Thomson & Co. upon another page of this issue shows other styles. The plows are adapted to various kinds of work and they are light and strong as steel and malleable iron can make them. They have imperial chilled or steel bottoms. The same carriage is used for two, three and four-gang plows, so that a two-gang plow can be changed to a three or four-gang by simply bolting on the extra beams and changing one bolt. This is an important feature with this gang, and one that will be appreciated by farmers, as they can have a two, three or four-gang riding plow for little more than the cost of an ordinary two-gang plow.

JOSHUA HENDY MACHINE WORKS,

(INCORPORATED SEPTEMBER 29, 1882.)

NOS. 39 TO 51 FREMONT STREET, SAN FRANCISCO, CALIFORNIA.

MANUFACTURERS OF NEW AND DEALERS IN SECOND-HAND

BOILERS, ENGINES, PUMPS AND MACHINERY

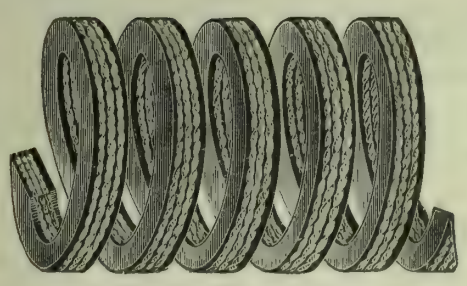
OF EVERY DESCRIPTION.

PROPRIETORS OF THE CITY IRON WORKS.

AGENTS FOR THE SALE OF

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"RUSSELL" AUTOMATIC ENGINES,
"CLIMAX" BAND SAW-MILLS,
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"ERIE ENGINE WORKS" BOILERS AND ENGINES,
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EXHAUST STEAM INJECTORS,
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A LARGE STOCK OF

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OF ALL SIZES

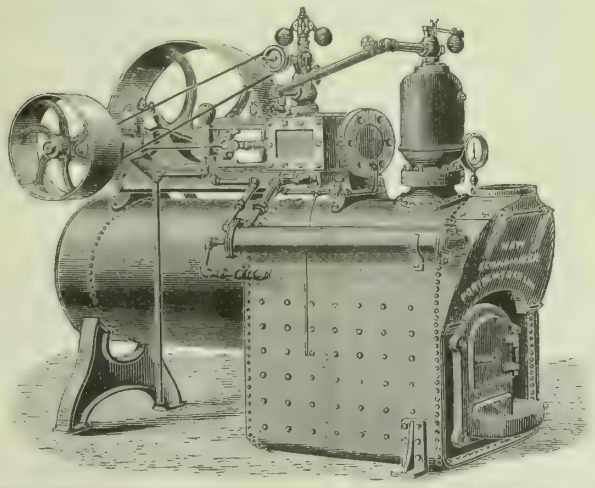
CONSTANTLY ON HAND.

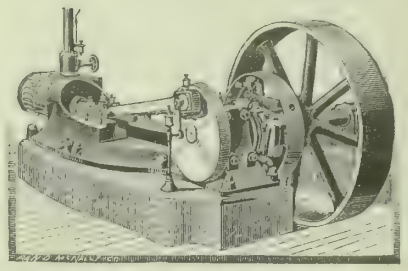
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FOR

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"RUSSELL" AUTOMATIC ENGINE.

Saw-Mill Machinery,

DOUBLE AND SINGLE CIRCULAR,

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WOOD-WORKING MACHINERY,

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Band Saws. Stickers. Planers, Shapers, Shingle Mills, Etc.

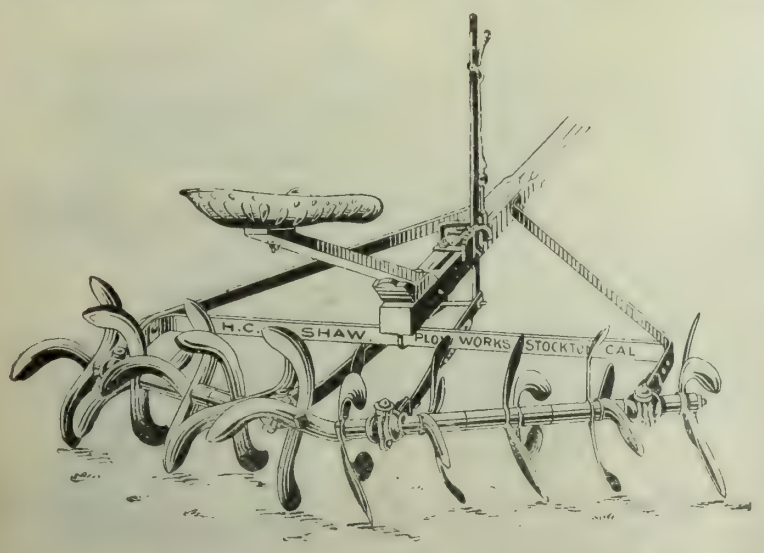
IRON-WORKING TOOLS

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THE "TRIUMPH"

ALL METAL SPADING HARROW.



THE BEST PULVERIZER IN THE WORLD.

Just the Thing for Working Summer Fallow Land.

SPECIALLY ADAPTED FOR ORCHARDS AND VINEYARDS.

FOR TWO HORSES. Works the soil about six feet wide. Angle of teeth adjustable to work the soil at desired depth. THIS HARROW is something entirely new. IT IS THE GRANDEST ACHIEVEMENT of its inventor, C. LA DOW, who is the recognized authority on Harrows, there being but few leading Harrows at the present time not built under his patents. We have made exclusive arrangements for its sale and it can be obtained only through us or our agents.

THE NAME "SPADING" refers to its action on the soil. The action of each cutter is like that of a small spade, lifting and turning the soil from a depth of four to six inches, doing more perfect work than is possible with any other Harrow in the world. THE BLADES are made from spring steel, in operation vibrating and shaking off sticky soil. IT NEEDS NO SCRAPERS to clean the revolving cutters.

Considering the immense amount of labor done, the draft is very light, as the pulverized soil passes through the gangs of revolving cutters, being left smooth. THE GANGS are so arranged that the most uneven ground is thoroughly harrowed and left level. IT LEAVES NO FURROW or ridge; when the field is harrowed it is all left smooth.

THE TRIUMPH REAPER NO. 3.

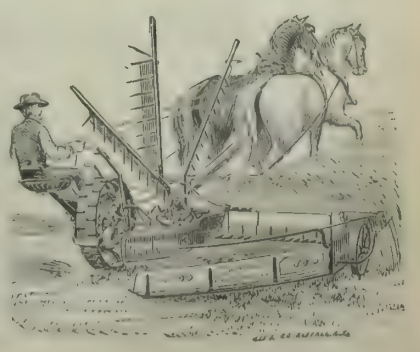
While Binders to a large extent have superseded Reapers, and the sales of the latter with other houses have greatly decreased, our trade on the No. 3 Triumph Reaper has been growing steadily larger.

Each year, since the introduction of this Reaper, have our sales increased, and although our supply from the manufacturers has been larger every year, yet the demand has been so much greater than our expectations that many orders have had to go unfilled.

We are prepared this year to fill all orders promptly, and guarantee every Reaper to do first-class work under any circumstances.

Every Triumph Reaper now running in the State of California is giving entire satisfaction to the farmer owning it.

Special Reaper Circular sent on application.



H. C. SHAW PLOW WORKS,

361, 363, 365, 367, 389 and 391 El Dorado St.,

STOCKTON, CAL.

THE VINEYARD.

Report on the Grape Interests of the Napa District.

The following is the report of E. C. Priber, just prepared for the Board of Viticultural Commissioners, of which he is a member for the Napa District:

It is not very gratifying for the Commissioner of the Napa District to make his annual report at a time when the conditions of the wine industry are so deplorable as they are at present, but it is with special pride that we can claim for this district that, with all the hard times, the low prices for wines and the terrible destruction by phylloxera, it shows wonderful improvement and has gained during the past few years a high reputation for the quality of both its wines and brandies.

The difficulty found in disposing of the young wines at a remunerative figure has forced many growers to hold their products, to buy the best oak cooperage and to build new cellars. This, as it may be called, forced retention of aged wines, has enabled them to seek and to find a profitable market with the consumers here and outside the State.

Napa county has improved immensely in its cellar facilities of nearly 500 growers. More than 100 make their own wines; about 50 of them have stone cellars, partly underground or tunneled. The total cooperage in the valley reaches ten million gallons.

While it is true that very little wine of Napa valley is offered on the San Francisco wholesale market at present, large quantities of the last three vintages are still held by the growers, who can give their product proper care and time to develop those qualities which will command a remunerative figure.

These terribly hard times have taught this lesson: That not all wines made are excellent, and not all can be judiciously aged, and thus learning to discriminate, the grower prefers to send all doubtful wine to the distillery to putting it on the market or to aging it, and by doing so injuring both his reputation and that of his district.

We have 35 registered distilleries in Napa county which have reported to the Internal Revenue Department 242 180 gallons of brandy from October 1, 1889, to August 1st this year. Quantities of this brandy have been shipped to Europe, where our Napa brandies have gained an excellent reputation.

The ravages of the phylloxera have been more noticeable than ever before. Only about ten per cent of the 15,000 acres are planted in resistant vines. The experience with the resistant vines in France, where the production is rapidly increasing in consequence of the replanting of those vineyards which were destroyed by the phylloxera, should teach us a lesson. It cannot be impressed too strongly upon our growers that the replacing of their diseased vines by Riparias is the only true salvation for their vineyards, and it might be advisable for our board to consider if our funds and the law which appropriates them would not permit the furnishing of Riparia roots to the wine-growers. We would also recommend to use all efforts in inducing the growers to pull out and burn all diseased vines, the present condition of affected vineyards in this State containing these destroyed vines making them hot-beds for the propagation of this plague. Experience has shown that where diseased vines have been pulled out and destroyed, the progress of the phylloxera has been comparatively slow.

This year's crop in Napa county will be smaller than that of '88 or '89. The shortage is caused mostly by the ravages of the phylloxera, and somewhat by coulure and sunburn. The Zinfandel, which is by far the most predominating grape, did not set as fully as usual, and will yield a light crop. The white grapes are looking very healthy and give promise of a bountiful crop.

Solano County

Is one of the few counties where table, raisin and wine grapes (suitable either for drying purposes or the manufacture of sweet or dry wines) are cultivated to perfection. This county has about 3000 acres in bearing, of which about 1000 acres are used for table grapes. The product of 500 acres is made into raisins, and 1500 acres are in wine grapes.

In the northern part, around Dixon, we have about 500 acres in grapes, nearly one-half of which are cultivated for raisins alone. The balance of the grapes will be dried this year; in fact, most of them are already contracted for. In former years a couple of hundred tons of grapes were sent from this neighborhood to the wineries at Cordelia, Napa City and San Francisco. No wines will be made in this locality the present year.

In the Vacaville section, including Pleasant valley, most of the grapes are sold for table use. The few vineyardists having wine grapes will dry the present crop. In Pleasant valley a great many vineyards are partly destroyed by phylloxera. Vineyards near Vacaville look healthy, are well taken care of and do not show much signs of phylloxera. They prove to be an excellent investment this year. Only a few small wineries exist here, the production of which does not figure largely in the grape market.

The vineyards around Cordelia, including Suisun, Fairfield, Benicia and Green valley, are planted solely to wine grapes. The climatic conditions do not favor raisin culture and scarcely permit the drying of their product. We have many wineries in this vicinity which, as the phylloxera has made considerable progress and has destroyed already hundreds of acres here, are fully able to handle the present crop, which looks very promising. Some grapes near Fairfield make very good sweet wines, but the larger part of the product of the wineries is light dry wines from grapes grown on the hills surrounding Green valley and the slopes near Benicia. Solano county may now have 200,000 gallons of wine in its different wineries and cellars, and will produce not more than 500,000 gallons this year.

Contra Costa County,

Which produces largely table grapes, lost a considerable portion of last year's crop by early rains. This year's crop is very promising. The wine production of the county may reach 400,000 gallons during the coming vintage.

The El Dorado District.

The following is the report of G. G. Blanchard, Commissioner for the El Dorado Viticultural District:

To the Board of State Viticultural Commissioners: For the purpose of better acquainting myself with the absolute condition of this branch of industry, I have quite recently made extensive visits into the counties of Yuba, Sutter, Nevada, Placer, Amador, Calaveras and Tuolumne; and have received reliable information in relation to the subject of viniculture in the counties of Mono, Inyo and Mariposa.

I am informed by the several assessors of the counties of Alpine, Plumas, Sierra and Mono that there are no grapes of any kind raised in those counties, except it may be a few experimental vines, planted more for experiment and curiosity than from any idea of profit.

Grape-raising—either for wine, table or raisins—in my district is principally confined to the counties of Placer, El Dorado, Amador and Calaveras. However, I have found some very fine specimens of raisins and fine qualities of wines produced in the counties of Nevada, Yuba and Tuolumne.

The raisins of Placer and El Dorado have long been known to the raisin market as superior in quality, those of Placer county having taken the first premium at the Citrus Fair, held in Sacramento in 1887.

El Dorado county having been the site of the discovery of gold in California, necessarily had attracted to it the earlier immigration to California, and to gold mining was added, at an early day in its history, that of viticultural pursuits, and the early vineyards were planted to what is known as the Mission grape. Probably some of the oldest vineyards in the State, outside of the Missions, are to be found in El Dorado county, planted when no other grape was known in the State except the Mission variety; and as the foreign vines became introduced into the State, they necessarily found their way into this county, so that to-day we have vineyards of the finest foreign varieties. The soil and climate, to an altitude of 2800 feet above the sea level, is found to be conducive to its growth to perfection. This adaptation of soil and climate is not confined to the growth to perfection of any one particular kind of grape, but extends to the whole family and species.

Except in the county of Placer, and there only to a limited extent, have vine pests of any kind affected the vineyards. The vines, from an altitude of 600 feet to that of 2800 feet above the sea level, have a uniformity of growth, healthfulness and producing qualities. Those of the higher altitudes contain much more of saccharine matter than those of the lower altitudes.

Those grapes cultivated for table use, such as the Tokay, Emperor, Rose of Peru and Muscat of Alexandria, obtain in the higher altitudes a greater degree of perfection in color, richness and consistency than those grown in the lower altitudes. The Flaming Tokay, at an altitude of 2000 feet, arrives at that peculiar color from which originated its sobriquet of "Flaming," and has that degree of fire brightness not to be found in those grown in the lower altitudes. The Muscat of Alexandria is relieved of that green appearance which it has in the valley counties, and possesses in the foothills a rich golden appearance, and it also has a more pronounced richness of the Muscat flavor.

In the counties of Yuba, Nevada, Placer, El Dorado, Amador and Tuolumne there is more or less wine of a very superior quality made. In Yuba there is a winery whose annual product runs into the hundreds of thousands of gallons, owned and operated by Mr. G. Sieber. At Nevada City there is also a winery, owned and operated by the Nevada County Wine Company, producing some ten or fifteen thousand gallons of wine annually. In El Dorado county there are several wineries, all producing a first-class quality of white wines, and some of their red wines command the highest price in the market.

The wines of Mr. George Sieber, both red, white, dry and sweet, will compare favorably with those of any other section of the State, and are the product, I was informed, of the grapes raised along the foothills back of Marysville. All the grapes converted into wine at the Nevada winery are raised in the higher altitudes of the grape-producing regions of Nevada and Placer counties, none of the grapes being raised at a less altitude than from 2000 to 3000 feet.

The grape-producing regions in my district will cover, from Yuba to Inyo counties, an area of from 20 to 30 miles in width by from 250 to 300 miles in length; and of all this vast region there is not a thousand acres but what is susceptible of producing the finest qualities of grapes of any variety, either for wine, raisin or table use.

Profit being the great desideratum of all industries, and especially those which require so much labor and expense as that of grape culture, wine and raisin making, the great distance to market, and an almost total want of facilities for transportation, has caused this industry, as to most of this vast area, to be neglected; for no matter how complete an adaptability there may be, both in soil and climatic condition in this region, unless the industry can be made profitable it will find but very few who will embark in it.

It is strange to observe, and yet true, that very little sulphur or other curative articles are used in any of the vineyards in these localities, there being no apparent need of its use, especially in the higher altitudes of the grape-growing regions.

On account of the distance from market and want of transportation facilities, very few new vineyards have been planted in the last year or two. In Placer county there has been a marked increase of acreage in the planting of vines in the last year, which on account of the facilities for transportation to market have been mostly table and raisin varieties.

Since the establishment of this commission, it is observable in all of the vine-growing localities of my district that there has been a constant increase in the cultivation of those superior varieties of foreign vines, both for wine and table use; and also through the advice and information in wine-making given to our wine-makers and viticulturists through our Chief Executive of Viticulture and Health Officer, there has been a most remarkable advancement in the art of wine-making and of grape culture generally.

At no distant date, when railroads shall have been extended so as to reach these grape-producing lands to such an extent as to afford facilities for cheap transportation, this whole region to which I have alluded will be one vast vineyard, giving employment to thousands of laborers and adding vastly to the wealth of California.

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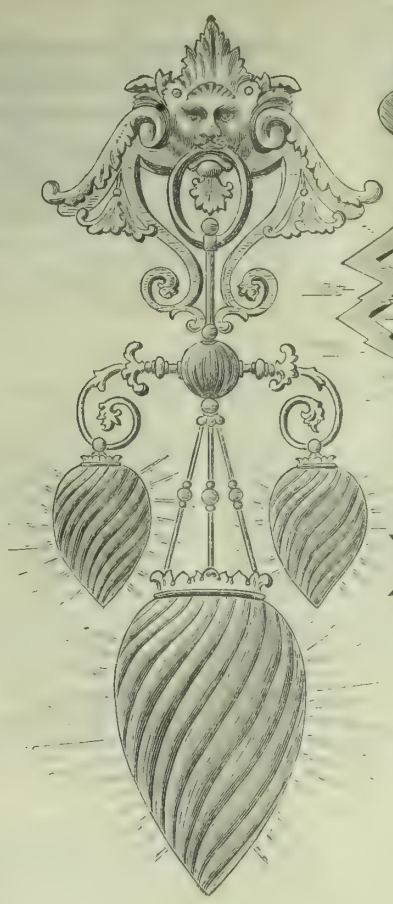
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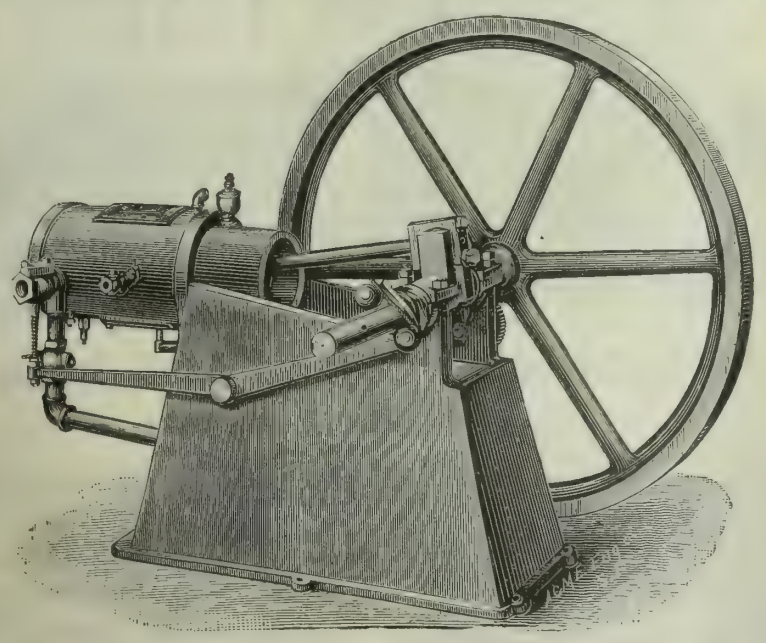
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PUBLIC AFFAIRS.

Taxation No Treasury for Farmers.

EDITORS PRESS:—Mr. Brigham, the national head of the Grange, says that if the policy of protection is to prevail, the farmers should have their fair share. He has frequently expressed, in a cautious and conservative way, his doubts about the whole protective business. He, like all the thinking farmers, has no doubt about the fact that now it is the farmers who pay for protection and yet get none of it. His remedy is for the farmers to enter the lobbies of Congress to log-roll for public taxes for private profit.

While some among the farmers think well of such a plan, our Protectionist leaders have little hesitation in expressing their intimate belief that the farmer must save himself and not look to any relief from legislation.

Legislative favors are competent to combinations of capital in monopolies or manufactures, but no befriending of the farmer can be effective by laws and duties raising the price of his products.

Carnegie, the canny Scotsman, who is rolling up such a vast fortune by the aid of our protective laws, well expresses this view in an article in the July *North American*. He there indicates that the produce of the farmer is largely food; that when the amount of food produced in a country is insufficient, combination among the farmers and monopoly, by the aid of protective duties, become possible, and not otherwise.

As food increases in price the number of those who die from an inability to pay for enough to keep them alive, augments. Thus protective profits to the farmer must increase the death-rate from starvation. This result is inevitable. Laws and duties for the farmer's protection, when really effective to him, are as impossible of maintenance in this country today as they were in England in 1848. Any laws directly and visibly bringing the starvation line higher among the poor cannot be enforced in a free country. The Protectionist leaders know this perfectly, and in the duties nominally for us farmers they play upon our weakness and secure our support for their legislative favoritisms on the false pretense that we, too, have our fingers in the public purse.

The leading Protectionist paper of this end of the State is the Los Angeles *Times*. On Aug. 4th there was an editorial in that paper entitled "The Farmers and Self-Help." The article commences thus: "We are glad to see that some journals are beginning to preach self-help to the farmers. As long as the tillers of the soil place their trust in legislation to lift their feet out of the mire and the mortgages off their backs, they will make little progress."

The fact is that the farmers have had neither confidence nor relief from legislation. They have been the victims of legislation. They have seen railroads bonused and favored, bankers bonused and favored, infant industries bonused and favored, while they have furnished the bonus or been the prey of these law-favored few. The *Times* article has, however, a truth shining through it dimly. It is that the protectionists themselves do not expect to be able to help the farmers, admitting that they desired to do so.

The policy that the farmers should pursue is one of equal justice to all.

We cannot hope to profit by any policy of favoritism. In intrigues, combinations or monopolies we are at a disadvantage as against concentrated capitalists. In legislative matters we continuously see corporations or capitalists slip out of their public obligations, reduce or totally avoid their taxes, and by intrigue or bribery obtain by law favors, monopolies or bounties at the general expense. We farmers are not in a business easily aided in this way, nor are we so disposed to play the part of beggars or thieves. I do not mean to say that the farmers are saints, but I do say that what moral tone the nation has depends on the farmers for its existence and could not live without them. The farmer is therefore always at a disadvantage in intrigue or chicanery. His strength is truth.

The farmer may support the various schemes to increase the profits of special occupations, or protect them, as it is called, at his own expense; he may consent to the enrichment of others by public taxation, but he can never hope to employ the law as a means of filling his own pockets.

In public taxes, the cost of collection and the friction and waste are heavy, so much so that only a small minority can ever profit by public taxes for private use. The farmers, being a majority of the whole community, are consequently precluded from any expectation, as a class, of deriving benefit from such taxes; and here it may be said that it makes no difference in the result as to whether such taxes for private benefit are collected by the Government and distributed in bounties or collected by the favored few by public law, as is now done under the protective system. To use an expressive slang saying, "the farmer is not in it." Consequently the farmer, in considering the enormous burden he now bears of protective taxes, the injury of world commerce and of his markets for surplusage by this system, should estimate only the advantages a few proprietors of the Carnegie class are to be given.

To ask the farmer to enact public taxes for private profit on the pretense that he is to be enriched, is like asking an honest man to compound felony on the ground that he will be given by the thieves a fraction of property that they have stolen from him, or are to steal from him.

The farmer may consent to be robbed for others' enrichment, but he cannot be robbed to enrich himself. ABBOT KINNEY.

Santa Monica, Aug. 25, 1890.

FARMERS' INSTITUTES.

Institutes in Oregon.

[Written for the PRESS by PROF. H. T. FRENCH.]

Some two years ago the Board of Regents of the State Agricultural College voted to hold a series of Farmers' Institutes. The matter was brought up by E. B. McElroy, State Superintendent of Public Instruction, who was well acquainted with the benefits derived from Teachers' Institutes held throughout the State. The management and control of the Institutes was placed largely in the hands of the college professors. A certain amount was set apart from the college funds to defray the expenses of such meetings. Six Institutes were held in different parts of the State with a reasonable degree of success.

Last year six more were carried on with more success than the year previous, and so the outlook was encouraging.

This year a series of six more has been located in various parts of the State. The first one is at Grant's Pass on the 28th and 29th of August; the next at Union, Union county, Sept. 10th to 12th. It is usually the plan to have the Institute continue through two evenings and one day, but the people of Union have planned for seven sessions, taking three evenings and two days. The remainder of the Institutes have been located at McMinnville, The Dalles, Silverton and Junction City.

The expense of such meetings is not very great—simply the actual traveling expenses of those who go from the college, together with small bills for printing, and (sometimes) for the use of the hall where the meeting is held. Very often such accommodations are furnished by the community where the Institute is located.

Some of the objects of such meetings may be briefly stated as follows: To bring the farming and industrial classes into a closer communication with the college professors. There is apt to be a feeling that the professors are away above the common people; that "book-larnin'" has placed them on a high pinnacle, from which they look away off over the heads of the humble farmers. This, of course, is a false notion, and the way for us to weed it out is to get down and mingle with the class whom we seek to aid. The Institute is the best place in the world for this kind of work.

Another object, like that of all similar organizations, is to bring the farmers together in order that they may exchange ideas upon the questions which are of vital importance to them. This every one understands to be of great good, and it needs no further mention here.

Mr. J. H. Stevens writes, regarding the work of the Farmers' Institutes in Wisconsin, as follows: "I have no hesitation in saying that, in my judgment, Farmers' Institutes, as conducted by you in Wisconsin, are of more moment and fraught with more benefit to the farmers than any other educational system that could be adopted. These Institutes have already been the means of advancing Wisconsin to the front of all her sister States in progressive agriculture. It is fortunate that you have such men as ex-Governor Rusk and Governor Hoard to lend helping hands in the noble work."

In the State of Wisconsin, $12,000 is appropriated annually for Farmers' Institutes. In Michigan, only $400 is set apart for this work, and the result has been very satisfactory.

The State Legislatures should make special provision for this work, and not compel the college authorities to take it from the college fund.

Wherever a State Institute is held, a permanent organization should be formed, so that the seed sown may spring into life in the shape of a local Institute the following year. Some of the best Institutes I have ever attended were carried on by local talent. A Grange, or Farmers' Club, or any half-dozen live farmers who will lay their plans for such a meeting, will meet with success.

That there must be a *large* appropriation from the State or Government for such work, is a mistake. Of course the larger the sum to draw upon, the more meetings can be held; but it is better to start them on a smaller scale and then enlarge as the demand increases.

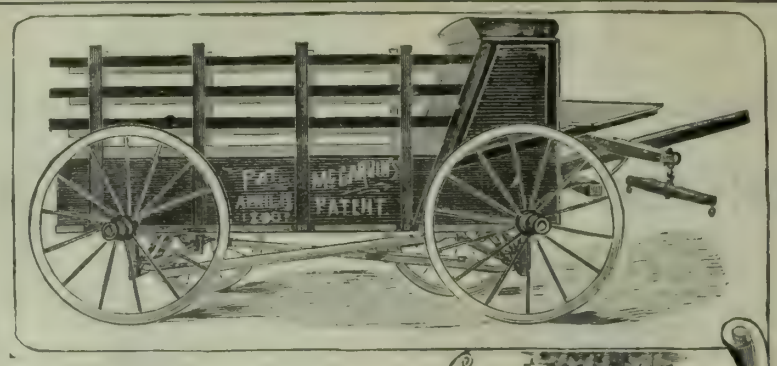
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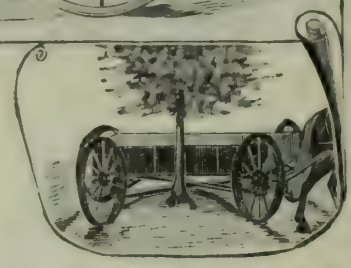
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LANGSHANS.—We wish to call the attention of our readers to the advertisement of Mr. W. E. Cornell, Des Moines, Iowa, breeder of pure-bred Langshans. A correspondent writes us that Mr. Cornell has some very fine specimens of this breed, and parties desiring to buy would do well to correspond with him, as he has a fine flock now ready for sale.



The Stockton Business College and Normal Institute.

Over a year ago we wrote that we did not wish to criticise our public schools, but that we believed our private schools, and especially our business colleges, were doing more for the public than public schools.

Take a school like the Stockton Business College. It has been established 16 years, but its growth for the past three years, and especially for the past year, has been a marvel to the State. Over 600 students have been in attendance during the past year, and the amount of work gone over and the general satisfaction given is almost incredible.

The principal, W. C. Ramsey, is a young man possessed of a great deal of push, executive ability, honesty and pleasing manners. In fact, he is the right man in the right place. His teachers are the best that can be obtained, for he pays such salaries that only men of merit can command. Their presence is a constant inspiration and example to those under their charge. Ten regular salaried teachers are to be found there every day.

One great feature of the school is its cheapness, and young men find that they can actually board, room and go to school there cheaper by far than they can get board alone for in most places in our State. Their charges are $18.75 per month for board, room and tuition by the year.

Mrs. Ramsey has charge of the dormitory of the school, and parents, however particular, need have no fear of sending their daughter or son, for they may rest assured that at all times they will receive the best of care and attention. Board is $10 per month and a furnished room $3. All of their rooms are heated by natural gas, and nothing more neat or convenient could well be devised.

Their course of study is much broader than most business colleges, for it includes not only all classes of business work and shorthand, but they train more teachers than any other private school in California. Over 70 of their students have passed the various county examinations and have received certificates to teach during the last eight months. One can hardly attend school there and not be filled with a desire to excel. They all seem to catch the inspiration.

The greater part of their students are young people who have earned their own money and have no time nor money to lose.

The school is indorsed by over one hundred of the business men of Stockton, for there is perhaps no other one institution in the city that is doing so much for the city.

The school occupies two entire buildings (see engraving of one in this issue), and is on a substantial basis, for it owns both of the buildings and they are fitted up as no other school in the State is fitted up. No pains, money nor time have been spared to make this school the leading school of the coast.

They now offer a choice of $25 cash or $50 scholarship to the person who will write the best essay on the subject:

"The value of a good practical education and the advantages offered by the Stockton Business College for securing the same."

We do not claim to be experts in school matters, but we hardly see how it is possible for any school to do more for those under its charge than the Stockton Business College.

Write to them for information, or what is better, call on them.

Mr. Ramsey says that "the time has come when a young man must either carry a good practical education or pack his blankets." Boys, take your choice.

The school is not on a visionary basis, but owns two immense buildings and occupies over 25,000 square feet of floor room. It excels all schools of the kind in the State in the number of teachers employed, the amount of room occupied, in the arrangement of its rooms, in the oversight over its pupils, in the advantages offered to those attending, in the cheapness of its expenses, in the number of students attending and the *Home Influence* given to all.

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The Pavilion will be open four nights during the week.

A splendid field of horses entered in the speed department, and fine exhibitions of racing will be given each day.

Entries for premiums close Monday at 7:30 P. M. Exhibitors are urged to make as many of their entries on Saturday before the fair as possible. Goods, animals and articles for exhibition must be in their places by 10 P. M. on Monday.

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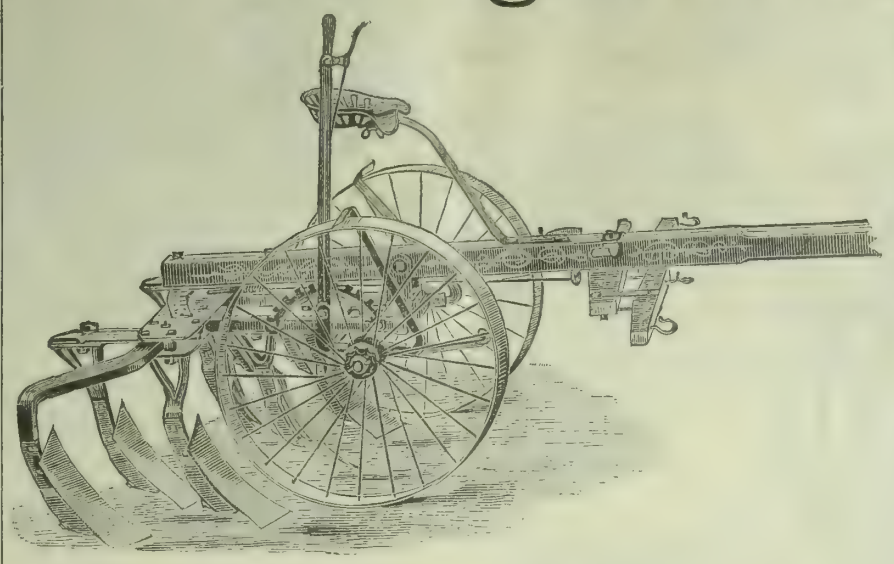
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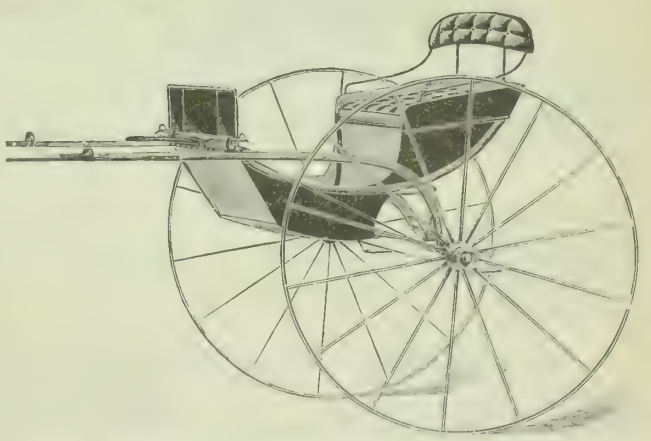
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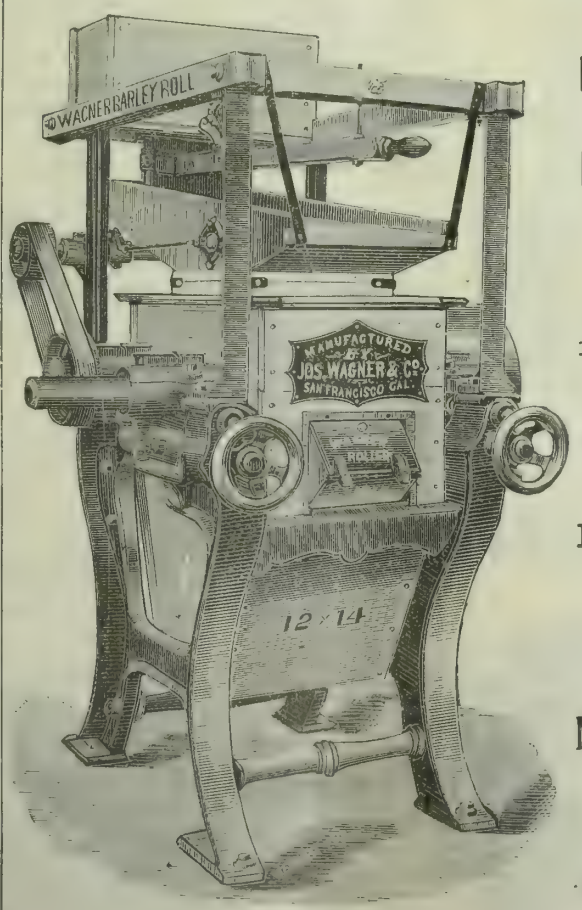
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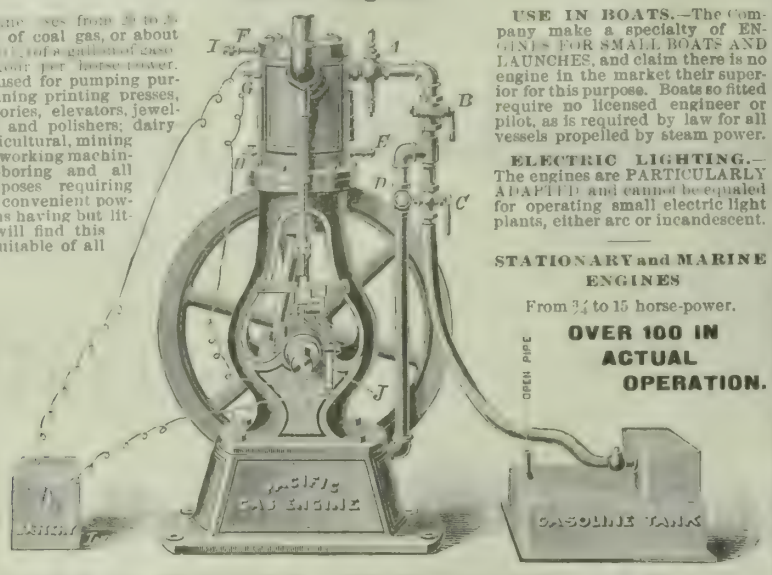
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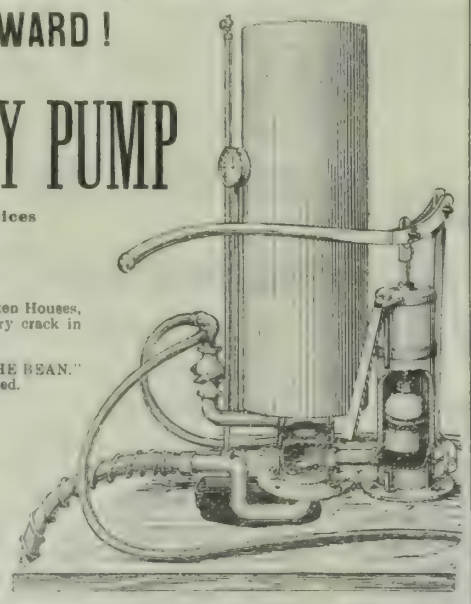
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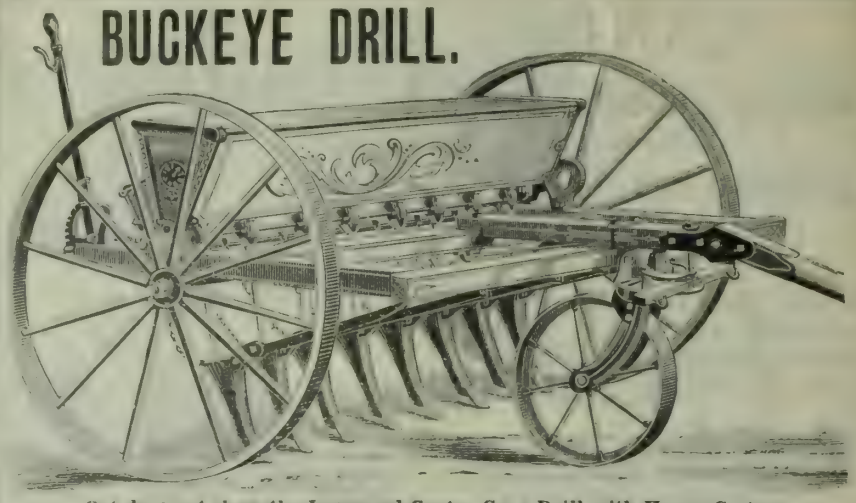
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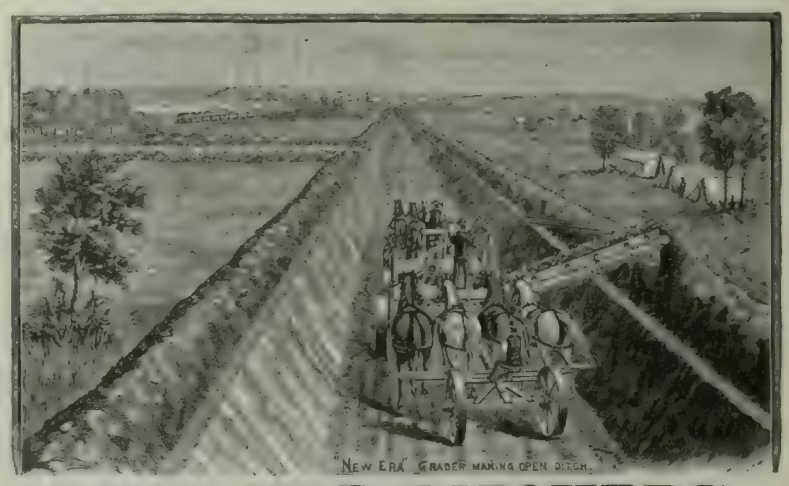
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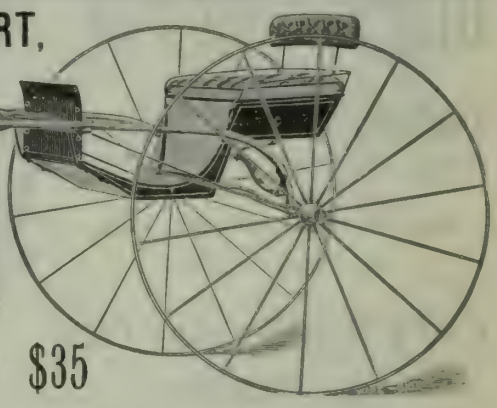
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List of U. S. Patents for Pacific Coast Inventors.

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FOR WEEK ENDING AUG. 26, 1890.

434,971.—RAILWAY BRAKE—A. F. Baatz, Bellingham, Wash.

435,274.—SOLDERING IRON—F. Barr, Tacoma, Wash.

434,916.—TRANSMITTING POWER—E. Chaffey, Santa Monica, Cal.

435,020.—STREET CAR MOTOR—F. M. Merrill, Oakland, Cal.

435,026.—TROLLING SPOON — H. E. Skinner, S. F.

The following brief list by telegraph, for Sept. 2, will appear more complete on receipt of mail advices:

California—Joe S. Blood, assignor of one-half to E. Manasse, Napa City, knife-sharpener; John M. Bryant of San Francisco, assignor to P. A. Doane, Oakland, ore-crusher; Stephen H. Chase, San Jose, continuous sectional chimney; Ferdinand Frank, Suisun, clothes-drier; George Gates, Drytown, concentrator; Carleton C. Harris, Chicago, Ill., assignor to A. N. Bartlett, Salida, automatic fire-kindler; David B. James, San Francisco, plate or pan lifter; Paul Maisonneude, Oakland, fruit-stoning machine; Washington Man, Fresno, insecticide; Alfred F. McMillan, assignor to Benicia Agricultural Works, Benicia, gang-plow frames; John L. Notley, Santa Cruz, decorating machine for removing outer covering from office; Fred H. Smiley, San Jose, journal bearing. Oregon—Joseph Albers, assignor of one-half to J Zeis, Corvallis, gate; Jennie A. Shepard, fossil-reel for winding skeins of zephyr, etc. Utah—Thomas Delamare, Toele City, axle skein; Rebecca M. Henshaw, Salt Lake City, clothes-hook.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none out worthy men.

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E. H. SCHAEFFLE—Calaveras Co.
O. N. CADWELL, Carpinteria, Cal.
WM. M. HILLEARY—Oregon.
JOHN SIMPSON—Oregon.
WM. HOLDER—Oregon.
R. G. BAILEY—Washington.
A. S. ROBERTS—The Dalles, Oregon.

"NOBLE WOMEN."—During his discourse at the funeral of Dr. W. W. McKaig recently, Rev. C. W. Wendte spoke of the appreciation by the deceased of the care and kindly attention of the noble women of the Fabiola hospital, to which he had often referred during his last days, which were spent at that institution. —*Oakland Enquirer.*

DR. BUZARD AT SALINAS.—We understand that Dr. Buzard will be in Salinas City about September 10th to operate upon a lame horse for W. J. Hill of the Salinas *Index*. Possibly others in the same region may need veterinary services, and if so, they can inform Mr. Hill.

MAYOR HAZZARD of Los Angeles has vetoed the ordinance calling a special election to decide whether saloons shall be closed on Sundays.

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PART IV: THE GRAPE.—Rise and Progress of the Grape Interest; Propagating and Planting Vines; Pruning and Care of the Vine; Grape Varieties in California.
PART V: SEMI-TROPICAL FRUITS.—The Date; The Fig; The Olive; The Orange; The Lemon, Lime, etc.; Minor Semi-Tropical Fruits.
PART VI: SMALL FRUITS.—Berries and Currants.
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A Substitute Race.

SACRAMENTO, Sept. 1.—At a meeting of the Executive Committee of the State Board of Agriculture to-day the matter of a substitute race for the 2.20 class was rearranged, and a trotting purse of $1200 offered, to be trotted for the first day, Sept. 11th, in place of the 2:22 class, in which the following named horses are eligible to entry, and such others whose records are not better than 2:23: Mary Lou, Wanda, Redwood, Pink, Guide, Oaknut, Argent, Larco, Nona Y. and Victor.

DENICKE'S FIGS.—Mr. M. Denicke of Fresno sends us a sample of his dried figs and asks what we think of them. We will answer frankly that they are exceedingly pretty, very light color and skin semi-transparent—as handsome a fig from an artistic point of view as we ever saw. The flavor, however, has been seriously impaired by the process employed in their preparation, and we suspect an oversulphuring. The flavor is not to be compared with that of Mr. Denicke's figs of last season, which, though somewhat darker color and perhaps tougher skinned, were vastly superior as an article for eating. This is the judgment of several whom we consulted and who have the memory of last year's figs by which to measure the impression made on the palate by the present sample. Of the comparative value commercially of the two products we do not attempt to judge.

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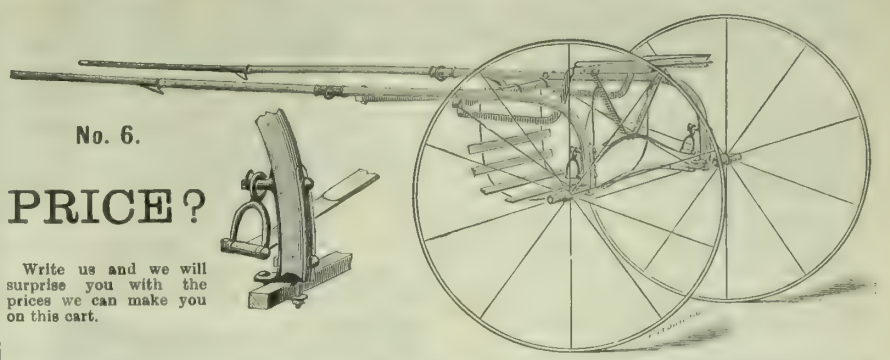
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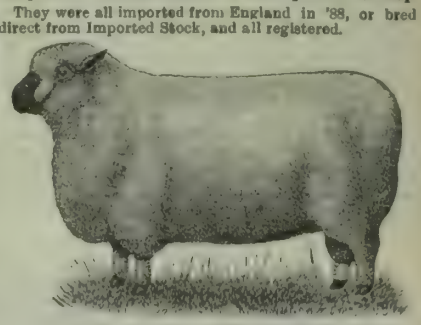
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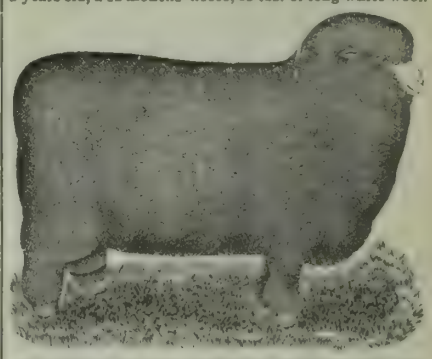


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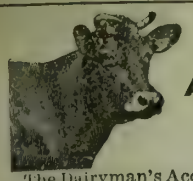
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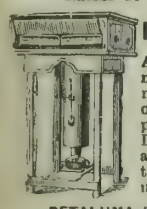
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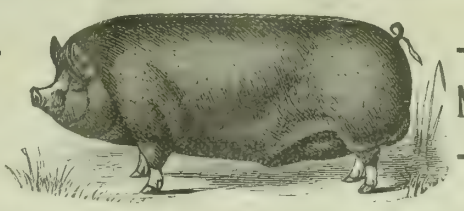
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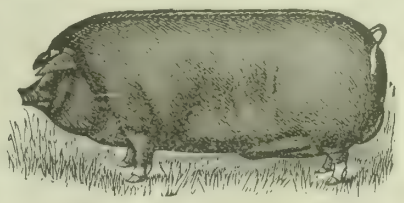
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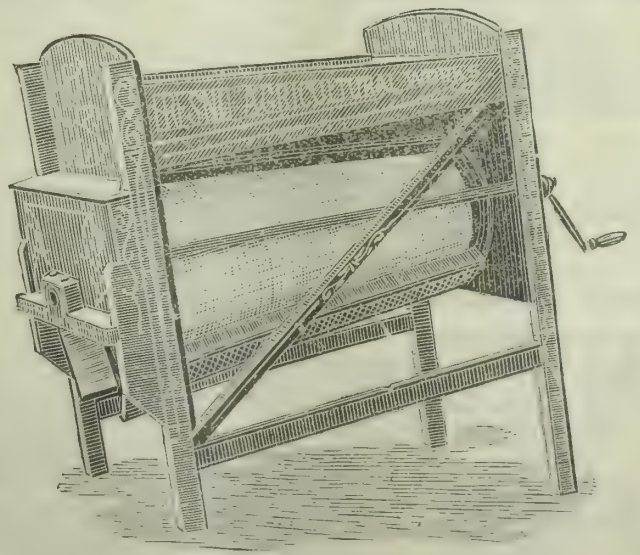
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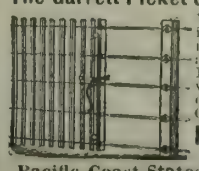
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S. H. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Sept. 3, 1890.

General trade in farm products has continued quite active. With the expectation of large numbers of visitors being in the city the incoming week, there has been a quickened demand and better prices for dairy products. Green and dried fruits are still active at good prices. Hops have made another up move. Barley shaded off some, but recovered at the close. Wheat at the East and abroad has sold at lower prices. The following is to-day's cablegram:

LIVERPOOL, Sept. 3.—Wheat—Quiet but steady. California spot lots, 7s 5½d to 7s 8d; cargoes off coast, 38s 9d; just shipped, 38s 6d; nearly due, 38s 9d; cargoes off coast, slow; on passage rather easier; Mark Lane wheat, very little demand; English country markets, quieter.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Sept.	Oct.	Nov.	Dec.	Jan.
Thursday	7s8d	7s9d	7s9½d	7s10½d	7s10½d
Friday	7s8½d	7s9½d	7s9½d	7s10½d	7s10½d
Saturday	7s8½d	7s8½d	7s8½d	7s9½d	7s9d
Monday	7s7½d	7s8½d	7s8½d	7s9d	7s9d
Tuesday	7s7½d	7s8d	7s8½d	7s8½d	7s8½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	38s9d	38s6d	38s9d	Firm.
Friday	38s9d	38s6d	38s9d	Inactive.
Saturday	38s9d	38s6d	38s9d	Firm.
Monday	38s9d	38s6d	38 9d	Slow.
Tuesday	38s9d	38s6d	38s9d	Quiet.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York for the past week:

Day.	Sept.	Oct.	Nov.	Dec.	May.	June.
Thursday	106	106⅞		108½	...	...
Friday	105⅞	106⅝	....	108½	....	...
Saturday	104½	105⅝	106⅜	107⅝	....	...
Monday	....	....	....	....	....	...
Tuesday	104¼	105⅜	106⅛	107⅜	112¼	...

The closing prices for wheat have been as follows at Chicago for the past week:

Day.	Sept	Dec.	May	June.
Thursday	102½	....	109⅝	
Friday	102½	105⅝	109⅛	....
Saturday	....	104⅝	108⅝	....
Monday	103⅛	104⅜	...	....
Tuesday	....	104⅜	108⅜	....

NEW YORK, Sept. 3.—Wheat—$1.05¾ for cash, $1.03⅞ for September, $1.07⅞ for December, and $1.12¼ for May.

CHICAGO, Sept. 3.—Wheat—$1.05½ for December and $1.09½ for May.

Foreign Grain Review.

LONDON, Sept. 1.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: Offerings of new wheat are scarce; best whites are quoted at 42s. Old wheat is extremely scarce; the highest quotation is 40s. Foreign wheat advanced 6d. Flour has risen 6d. Corn is strong; mixed American has risen 1s. At to-day's market there were larger supplies of new wheat; the finest white was quoted at 40s. Foreign wheats were irregular; Californian advanced 6d and Indian 3d. Flour was slow. Oats were scarcer. Corn rose 6d.

Potato Blight.

LONDON, Sept. 1.—A reporter of the *Daily News*, who has been making a tour of Limerick, Waterford and parts of Cork, gives a deplorable account of the condition of the potato crop. He says the blight never before appeared so early.

Hops.

NEW YORK, Sept. 1.—Hops excited. All spot advanced. Brewers' and England's wants are urgent. State growers are alive to the position, and stand out for stiff prices. The stock of part of the engagements is going abroad freely. State, new, 40@45c. A carload of Pacific, new, was landed at 35c. Common to best States, 1889, 22@28c; Pacific, 25@27c; all 1888, 15@22c; old, 8@15c.

Mark Lane (London) *Express* reports as follows on Aug. 18th: Mold has been spreading most disastrously of late, and has now been succeeded by a gale of an extremely damaging character, inasmuch as the later descriptions of hop, now in brush and burr, have been so severely lashed that it is questionable whether they will develop into cone. Vermin also continue extremely numerous, and the combined adverse influences have sent some hundreds of acres irreparably to the bad. Nothing more than a very moderate crop can be secured, even should no further injury reduce the present prospects. Messrs. Wests, Jones & Co. report: There has been almost a total clearance of the 1889 growth, and a very considerable business has been transacted in old hops at a very material advance upon recent values, and prices keep very firm with an upward tendency. This year's crop on the continent of Europe will scarcely suffice for the home requirements. The yield in the Eastern States of America will be small, but the accounts from California are favorable.

NEW YORK, Aug. 28.—A Springfield man in the *New England Homestead* estimates a general shortage of 20 per cent in the hop crop of this country. He estimates the crop will be short 25 per cent in New York State; Massachusetts short 25 per cent; Wisconsin 40 per cent short, and California 10 per cent short. On these figures the shortage alone is sufficient to send prices up; but added to this is the fact that most of the old hops have passed out of the hands of the growers.

NEW YORK, Sept. 2.—The *Mail and Express* says that the present interest in the hop market exceeds anything known since 1882. Prices continue to bound upward, with no indications of a break for some time.

Manitoba Crops.

TORONTO (Ont.), Aug. 29.—The Manitoba and Northwest harvest is now probably beyond the reach of accident. The yield of grain and roots is such as was never surpassed and seldom equaled in any country. Four days ago the reaper commenced, and miles of grain was falling in bound sheaves from the reaper and binder. Of the crop around Moosejaw and Regina and all the way, "magnificent" is the word. The crop is light in the United States and elsewhere. Sixteen million dollars will come into Manitoba and the Northwest for wheat alone. How much Canada will get for oats and potatoes cannot be calculated, but it will get a good round sum. The $16,000,000 was calculated last evening with Mr. Whyte, general superintendent of the Canadian Pacific Railroad, the best railway man in Canada after Mr. Van Horn, and fully informed.

Eastern Wool Markets.

PHILADELPHIA, Aug. 29.—Wool is unchanged.

NEW YORK, Aug. 29.—Wool, steady; domestic fleece, 33@38c.

BOSTON, Aug. 29.—Territory wool has been active, selling at 58@60c scoured; 55@57c for fine medium and 53@55c for medium. California wool is quiet; choice spring is selling at 23@24c, and average wool at 17@20c. Western Oregon sold at 17@20c.

NEW YORK, Aug. 29.—*Bradstreet's* says: Values are firm in the wool markets with a fair demand. In view of the fact that a great deal of machinery is idle, and the worsted markets so overcrowded with English goods that domestic manufacturers are having a light season, their demands for stock are accordingly limited. At Boston, Ohio, and Michigan, wools are meeting with a restricted call, and Territory supplies are in moderate demand. Pulled wool has been selling well. There is inquiry for Australian stock. On the whole, there seems to be increasing confidence in a more active market during the autumn than the past six months have seen. Whatever changes in the situation have occurred of late rather favor sellers.

Local Markets.

BARLEY

	Buyer Season.		Seller 1890.		Buyer 1890.	
	H.	L.	H.	L.	H.	L.
Thursday	141	140½	...	...	135½	134½
Friday	141	140½	129⅞	129⅞	135½	134
Saturday	140	139⅝	...	...	...	...
Monday	139⅝	139½	...	...	134½	132
Tuesday	142	140½	...	...	136½	135

WHEAT.

	S. S.	Nov.	B. '90.	B S.	S. '90.
Thursday	h.		144⅜	153⅞	....
	l.		144⅜	153⅛	....
Friday	h.		144⅜	153⅝	....
	l.	....	144½	153⅝	....
Saturday	h.	....	144⅝	153⅛	....
	l.	....	144½	153½	....
Monday	h.	....	143⅝	152½	....
	l.	....	143⅝	151½	....
Tuesday	h.	....	144	152½	....
	l.	....	143⅜	151½	....

BAGS—The market is barely steady for standard-sized grain bags. Outside holders offer to sell at 7⅜c.

BARLEY—The sample market after shading off has recovered, closing strong under a good demand. On Call, trading has been light. The bear contingent has been so badly demoralized in shorting the market, that few dare to sell short. The following are to-day's sales on Call:

Morning Session: Buyer 1890 — 300 tons, $1.36¼; 100, $1.36⅜; 100, $1.36¾; 500, $1.36½; 400, $1.36¼. Buyer season—200 tons, $1.42½; 100, $1.42 ₱ ctl. Afternoon Session: Buyer 1890 —400 tons, $1.35½; 500, $1.35⅜; 100, $1.35⅝. Buyer season—300 tons, $1.41⅞; 200, $1.41⅜; 100, $1.41¼; 600, $1.41; 100, $1.40¾; 200, $1.40⅞ ₱ ctl.

BUTTER—The local demand has been quite active, causing prices to appreciate. The increased demand is due to dealers and consumers expecting a larger consumption within the next ten days. Receipts from the East are increasing.

CHEESE—The market is firm, but no higher. The local demand is freer. Eastern receipts are larger.

EGGS—The market is higher and strong at the advance. Eastern are coming in quite freely.

FLOUR—The market is strong at full figures. Both the home and export demand are active.

WHEAT—The sample market has shown continued activity. Buyers, although quoting less here, are paying the high price of last week at many points in the interior. The exports of both wheat and flour since July 1st aggregate more than they did for the like time in 1889. In futures, trading has been fairly active at fluctuating prices. The following are the reported sales made on to-day's Call:

Morning Session: Buyer 1890 — 100 tons, $1.43⅜; 100, $1.43¾. Buyer season—5000 tons, $1.51½; 300, $1.51⅜; 300, $1.51¾ ₱ ctl. Afternoon Session: Buyer 1890 — 200 tons, $1.43¾; 1500, $1.42⅞; 1000, $1.42¾. Buyer season—1100 tons, $1.51; 500, $1.50¾; 600, $1.50⅞ ₱ ctl.

[COMMUNICATED.]

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Sept. 2d, were as follows:

Flour, qr. sks	194,911	Buckwheat, sks	250
Wheat, ctls	221,542	Middlings, sks	5,296
Barley, "	31,826	Alfalfa, "	....
Rye, "	2,783	Chicory, bbls	190
Oats, "	6 649	Broomcorn, bdls	....
Corn, "	6 181	Hops, bls	157
*Butter, "	1,744	Wool, "	1,876
do bxs	310	Hay, tons	2,917
do bbls	135	Straw, "	200
do kegs	205	Wine, gals	205,510
do ½ do	....	Brandy, "	1,420
†Cheese, ctls	191	Raisins, bxs	243
do bxs	18	Honey, cs	133
Eggs, doz	34,290	Walnuts, sks	....
do " Eastern.	84,630	Flaxseed, sks	521
Beans, ctls	1,913	Mustard, sks	937
Potatoes, sks	35,021	Almonds, sks	....
Onions, "	2,677	Peanuts, sks	....
Bran, sks	10,750	Popcorn sks	166

*Overland 467 ctls. †Overland 480 ctls.

Cereals.

Mark Lane Express, Aug. 18: Harvest has been in active progress during the past week, but the temperature has fallen. There has been an increase in the rainfall, and the last three days have been a period of high winds. The reaping of corn already ripe has not been impeded, but the ripening of backward grain has not been greatly advanced. Sunshine records have been very variable; thus Lewes has enjoyed in 8 days 24 hours more sunshine than London. That this year's wheat crop will vary greatly, according to locality, is now admitted on all hands; but prospects have improved in the Midlands, and there is a full crop in the heaviest growing counties. The London market of Friday and the country markets of Saturday were largely absorbed in discussing what would eventually be the outturn of the British crop. The careful estimate published in the *Times* of Friday morning reckoned 72,105,000 bushels on 2,530,000 acres, or 2850 bushels to the acre, a better yield than in 1888 or 1886, but inferior to 1889, 1887, 1885 or 1884. In bulk the yield on this estimate will be smaller than in 1888, as a decline of 133,000 acres in the area is allowed for.

The Hungarian grain crops for 1890 are estimated as follows: Wheat yield, 18,994,000 qrs. on 7,450,000 acres; rye, 7,268,000 qrs. on 3,203,750 acres; barley, 6,237,000 qrs. on 2,640,000 acres; and oats, 5,262,000 qrs. on 2,645,650 acres. The new wheat proves disappointing in weight and quality.

The last estimate of the French crop puts the wheat yield as low as 35,250,000 qrs., in which case over 5,000,000 would require to be imported. The quantity of wheat and flour afloat with a British destination is still larger than in the two preceding years, but the difference is now small, not amounting in either case to a week's supply.

G. A. Abel, Grain Inspector of the San Francisco Produce Exchange Call Board Association, reports the stock of grain in city warehouses on September 1st as follows:

	June 1.	July 1.	Aug 1.	Sept. 1.
Wheat, tons	3,596	2,102	2,034	9,054
Barley	13,869	9,619	2,713	10,683
Oats	2,509	2,321	1,508	599
Corn	524	1,161	516	602
Bran	150	200	150	68

The quantity of wheat in the warehouses at Port Costa on the 1st was 116,000 tons, making a total of 125,054 tons in all Call Board warehouses, an increase of 51,161 tons during the month of August. A year ago there were 110,168 tons in Call Board warehouses, the increase for August last year being practically the same as this year.

The local wheat market has ruled weak so far as quotations are concerned, but actual transactions, with a few exceptions, have been made at last week's prices. The crop is unmistakably short, yet farmers have been free sellers, preferring to sell rather than take chances for better prices later on in the season. With lower bids, sellers, unless pressed for money, are offish, believing that better prices will obtain when more vessels arrive and charters recede. Buyers use the coal miners' strike in Australia as an argument against lower freights, forgetting that non-union miners are being put to work; besides, many coal vessels will be dispatched from England to this coast. It now looks as if we will have cheap freights toward the close of the year.

Eastern mail advices report that farmers are selling freely; this, no doubt, accounts for the advance in ocean freights from Atlantic seaports to Europe. With English farmers selling freely and American farmers free sellers, it is only a question of a short time when the selling pressure will abate and prices advance, for supplies do not accumulate to any great extent.

Barley has shaded off, more in sympathy with the decline in wheat than from any other cause. The crop is shorter than heretofore claimed, and as the consumption is larger the supply will be fed out before another season. For several years past the carryover from season to season has been quite large, but the carryover from the present season promises to be next to nothing. Oregon and Washington have a large crop, but the consumption up north is quite large.

The receipts of oats are fairly large, but stocks do not accumulate owing to free feeding, due largely to the higher cost of barley. The crop in this State and Oregon is said to be less than in 1889, but authentic information on the subject is difficult to get.

Corn has held to steady prices. Receipts and consumption are about the same. Crop prospects on this coast are not of the best, yet an increased acreage will offset in lessened yield to the acre. Crop advices from the Central States, while discouraging, are no worse than reported a fortnight ago.

Rye is offering quite freely. Buyers are offish unless offered concessions.

The Grain Standard Committee of the Produce Exchange has established the following standard for wheat, rye and barley crop of 1890:

	Pounds.
No. 1 White wheat	61
No. 1 Amber wheat	60½
No. 1 Sonora wheat	62½
No. 1 Rye	60
No. 1 Brewing barley	46
No. 2 Brewing	44
No. 1 Feed bright	41
No. 1 Feed dark	43
No. 2 Feed dark	40½
No. 1 Chevalier	53½
No. 2 Chevalier	51

Feedstuff.

Bran and middlings are selling for less money. Heavy receipts of the former with feeders holding off are against sellers. Ground barley and feed-meal are unchanged.

As heretofore indicated, hay is strong at an advance. The demand is good. The heavy fruit crop and more hauling, freighting and other work requiring teams causes a large consumption. Holders are not pressing sales. There were fewer grain-fields cut for hay this year than has been the case for several years past.

Fruits.

Berries are strong for all kinds, with blackberries and raspberries being about out of market. Huckleberries are steady.

In tree fruits, apples show more strength for choice good keepers, but poor are hard to place except at low prices. Bartlett pears are coming in sparingly, or, at least, good keepers are hard to get, and for such, good prices are paid. In some instances about 4¾c have been paid. Peaches are still higher. Canners readily pay 6c, while even a fraction more might be realized for a large straight parcel of choice. Plums are higher, with canners buying. Nectarines are unchanged. Grapes have a firm tone. Canners are buying Muscats at $25@40 a ton. Good-keeping table grapes are wanted to fill shipping orders. Wine grapes are selling at from $10 to $16 for Mission and Zinfandel.

Dried fruits continue firm. Shipments to the East are very heavy. It now looks as if the holidays will find very few in first hands. Driers' past experience has been that, four years out of five, to sell before the holidays is the best. Large jobbers in this city, who have not bought heavily, are now in the market. The market, in sacks is quotable as follows: Evaporated apples, boxes, 12½@13¾c; sliced, 8@10c; quartered, 7¼@9c; pitted plums, 10@12c; evaporated peaches, 18@21c; bleached apricots, sacks, 14@17c, boxes, 17@18c; white nectarines, 15@17c; red nectarines, 10@11c; California prunes, 9@11c; grapes, 3@3¾c, and an extra parcel might fetch 4c.

Raisins are steady, with a strong undertone. The market for October delivery is so low as to warrant the assertion that prices are more apt to advance than to decline. The East will have to buy quite freely. Dried grapes are still meeting with a good demand. Although the quantity dried will probably be double that of 1889, yet they will be marketed at good prices. This of course refers to the better selected and dried. Poor will be slow, even low prices will not induce much buying while better are to be had. For delivery in this and next month, London Layers are quoted at $2@2.25, with an advance on something very fancy. Loose Muscatels, $1.75@2. Poorer grades sell for less money. In the North, sales are reported at 4¼@6½c according to locality and quality.

Vegetables.

Cucumbers and tomatoes are weak, as are summer squash and egg plant. In other garden truck the market is steady.

Onions are slightly easier, but as the receipts are light any increased demand will cause prices to advance.

Potatoes are steady. Receipts are large, but then the demand is also large. Stocks do not appear to accumulate.

Live-stock.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4¼@4½c ₱ lb; dressed, 7¼@8½c ₱ lb.; heavy, 3½@4c ₱ lb.; dressed, 5¾@6½c ₱ lb. Stock hogs, 4¼@4½c ₱ lb

BEEF—Stall fed, 6½@—c ₱ lb.; grass fed, extra, 6@—c ₱ lb.; first quality, 5¼@5½c ₱ lb.; second quality 4¼@5c ₱ lb.; third quality, 4c@— ₱ lb.; bulls and thin cows, 2@3c ₱ lb.

VEAL—Small, 6@8c ₱ lb.; large, 4@6c.

MUTTON—Wethers, 6½@7½c ₱ lb.; ewes, 6@6½c ₱ lb.; lamb, spring, 8@9c.

Miscellaneous.

Poultry has held to fairly firm prices. Turkeys are higher.

Honey is meeting with a better inquiry. The past week a fair shipment was made to France.

Nuts have a strong tone. The demand promises to be good.

Bacon, hams and lard are strong; particularly the first two.

Hops are booming. In first hands there is very little, owing to growers having sold freely on the up move—from 16c to 25c.

Wool is without essential change. The stock here is not large considering the condition of the market. The markets for goods at the East are overstocked, and until the surplus is worked off, there will not be much of or any improvement in the price of wool.

Exports by sea the past week aggregate as follows: Wheat ctls, Cork, 47,736; Liverpool, 80,375. Flour bbls, Sligo (Ireland), 20,139; Central America, 472; Tahiti, 874. Barley ctls, Tahiti, 288. Honey cases, Havre, 200.

From the *Commercial News* of Sept. 3d the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	278,071	226,347
On the way to neighboring ports	23,841	20,181
In port, disengaged	7 634	28,104
In port, engaged for wheat	48,283	63,693
Totals	357,829	338,325

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Aug. 27, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	1,820,185	1,817,527
Flour, bbls	183,551	177,076
Barley	41,621	166,517

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Sept. 3, 1890

BEANS AND PEAS.		Cal 1890 Choice	30 @ 32½
Bayo, ctl	3 00 @ 4 00	do Fair to G'd	25 @ 30
Butter	2 10 @ 2 30	**ONIONS.**	
Pea	2 60 @ 3 00	Silver Skin	2 00 @ 2 50
Red	4 00 @ 4 25	Pickling	85 @ 1 00
Pink	2 75 @ 3 50	**NUTS—JOBBING.**	
Large White	— @ —	Walnuts, Cal. ₱	9 @ 10
Small White	2 60 @ 3 00	do Ch'ce	11 @ 12
Lima	4 50 @ 4 75	Almonds, hd shl.	5 @ 6½
Fld Peas, blk eye	— @ —	Softshell	14½@ 15½
do green	— @ —	Paper shell	16 @ —
do Nles	2 00 @ 2 25	Brazil	11½@ 13
Split	6 @ —	Pecans	9 @ 11
BROOM CORN.		Peanuts	6 @ 8
Choice to Extra	75 00 @ 85 00	Filberts	11½@ 12½
Fair to Good	65 00 @ 70 00	Hickory	6 @ 8
Poor	45 00 @ 60 00	Chestnuts	14 @ —
CHICORY.		Pine nuts	7 @ 8
California	6 @ 6½	**POTATOES.**	
German	6½@ 7	Early Rose, sks	1 00 @ 1 10
DAIRY PRODUCE, ETC.		Chile	90 @ 1 00
BUTTER.		Peerless	85 @ 1 00
Cal. Poor to fair, ₱ lb	17½@ 22½	River Reds	— @ —
do good to choice	25 @ 26	Humboldt	— @ —
do Giltedged	27 @ 29	Petaluma	— @ —
do pickled	17 @ 20	Burbanks	75 @ 1 30
do in kegs	14 @ 16	Sweet	1½@ 2½
do Creamery in rolls	28 @ 29	**POULTRY AND GAME.**	
Eastern do	19 @ 20	Hens, doz	5 00 @ 7 00
do do, in tubs	17 @ 18½	Roosters, old	5 50 @ 6 50
CHEESE.		do young	4 50 @ 7 00
Cal, choice mild	10 @ 11	Broilers, small	2 00 @ 3 00
do fair to good	8 @ 9½	do large	3 50 @ —
Young America	10 @ 11	Fryers	4 00 @ —
N. York Cream	10 @ 12	Ducks, tame	3 50 @ 4 50
Western	8 @ 10	do large	6 00 @ 7 00
EGGS.		Geese, pair	1 50 @ 2 00
Cal. ranch, doz	35 @ —	Turkeys, Gob'r.	20 @ 22
do do sel'cted	37½@ —	Turkeys, Hens	18 @ 20
do. store	27½@ —	Pigeons	2 00 @ 3 00
Est'n, old st'rage	— @ —	Rabbits, doz	75 @ 1 25
do fresh	17½@ 25	Hare	1 00 @ 1 50
do selected	27½@ —	Venison	9 @ 13
do to arrive	25 @ —	Dove	75 @ —
		EGG FOOD.	
		Manhattan, ₱ lb	12 @ —

FEED.	
Bran, ton	17 00 @18 50
Feedmeal	28 00 @29 00
Gr'd Barley	27 50 @29 00
Middlings	25 00 @26 50
Oil Cake Meal	25 00 @ —
Manhattan Food Per 100 lbs	7 50 @ —
HAY.	
Compressed	12 00 @16 00
Wheat per ton	10 50 @14 50
do choice	15 00 @15 50
Wheat and Oats	10 50 @14 50
Wild Oats	8 00 @12 00
Tame do	8 00 @12 00
Clover	8 00 @11 00
do ch'ce red top	— @ —
Barley	9 00 @11 50
Barley and Oats	8 00 @11 50
Alfalfa C'mpr'sd	— @ —
Straw bale	45 @ 55
FLOUR.	
Extra, City Mills	4 25 @ 4 50
do Co'try Mills	4 25 @ 4 50
Superfine	3 25 @ 4 00
GRAIN, ETC.	
Barley, feed, ctl	1 25 @ 1 30
do Choice	1 31½@ —
do Brewing	1 33½@ 1 36½
do do Choice	1 37½@ 1 42½
do do gilt'dg'd	1 45 @ —
Chevalier case	1 50 @ —
do com to good	1 30 @ 1 40
Buckwheat	1 75 @ —
Corn, White	1 31½@ 1 35
Yellow	1 25 @ 1 32½
Oats, milling	1 70 @ 1 75
Surprise	1 67½@ 1 71½
Choice feed	1 67½@ 1 71½
do good	1 62½@ 1 65
do fair	1 55 @ —
do Gray	1 45 @ —
do Black	1 40 @ 1 50
Rye	1 25 @ 1 32½
Wheat, milling.	
Gilt edged	1 45 @ —
do Choice	1 42½@ —
do fair to good	1 40 @ 1 41½
Shipping, ch'ce	1 41½@ 1 41½
do good	1 38½@ —
do fair	1 30½@ —
Sonora	1 36½@ 1 40
HIDES.	
Dry light to h'vy	10 @ 11
Salted	5 @ 8½
HOPS.	
Oregon, 189	30 @ 32½

PROVISIONS.	
Cal. Bacon. Heavy, lb	10½@ 11
Medium	12 @ —
Light	13 @ 13½
Extra Light	— @ —
Lard	9 @ 11
Cal. Sm'k'd Beef	11 @ 12
Hams, Cal	12½@ 13½
do Eastern	13 @ 14½
SEEDS.	
Alfalfa	9½@ 10
Canary	4 @ 4½
Clover, Red	12 @ 13
White	20 @ 22
Cotton	20 @ —
Flaxseed	2 @ 2½
Hemp	8 @ 8½
Italian Rye Grass	10 @ 11
Perennial	7 @ 9
Millet, German	5 @ 6½
do Common	5 @ 6
Mustard, yellow	1½@ 2
do Brown	2½@ 3
Rape	1½@ 2
Ky. Blue Grass	14 @ 16
2d quality	13 @ 14
Sweet V. Grass	75 @ —
Orchard	12 @ 14
Hungarian	7½@ 8
Lawn	27½@ 40
Mesquit	6 @ —
Timothy	6 @ 6½
TALLOW.	
Crude, lb	3 @ 5
Refined	6 @ —
WOOL, ETC.	
SPRING—1890.	
Humboldt and Mendocino	19 @ 24
Sac'to valley	15 @ 22
Free Mountain	18 @ 24
S Joaquin valley	12½@ 17
do mountain	17 @ 22
Cala'v & F'th'll	15 @ 24
Oregon Eastern	13 @ 22
do valley	20 @ 25
So'n Coast, def	10 @ 14
So'n Coast, free	12½@ 19
FALL—1890.	
North'n, choice	15 @ 17
do defective	12 @ 14
Mountain Free	11½@ 14
San Joaquin defective	8 @ 11
Southern do	8 @ 11

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Sept. 3, 1890.

Bananas, bunch	1 00	@	2 50
Cranberries	—	@	—
Limes, Mex	5 50	@	6 00
Lemons, Cal., bx	3 50	@	4 00
do Sicily, bx	9 00	@	10 50
do Malaga	9 00	@	10 00
do do Seedling	4 50	@	5 00
Pineapples, doz	3 00	@	5 00
Strawberries fair, chest	4 50	@	6 00
Bl'kberries, do	4 00	@	6 00
Huck'eberries lb	7	@	9
Figs, box, black	50	@	75
do white	25	@	50
do Smyrna	—	@	—
Plums, lb	2	@	2
Egg plums	2	@	3
Pears, bx	50	@	2 00
do Bartlett lb	3½	@	4½
Peaches box	50	@	1 00
do choice	1 15	@	1 25
do canning, lb	5	@	6
Apples com box	50	@	—
do choice	1 00	@	1 25
Nectarines, Red	75	@	1 00
do White	50	@	75
Grapes, box	25	@	40
do Muscats	50	@	75
do Rose of Peru	40	@	50
do Tokay	50	@	75
do Blk Hamb'rg	25	@	50
do Isabella	1 00	@	1 25
do wine Zinfandel	14 00	@	16 00
do Malvoise	25	@	50

Green Gages lb	2	@	3
Watermel'ns 100	5 00	@	10 00
Cantaloupes crt	50	@	1 00
Nutmeg melons	50	@	—
Crabapples, box	75	@	1 00
Quinces, box	50	@	75
VEGETABLES.			
Okra, dry, lb	6	@	10
do green bx	40	@	50
Parsnips, ctl	1 00	@	—
Peppers, dry, lb	12	@	—
do green, bx	35	@	50
do Bell	40	@	55
Turnips, ctl	50	@	—
Beets, sk	75	@	1 00
Cabbage, 100 lbs	50	@	75
Carrots, sk	35	@	50
Mushrooms, Cultivated, lb	—	@	—
Wild, lb	—	@	—
Cucumbers box	20	@	40
Tomatoes, bx	30	@	45
Garden peas, lb	2	@	3
Sweet po do	1½	@	2
String Beans	1½	@	2½
Lima do	2	@	3
Squash, summer, bx	25	@	50
Marrowfat, ton	20 00	@	25 00
Garlic, lb	6	@	8
Green corn doz	12½	@	20
do do corn sk	50	@	1 00
Egg Plant, bx	40	@	50
Cauliflower doz	40	@	60

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE, Aug. 27-Sept. 2.	Olympia. Rain	Temp.	Wind	Weather.	Portland. Rain	Temp.	Wind	Weather.	Eureka. Rain	Temp.	Wind	Weather.	Red Bluff. Rain	Temp.	Wind	Weather.	Sacramento. Rain	Temp.	Wind	Weather.	S. Francisco. Rain	Temp.	Wind	Weather.	Fresno. Rain	Temp.	Wind	Weather.	Keeler. Rain	Temp.	Wind	Weather.	Los Angeles. Rain	Temp.	Wind	Weather.	San Diego. Rain	Temp.	Wind	Weather.
W.	.00	80	E	Cl.	00	84	Nw	Cl.	.00	54	SW	Cy.	.00	92	SE	Cl.	.00	78	S	Cl	00	62	W	Cl.	.00	94	Nw	Cl.	.00	88	SW	Fr.	.00	70	W	Cl.	.00	70	W	Cl
T.	.00	78	N	Cl.	.00	84	Nw	Cl.	.00	54	SW	Fy	.00	98	SE	Cl.	.00	86	S	Cl	.00	58	W	Cy.	.00	98	S	Cl.	.T	90	SW	Cl.	.00	70	W	Cl.	.00	70	W	Cl.
F.	.00	68	SE	Cl.	.00	76	N	Cl.	.00	54	SW	Fy.	.00	90	SE	Cl.	.T	76	SW	Cl.	00	64	W	Cl.	.00	96	S	Cl.	.....	.....	.....	.....	00	74	SW	Cl	00	70	Nw	Cl.
S.	.....	.....	.....	.....	.00	66	N	Cy.	.00	58	Nw	Cl.	.00	78	SE	Cl.	.00	74	S	Cl	00	62	W	Cl.	.00	88	W	Cl	.....	.....	.....	.....	.00	70	W	Cl	.00	72	Nw	Cl.
S.	.01	58	S	Cy.	.10	64	S	Cy.	.00	60	Nw	Cl.	.00	84	SE	Cl.	.00	84	N	Cl	00	66	W	Cl.	.00	90	Nw	Cl.	.....	.....	.....	.....	.00	74	Nw	Cl.	.00	72	W	Cl.
M.	.03	62	S	Fr.	.10	64	Nw	Cy.	.00	58	Nw	Cl.	.00	86	SE	Cl.	.00	84	W	Cl.	.00	64	W	Cl	.00	96	W	Cl	.C0	84	S	Cl.	.00	80	W	Fr.	.00	74	Nw	Cl.
T.	.00	66	N	Cl.	.00	70	Nw	Cl.	.00	60	Nw	Cl.	.00	92	W	Cl.	.00	86	N	Cl.	00	72	W	Cl.	.C0	96	Nw	Cl	.00	86	Nw	C.	.00	80	Nw	Cl.	.00	78	Nw	Cl.
	.04	.....	.....	.....	.20	.....	.....	.....	.00	.....	.....	.....	.00	...	.....	.....	T	..	.	...	.00	.....	.....	.....	.00	.....	..	..	T	.....	.....	.....	.00	.....	.....	..	.00	..	.....	..

EXPLANATION.- Cl. for clear; Cy, cloudy; Fr., fair; Cm., calm; — indicates too small to measure. Temperature, wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

California Fruits East.

NEW YORK, Aug. 29.—Sgobel & Day, agents of the California Fruit Union, sold two refrigerator cars of California fruit as follows: Bartlett pears, $2.60@3 40; Kelsey Japan plums, $2.65 ₱ half crate; Gros prunes, half crate, $1.10@1.85; full crate, $3.45@3.50; assorted peaches, $1@2. Bartlett pears had commenced to yellow up, but the peaches were mostly green and undesirable.

CHICAGO, Aug. 28.—The Earl Fruit Co. realized the following prices for California fruits to-day: Beurre Clairgeau pears, $2 35; Duchess pears, $2.05; peaches, $1.45@1.85; Tokay grapes, half crates, $2.25@2.55; Muscats, half crates, $1.15@1.40; White Malagas, $1.30; German prunes, $1.50. Passenger cars are two days late and the fruit is mostly in poor condition.

CHICAGO, Aug. 29.—The Earl Fruit Co. sold California fruit at auction to-day as follows: Bartlett pears, ripe, $2.15@2.55; Fallenburg plums, $1.70; Gros prunes, $1.85; Yellow Egg plums, $1.40 @1.65; Orange Cling peaches, $1.65@2; Mokevitt, $1.60; Susquehanna peaches, $1.05; some ice-water wet, $1.15@1.40; half crates Tokay grapes, $2.45@ 3.10; some in poor order, $1.45@2.10; half crates Muscatel grapes, $1.20@1.35; White Malaga grapes, $1.10@1.15.

CHICAGO, Aug. 30.—Porter Bros. Co. sold 8 carloads of California fruit to-day as follows: Bartlett pears, $2.45@3.30; half-crates Tokay grapes, $1.40 @2; Gros prunes, $1.60@1.85; Orange Cling peaches, $1.50@1.70; Early Crawford peaches, $1@ 1.65; Susquehanna peaches, $1.50@1.70; half crates Muscat grapes, $1.@1.25.

NEW YORK, Aug. 30.—A private cablegram gives information that the market for French prunes at Bordeaux opened with firm offers for sizes at 40 francs, with an eager demand and with the market poorly supplied.

CHICAGO, Sept. 1.—Porter Bros. Co. sold five carlcads of California fruit to-day as follows: Bartlett pears, ripe, $2.40@3; Beurre Bosc, $2@2.50; Duchess pears, $2.45; Beurre Clairgeau, $2.45; Orange Cling peaches, $1.35@1.95; Early Crawford peaches, $1.30@1.85; Susquehanna peaches, $1.50@1.85; half crates Muscat grapes, $1@1.35; half crates Tokay grapes, $1.65@2.85; full crates Muscat grapes, $2.40@2.85; Egg plums, 60c@ $1.65; Gros prunes, $1.90@2.20; half crates, Rose de Peru, $1@1.25.

NEW YORK, Sept. 1.—Fresh fruit had good weather. A steady sale of all lots in good condition. One firm sold by auction 46 cars Bartlett pears, $2.65@3.50; boxes of numerous straight lines, making above $3; half boxes, $1.25@1.65; Beurre Hardy, $2.35@2.50; other, $2.05; peaches, $1.30@ 2.55; Egg plums, $1.40@1.75; other, $1.20@1.65; Gros prunes, $1.45@2.05; other, $1.30@1.85; Tokay grapes, $1.10; double, $1.95@2.90; single Muscat, $1.30@1.70; double, $2.85; other, 90c@ $1.75; Red nectarines, $1.65@2.20. The California Fruit Union sold eight cars of Bartletts at $1.75@ 3.55, and Beurre Clairgeau at $2.40; peaches, $2.15 @2.50; some rather green, $1@1.05; Japan plums, $2.65; others, $1.55@1.60; Gros prunes, $2.20@ 2.50, full crates; $1.10@1.85, half; Muscat grapes, $2.25@2.85, full crates; $1.35@1.60, half; Tokays, $2.90@3.50, full; $1.75@1.80, half. Six private cars made full rates. The apricot situation is somewhat mixed. Enough here to fill present orders, and early coast purchases enable owners to shade the rates, while the invoices from other cities are pressed on this market. Canned goods are strong. Six thousand cases of peaches were bought in England and resold here at a good profit.

NEW YORK, Sept. 1.—Raisins quiet. Prunes somewhat unsettled. The actual sale of the French at 8⅛@8⅝c, 60 to 90 sizes, causes some comment, though it is generally known the French product contracts are small. Established prime California, however, are still quoted at 13½@14½c, forties to sixties.

CHICAGO, Sept. 2.—The Earl Fruit Co. sold six cars of California fruit to-day as follows: Bartlett pears, $3.90@3.95; Beurre Hardy, $2.05@2.20; Beurre Clairgeau, $2.35, over-ripe wormy ones sold for less; Duchess, $2.05; Onondaga, $2.30; Late Crawford peaches, $1.60; Clings, $1.75; Foster. $1.50; Susquehanna, $1.55@2; Gros prunes, $1.75@ 2.05; a few at $1.65; German $1.60; grapes, half-crates, Muscat, $1.15@1.25; Tokay, $1.40@2; Black Morocco, $1.80.

CHICAGO, Sept. 2.—Porter Bros. sold 11 carloads of California fruit to-day as follows: Grapes, half-crates, Muscat, $1.10@1.35; Tokay, $1.40@2.50; Rose de Peru, 90c@$1.25; Bartlett pears, $2.90@ 3.90; Beurre Hardy, $2.70; Beurre Clairgeau, $2.70; Howell, $2.70@2.75; Duchess, $2.75; Fallenberg plums, $1.25@1.40; Golden Drop, $1.75; peaches, Early Crawford, $1.50@1.65; Susquehanna, $1.50@ 1.80; Galway, $1.65; Orange Cling, $1.50@1.70; German prunes, $1.60.

NEW YORK, Sept. 2.—Indications that this will be a great all-round horticultural year for California continue to offer in this and foreign markets. French prunes, which could have been purchased in Bordeaux in April at 27f, opened last week regularly at 40f. Now there has been another advance in the Bordeaux market. Two offers of 41f have been refused. A private cablegram says fruit sold at 42@43f, and the Bordeaux market is greatly excited. Meantime, according to the *Commercial Bulletin*, the course of the market for California prunes indicates very clearly that many in the trade believe consumers will take the goods regardless of the point to which the price may be forced. The crop has been sold and resold, and at steadily advancing prices, until to-day it is difficult to obtain firm offers for additional quantities, and this too in the face of the fact that the crop has not commenced to move freely.

NEW YORK, Sept. 3.—E. L. Goodsell yesterday auctioned off ten cars of California fruit for account of the Earl Fruit Co., Sacramento, at the following prices: Bartlett pears, $3.20@3.30; ripe, $2.30@ 2.60; Boussock, $1.80@2.30; late Crawford peaches, $2.15; Cling, $1.25@2.37; Muscat grapes, single crates, $1.15@1.70; double, $2 60; Tokay, single, $2 @3; double, $4.45@5; French prunes, $1.60; Gros, $1.65@1.90; Silver, $1.40@1.80; Egg plums, $1.25 @1.80; Nectarines, $2.85.

THE old town of Monterey has begun to adopt some modern improvements.

The Whole Country Needs Fertilization

PUBLIC ATTENTION

Is called to the following letter from Professor Palmer to R. B. Cunningham, Agent of the Mexican Phosphate and Sulphur Co. at Guaymas. Mr. Palmer has been connected with the Smithsonian Institute for over 30 years:

GUAYMAS SONORA, MEXICO, January 9, 1890.

R. B. CUNNINGHAM, ESQ.—DEAR SIR: In answer to your communication regarding localities likely to furnish a market for Guano, I would state that in my opinion the whole of Southern California will furnish a market for your Fertilizer.

The Vineyards are troubled with a disease in the sap of the plant (or circulation). The cause of this disease has not been found out, but it is a fact, witnessed in animals and vegetables, that most diseases manifest themselves more readily when the animal or plant has not the proper food.

It is my opinion that by applying a liberal quantity of Guano to the Vineyards the disease will be suppressed. The remedy must be administered through the means of the soil, the disease being in the interior of the plant which is controlled entirely by what is derived from the soil.

If the said disease was on the outside of the leaves, stems, or roots, then the remedy would be external only. Experiments with Chemicals have failed, so far as I am aware of, to exterminate the disease.

Why not try a Fertilizer as a remedy? It will strengthen the living plants to withstand disease, and may be relied upon as a cure in the diseased plants, the remedy for which must be one that will change the constituents of the plant fluid which impart healthy life.

Southern California also requires a Fertilizer for her Orange Groves and Fruit Orchards. The Public Press and the Fruit Growers assert this fact that they must resort to Fertilization at once. This was proven to my mind on visiting Southern California last year. Trees, like grain, as the crops are gathered, remove from the soil its strength, and in order to continue the ability to produce a healthy and abundant crop, you must convey to the soil a competent supply of Fertilizer, and that section has no means of producing the desired supply from its domestic animals. Yours respectfully, [Signed] EDWARD PALMER.

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Potash	9 to 10 "	2 "	5 to 6 "
Ammonia	3 to 4 "	2 "	3 to 4 "

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Notices of Recent Patents.

Among the patents recently secured through Dewey & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

VEHICLE [illegible]—Geo. A. Stom, Golden Gate, Alameda Co. No. 432,150. Dated July 15, 1890. This vehicle running-gear consists of a series of elastic springs connecting the front and rear axles, and so disposed as to allow the front axle to be turned without the interposition of a bolster or fifth-wheel.

WINDMILL.—Orin W. Parker, Oakland. No. 432,146. Dated July 15, 1890. This patent covers certain details of construction in connection with the regulating apparatus for relieving the wheel in case of too much wind.

[illegible] TRAIN SIGNAL.—Albert W. Reppy, Oakland, assignor of one-half to T. C. Masteller. No. 433,216. Dated July 29, 1890. This invention relates to that class of train-signaling apparatus in which a normally closed electric main current is employed in connection with one or more local circuits in the several cars and engines of the train, said local circuits, including an alarm, being normally inoperative or open but adapted to be closed and brought into action by the breaking or opening from any cause of the main circuit. The object of this invention is to provide a simple and effective apparatus of this class adapted to be called into action in any possible contingency, particularly upon the breakage of any portion of the train, the derailment of any of its wheels, or the will of any passenger, train-man or engineer.

SPRING PRESSER FOOT FOR SEWING MACHINES. Crapo Leak, S. F., assignor of three-fourths to Mondula Leak and D. V. B. Henarie. No. 433,130. Dated July 29, 1890. This invention relates to certain improvements in pre ser-feet for sewing machines. The advantage of the device is very great, especially in sewing kid, leather, cloth, or goods of any description where seams lap or varying thicknesses of material occur in the line of stitching.

WHEEL.—Daniel Best, San Leandro. No. 433,193. Dated July 29, 1890. This invention relates generally to the class of vehicle wheels, and especially to those wheels which are to be esed with very heavy vehicles, such as traction ungines or road locomotives and other heavy implements. The object of the invention is to provide a construction which will permit the ready attachment of the spokes to the hubs and their removal therefrom when necessary.

GAME.—Dormer Walsh, S. F., assignor to F. H. Manker. No. 433,110. Dated July 29, 1890. This game or toy consists of an inclosed table having a smaller movable table fixed in it with the upper surface flush with that of the main table, a means for giving an impulse to the movable table and a series of marked or numbered pieces which are assembled upon the moving table and afterward projected therefrom, and an opening in the main table designed to receive some one of the marked disks which are projected from the movable table and to expose the number or mark thereon. Various games may be played with this device, the object being in each case to scatter the movable disks about the surface of the main table and to place one of them within the observation opening.

PROCESS OF AGING WINE.—Geo. H. Malter, S. F. No. 433,131. Dated July 29, 1890. This is a peculiar method of aging wine, by which the valuable aromatic and delicate flavors from wine vapors are introduced into the wine being aged.

TRACTION ENGINE.—Jerome B. Harris, Stockton, assignor of one-half to John Gambetti. No. 434,131. Dated Aug. 12, 1890. This patent covers an improved form of driving mechanism for traction engines. The object is to so arrange the driving mechanism that when called into action, and while operating, the dead weight of the frame and the carried parts is transferred from the axis of the carrying or driving wheels to a point outside of, or beyond said axis, and near the wheel's rim, whereby said weight is utilized to assist the positive power in turning or driving the wheels. By the construction employed, when the machine is starting and advancing it has not only the positive driving power of the engine, but also a supplementary power constantly acting and due to the weight of the machine bearing down on the wheel near its rim.

[illegible] DRAPERS.—Wm. M. Nelson, Traver, Tulare Co. No. 434,565. Dated Aug. 19, 1890. This invention relates to the general class of drapers or belts for agricultural implements of any nature, and it consists in the novel construction and combination of parts, the object of which is to accomplish the double purpose of protecting the ends of the draper-slats or sticks by preventing them from splitting, and of guarding the rivets which hold the sticks to the belts and preventing them from wearing loose and dropping out.

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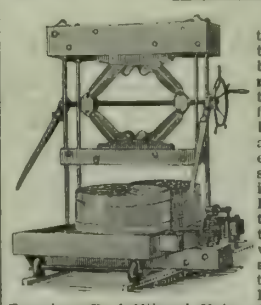
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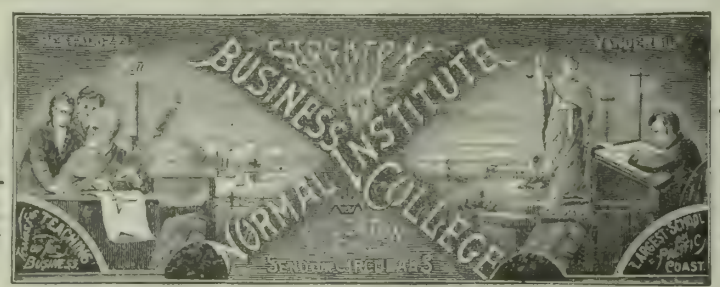


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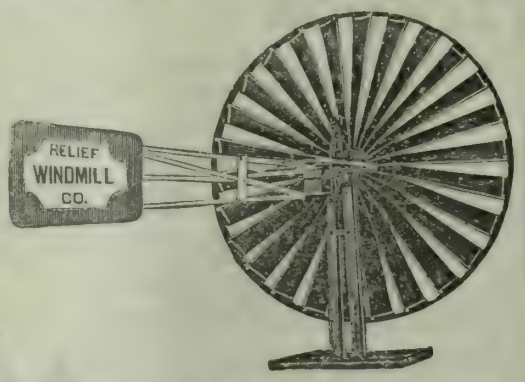
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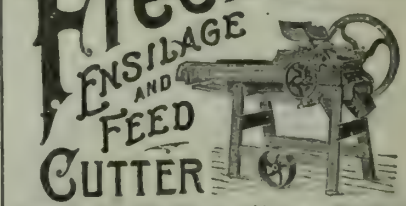
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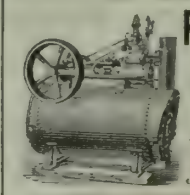


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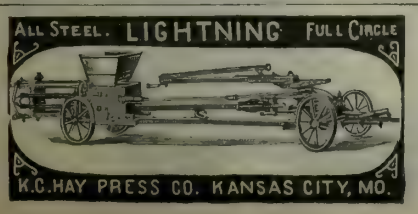
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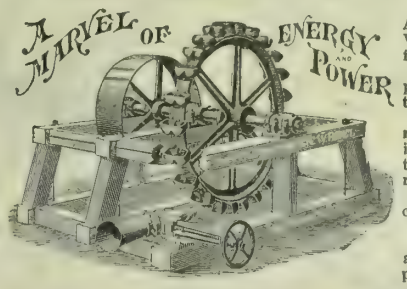
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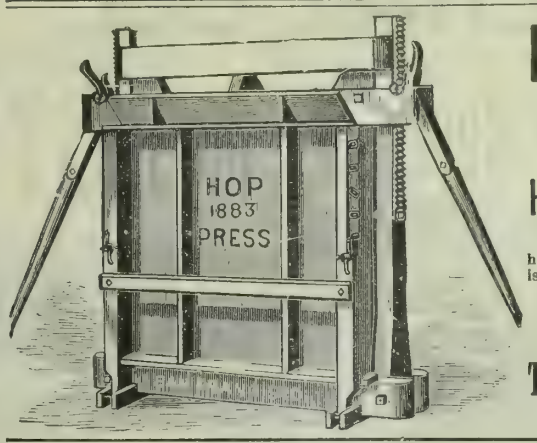
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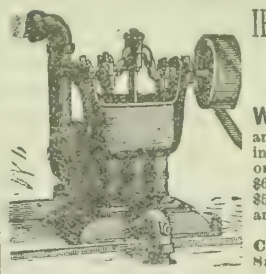
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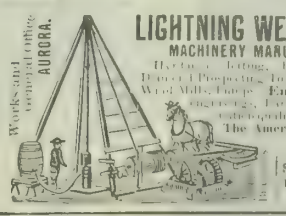
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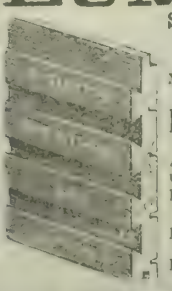
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The New "Bradley" Gang Plow.

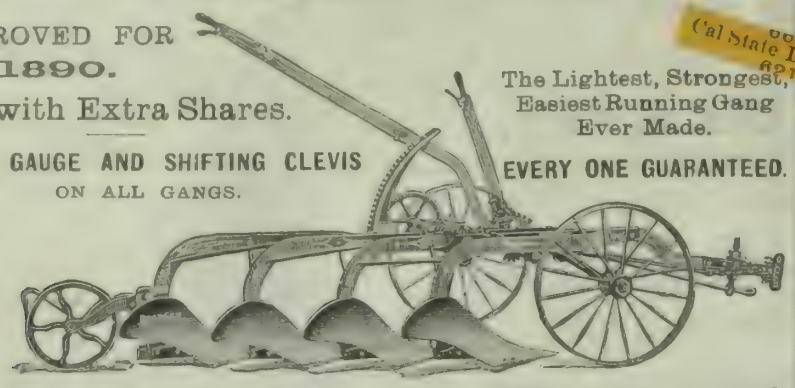
BRADLEY TWO, THREE AND FOUR FURROW GANGS

With the CELEBRATED "Q" BOTTOMS.

IMPROVED FOR 1890.

All with Extra Shares.

LAND GAUGE AND SHIFTING CLEVIS ON ALL GANGS.



The Lightest, Strongest, Easiest Running Gang Ever Made.

EVERY ONE GUARANTEED.

Made Wholly of Steel and Malleable Iron, Giving Great Strength and Little Weight.

The Bradley Square Corner Gangs

ARE TAKING THE LEAD!

EVERY ONE SOLD IS GUARANTEED EQUAL OR SUPERIOR TO ANY GANG MADE.

TULARE, CAL.

MESSRS. TRUMAN, HOOKER & CO., San Francisco, Cal.—GENTLEMEN: This is to certify that I bought of your agents one New Bradley "Square Corner" Four-Gang Walking Plow, and have tried it in different soils, plowing from two to ten inches deep, with six unbroken horses, doing the work to perfection, and it gave perfect satisfaction, doing better work than the "G——," "S——," "N—— D——" and "P——" Gang Plows, with two horses less on the plow than either of the above-named Gangs, and I cannot recommend it too highly to my fellow farmers of Tulare county as the best Gang Plow in the San Joaquin valley. [Signed] M. H. BAILEY.

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The Bradley "Square Corner" Sulky Plow

Runs Lighter, is Handled Easier, and the **Shares last** longer than any other Plow sold on the Coast. All the **Bradley** Plows have **extra hardened** Soft Center **Steel** Moulds.

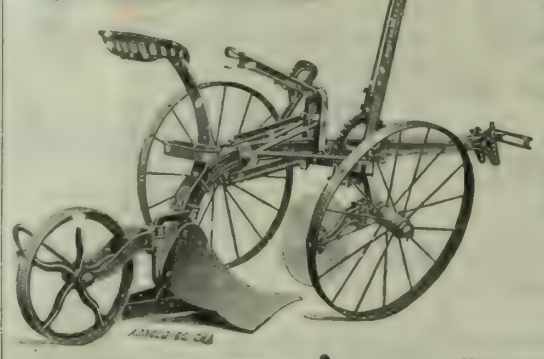
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1st—Extra hardened soft center steel moulds.
2d—Lightness of draft—Plow is carried on wheels.
3d—They are **Steel** Beams, stiff and strong; don't bend
4th—They will plow from 2 to 14 inches deep.
5th—They will turn a square corner without taking out of ground.
6th—We give you **Cast** Steel Shares 5-16 inches thick.
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9th—It has been shown they are best for plowing in beet culture.
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11th—No other Sulky will plow so deep.
12th—They will scour in any soil.

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ALL STEEL AND IRON.

The Lightest, Strongest, Easiest Running Gang Ever Made.

These Gangs have a LAND GAUGE not shown in cut.

Lighter Draft than any other.



The Bradley Square Corner Gangs

ARE TAKING THE LEAD.

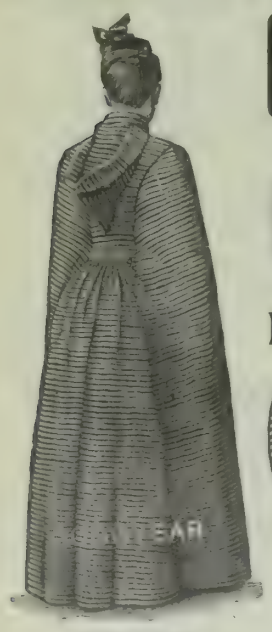
Every One Sold is Guaranteed Equal or Superior to any Gang Made.

SAN JOSE CAL., January 11, 1890.

MESSRS. MEADOR & OGAN—Gentlemen: I write to inform you that the Square Corner Bradley 2-Gang Plow I got on trial is giving entire satisfaction. It works in adobe soil where I never could get a plow to work before. I have been using plows of all kinds and never before had a plow that would scour and turn the soil in this adobe.—J. E. MILLER, JOHN MORGAN, J. W. JOHNSON.

TRUMAN, HOOKER & CO., 421-427 MARKET STREET, SAN FRANCISCO.

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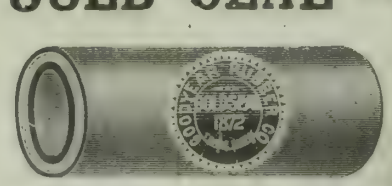


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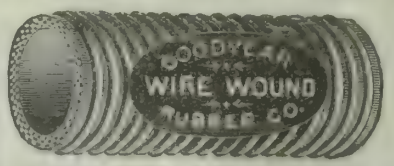


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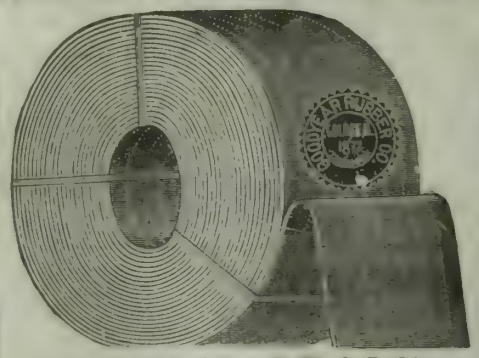




RUBBER HOSE



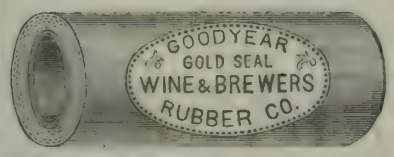
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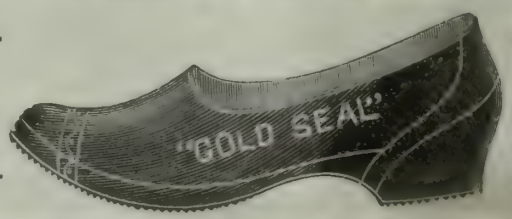
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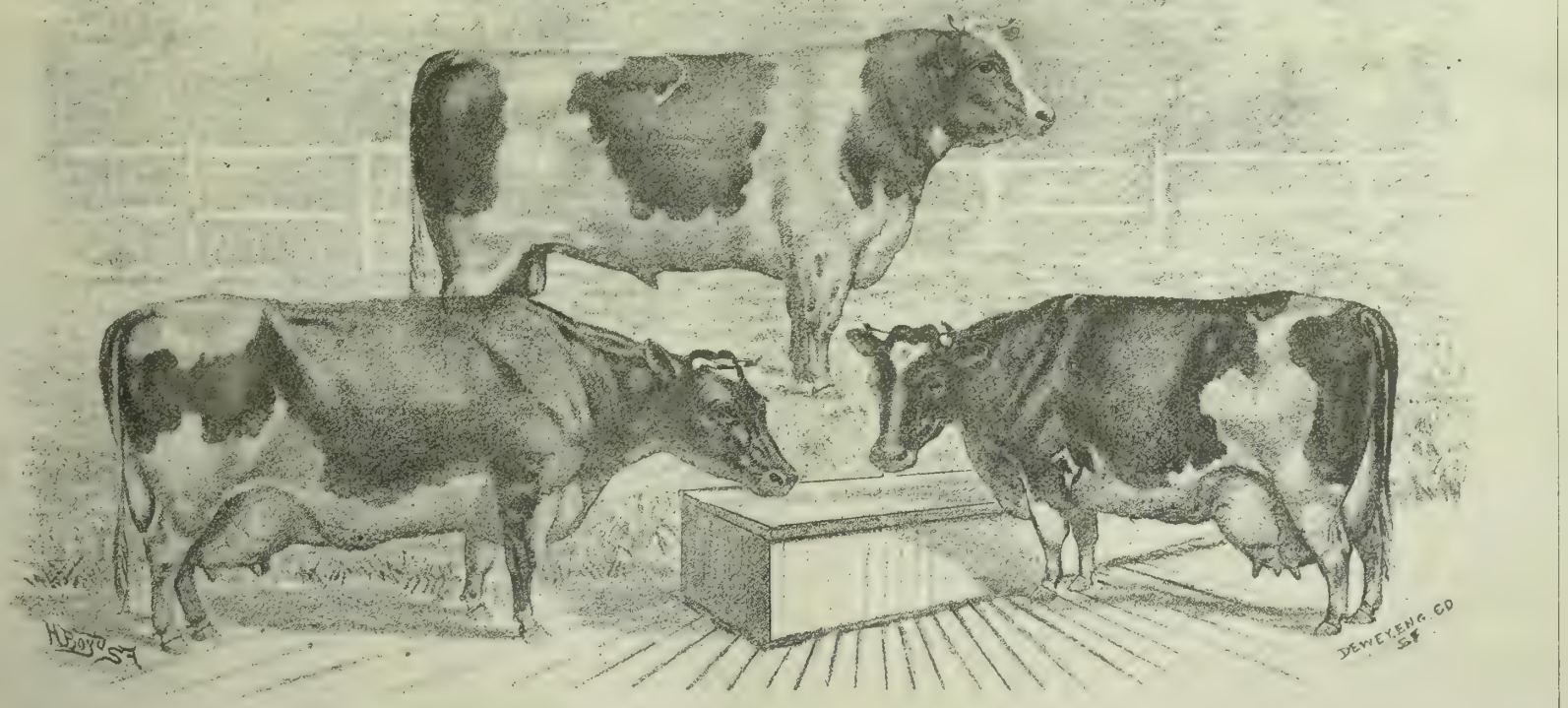
TWENTY-PAGE EDITION.

Vol. XL.—No. 11. SAN FRANCISCO, SATURDAY, SEPTEMBER 13, 1890. DEWEY & CO., Publishers, Office, 220 Market St.

Cerro Alegre Rancho Holsteins.

Our leading engraving gives representative portraits from the Holstein-Friesian herd of Geo. B. Polhemus of Coyote, Santa Clara county, which is rated as now standing at the head of the Holstein-Friesian interest of this State. The animals, as depicted by the artist from recent photographs, are eloquent exponents of the dairy points upon which the breed is advancing so rapidly in popular esteem and patronage.

The bull shown in the background is a grand



THOROUGHBRED HOLSTEIN-FRIESIANS, OWNED BY GEORGE P. POLHEMUS, OF SANTA CLARA COUNTY.

animal and stands at the head of the Cerro Alegre herd. He is King Aaggie Clothilde, born May 14, 1888, Reg. No. 10152, H. F. H. B. The six nearest female ancestors of this bull have butter records that average 22 pounds 5¼ ounces of butter in a week, and his eight nearest female ancestors average 16,617 pounds 6 ounces of milk in a year. Very few bulls ever known can show such average records for so large a number of ancestors. His breeding comprises the richest strains yet known to Holstein breeders. His sire is the highest-priced bull of this breed in the world. His dam is considered one of the best of the Aaggie family. He is a magnificent individual, with unusually fine head, splendid skin, good neck, excellent chest, broad, fine loin, straight, broad, lengthy rump, deep, broad quarter and elegant escutcheon.

The cows shown by the artist are fit companions for the king of the Aaggie and Clothilde families. Geeat Van Diepen (6018 H. H. B.; Advanced Registry 860) was imported from Holland April 21, 1884, being then a yearling. Her milk test began March 21, 1889, and closed Jan. 17, 1890, during which period she produced 12,188 lbs. 11½ ozs. milk. A second test began May 5, 1890, and up to June 30, 1890, she produced 3890 lbs. 15½ ozs.—an average of nearly 70 lbs. per day. One day's milking was 79 lbs. 12 ozs.

The other cow is Fansje 2d (9052 H. H. B.; A. R. 613), whose dam Fansje is 614 of the Advanced Register, was calved Feb. 28, 1886. She began her first test for Advanced Registry July 10, 1888. She made a ten-day record of 421 lbs. 3½ ozs. A later ten-day test, eight months after calving, began Feb. 22, 1889, and she made a record of 227 lbs. 2 ozs., which placed her on the Advanced Register, the first from this State. She began her three-year record May 11, 1889, closing May 10, 1890, with a record for the year of 13,923 lbs. 14½ ozs. One day's milking was 61 lbs. 5 ozs. as a three-year old. She dropped a heifer calf, sire King Aaggie Clothilde, August 18, 1890.

The Cerro Alegre herd has many notable animals besides those pictured by the article. One of its members, Rebecca Eymond, won the State milking contest of 1889 at Sacramento, and her record under great disadvantages was the largest ever made in our public tests. At Santa Clara County Fair, 1889, the same cow won the one-day milk contest open to all breeds, and at the same county fair, 1890, five members of the herd stood first, second, third, fourth and fifth in a test open to all breeds, the five cows averaging over seven gallons of milk per cow.

Visitors at the State Fair now in progress can learn by observation of the character and deeds of Mr. Polhemus' Holstein-Friesians. They will bear the closest study.

Oregon State Fair.

The Constitution of the Oregon State Agricultural Society ordains that the society shall hold a fair and stock show every year, beginning on the third Monday of September and continuing through the week. As the month came in on Monday, the opening of this year's fair at Salem next week falls upon the earliest possible date—the 15th.

The speed program and conditions as to the races appeared in the RURAL for August 16th, and our readers have been well advised of the fact that the cash premiums offered for agricultural, stock and mechanical exhibits, works of art, fancy-work and speed-trials amount to over $15,000.

The premiums on horses range as high as $30 in the thoroughbred, standard trotting, all-work and roadster classes, and $22 on Percheron, English shire, Clydesdale, graded draft, farm and carriage horses, and jacks, jennies and mules.

In cattle the best Shorthorn, Devon, Hereford, Ayrshire, Jersey, Holstein, Angus, Red Polled, and Guernsey bulls and cows may each win $37, and there is a host of lesser premiums, besides specials of $30 for herds of each class, and the best milch cow of any breed, to which L. K. Cogswell of Chehalis adds a $50 silver pitcher for the exhibition of the best yearling Red Polled bull calved in Oregon or Washington and shown at Oregon State Fair.

In the ten classes of sheep and the Angora goats, prizes range downward from $9 for pure-bred and $7.50 for grades, besides which a special of $100 is offered for the best ram of any breed or age for wool and mutton. Swine, six classes, have the same $9 limit, while the best trios of more than 90 varieties of turkeys, geese, ducks, fowls and pigeons may each win $2.

Coming to farm products, we find $10 premiums for best displays in sheaves of winter and spring wheat, oats and meadow grass respectively, and numerous prizes of $5 each for samples of thrashed grain of named varieties.

The dairy receives handsome recognition in prizes of $10 and $15 in each of four butter classes and $25 for best cheese.

The premiums for fruit are considerable; for floral exhibits, liberal; and for vegetables, sufficient to stimulate competition.

We hope the exhibits will prove varied, fine, ample and instructive; the competition at once lively and kindly; the visitors many and appreciative, and the whole affair a pleasing and profitable success.

CORRESPONDENCE

Correspondents are alone responsible for their opinions.

Is It Chance?

EDITORS PRESS:—Most persons have probably noticed that when hops, morning-glories, beans and other vines are growing they twine around the poles, cords, trees or whatever supports them in their upward growth; but we would like to know how many can answer readily whether they always twine the same way, and if so, which way?

After many years of careful observation, we are inclined to the belief that there is some influence which guides them in this respect so that they invariably twine in the same direction, and that direction cannot be easily reversed, for we have often tried the experiment with vines which had started up a pole by unwinding them, turning them in the opposite course and fastening them in place. To our surprise they would invariably start above the fastening and twine the way they had first commenced.

In the oak and chestnut forests of Pennsylvania, one can find large numbers of tall trees, especially chestnut, which have been struck by lightning, the scars showing that the electric fluid in running from the top to the bottom has followed the grain of the timber, which is often very winding. Our observation goes to show that these windings follow the same course as do vines on poles.

We have often noticed that hawks, buzzards and other birds which ascend to great hights by circling round and round, without any flapping of the wings, or by what some term sailing, circle in the same direction as vines twine.

Pigeons, when being taught as carriers, are often placed in boxes and taken on board the cars some distance from their homes. When liberated they will fly around in different directions for a time and then rise to a considerable hight by circling in the same direction as climbers before starting on their return trip.

Hunters and others traveling in dense forests are often bewildered and lost, and in their endeavors to find their way out they have resolved as a final effort to pursue a straight line in one direction, when, to their surprise, they would soon cross their former tracks, showing that, instead of traveling in a "bee-line" they had been circling. Frequently, when the ground has been covered with snow, their tracks could be traced, and it has been found that their circling was in the same direction as that of others herein described.

As far as our experience has taught us, cyclones and waterspouts also circle in the same course, consequently the more we investigate the more firmly we are convinced that there must be some universal law governing this circling motion—a motion which we find to be what is termed back-handed or against the sun.

IRA S. THOMSON.

National City, Cal.

El Cajon Fair Notes.

EDITORS PRESS:—The second annual fair of the El Cajon district took place Aug. 28th–29th, in the large and commodious packing-house of the El Cajon Vineyard Co. This fair is held solely as a horticultural exhibition of the products of El Cajon and adjacent valleys, gives no premiums and charges no admission.

Being in a raisin district, the display of grapes is naturally the leading feature, but in addition to the Muscats, Malagas, Fiher-Zigos, Sultanas and Zantes, were to be seen many wine and table grapes, such as Catawba, Cornichon, Mission, Verdel, Morocco, Tokay, Sweetwater and Rose of Peru. Although there were many other sorts whose names I cannot now recall, these will give some notion of the varieties displayed.

Among the finest exhibits was that of Major Levi Chase, who showed grapes in almost endless quantity and variety; also apples, pears, peaches, plums, prunes and almonds, several samples of evaporated peaches and apricots and a box of beautiful prunes, which, disdaining to take a European name, were branded simply "El Cajon Prunes."

Near this exhibit was that of H. S. Richards' Ricardia ranch, including a splendid display of raisin and table grapes, peaches, pears, plums, figs and apples, showing a three-years' effort at fruit-growing.

Next came L. B. Barnes' exhibit, from the H. T. Christian ranch, of assorted grapes and fruits, oranges, evaporated peaches and apricots, jellies, and a four-pound cluster of Sultanas overhanging all. From Dr. Johnson's came grapes, fruits and melons; J. P. R. Hall, figs—four varieties; G. M. Hawley, assorted and canned fruits; J. M. Asher, table grapes, jellies, canned and crystallized fruit; Uri Hill, citrus and deciduous fruits, Zante currants, jellies, etc.; Vallejo Ranch (E. S. Vacher), lemons, figs, pomegranates, and many other fruits, green and dried, canned fruits and jellies; Dr. Worcester, a good collection of fruits, green, dried and preserved; Geo. C. Swan (Loma del Cajon), a fine variety of samples of evaporated fruits; El Cajon Vineyard Co., raisins, grapes, fruits, canned fruits and jellies; the Boston Ranch, a full supply of fruits, green, canned and jellied; H. Culbertson, assorted fruits and the finest samples of sun-dried peaches at the fair; G. H. Bowers, Hungarian and Silver prunes, nectarines, Siberian crabapples, and Sultanas, green and dried; Holt Vineyard Co., a fine display of grapes and fruits; Jno. T. Gordon, raisins and fruit, including some especially fine peaches; W. H. Ogden, the usual supply of fruit and samples of licorice-root and sugar beets.

Mrs. B. P. Hill, from the midst of fruit and flowers, dispensed free samples of table wines, as did also E. Brayton of Health Valley. C. C. Furginson of Jamacha sent samples of grapes and peaches, while H. C. Stiles of Spring Valley showed a good collection of limes, lemons and oranges. Herbert Dabney of Jamacha exhibited some magnificent clusters of Chasselas grapes.

The Julian apple country, which sent over two tons of fruit to our county fair at Escondido last season, sent down a large assortment of apples, contributed mostly by Messrs. Bundy, Sawday and Talley. J. W. Somers, La Mess Ranch, contributed guavas, tomatoes, "spuds" and turnips. Several pumpkins of large size were also visible.

The largest cluster of grapes in sight was a bunch of Chasselas marked seven pounds. In the midst of the fruit was the El Cajon horn of plenty, overflowing with its superabundant load.

The fair was well patronized, several carloads of San Diegans coming to enjoy the sights.

J. B. H.

El Cajon, Cal., Aug. 29, '90.

HORTICULTURE

Apple Roots Resistant to Woolly Aphis.

B. M. Lelong, Secretary State Board of Horticulture, favors us with a copy of correspondence just received by him from John C. Blackmore of "the Pah Gardens," Onehunga, Auckland, New Zealand, concerning apple roots resistant to woolly aphis, or as they are called in the colonies, "Blight-proof stocks." In opening his letter Mr. Blackmore very properly alludes to Mr. Lelong's last report as "the best gotten-up horticultural report that I know of, reflecting the highest credit on yourself for the most zealous and painstaking manner which you must have bestowed on its preparation." He continues as follows:

In your report I notice on page 214, and in your reports of Horticultural Commissioners, the remarks on woolly aphis. I infer from these remarks that the fruit-growers of California are not acquainted with the method pursued in this country to combat this great enemy to the successful culture of the apple.

In hopes that it may be of use, I send you a short history of the troubles we had to contend with in cultivating the apple in this country, until the fortunate discovery that Winter Majetin and Northern Spy apples were blight-proof. Prior to 1870 the apple tree had for many years been the victim of the woolly aphis in its most virulent form. Apple trees presented a most heartrending spectacle, the trees being gnarled and knobbed from rootlet to branchlet from the abundance of the aphides; indeed, many varieties even with the most rigid attention could not be kept alive. The result was that the apple well-nigh went out of cultivation, and we depended upon our supply of fruit from Tasmania. Things were in this state when Mr. Thomas Lang of Victoria informed us that the Winter Majetin apple really did set the aphides (*S. lanigera*) at defiance, and that in conjunction with a Mr. Treen he was carrying out a series of experiments to test the aphis-resisting qualities of Winter Majetin and other kinds. Further tests proved that the Northern Spy possessed the same valuable resisting qualities as Majetin. The apple tree then became a matter of special study by a few cultivators, both in this part of New Zealand and in Victoria. Seeing the perfect immunity from blight which these two varieties enjoyed, both branches and roots, it at once suggested itself that if these two varieties were used as a stock to work all other kinds on, it would defy the attacks of the aphis below ground.

About 16 years have elapsed since I first drew public attention, through the Australian press, to the above apples as blight-resistant and as stock to work other kinds on, and they have stood every test, remaining entirely blight-proof. When those kinds most subject to blight were grafted on them, all below the graft have proved to be clean. It was in the roots below ground, where the aphis multiplies during autumn and harbors during winter, that formerly gave us the trouble, but by grafting on Majetin and Spy all affected apples, it dislodges this pest from the roots, and the cleansing of the branches of varieties very much subject to blight, and worked on them, is comparatively an easy matter where there is no harbor for the insects below the ground; in fact, varieties formerly very much subject to blight on the branches before working on blight-proof stocks are since almost free, therefore the great obstacle to successful apple culture is removed. This was very forcibly brought to my mind a short time since when acting as judge of fruit at the Auckland Horticultural Show. Ten years previous, when acting in the same capacity, there were only about 20 dishes of apples, but on the occasion I now refer to there were four long rows of tables running the whole length of the drill-shed devoted to apples; the first table contained 1000 dishes of apples for competition, not an inferior specimen among the lot. The other tables were likewise crowded from end to end, among them collections containing over 300 distinct varieties, and all perfect specimens fit to compete with the best grown in any part of the world. Truly we can say of the apple aphis, it is no longer a pest.

In grafting on these stocks, to insure the scion not taking root, the scion or bud should be inserted one foot from the ground; all varieties form a perfect union on either stocks. Northern Spy forms a mass of small fibrous roots close to the main stem. Winter Majetin roots are not so numerous and travel a long distance in search of nutriment.

For some time after the discovery of Majetin and Spy being blight-proof, the stock of each kind was very scarce—the ordinary propagation was too slow a process. The method I finally adopted was to side-graft inverted a piece of any kind of apple root, in an oblique cut, on a Majetin or Spy cutting two inches from its base. The cuttings emitted roots of their own below the inserted root; the following autumn the plants are lifted and the piece of root that was grafted on is cut clean out, leaving, of course, the young plants now on their own roots. The method now pursued, and which was first practiced by myself on a large scale, is to propagate both Spy and Majetin by their own roots, as root cuttings, in planting the roots leaving the smallest trace only above the surface. These root cuttings make fine trees and are fit to regraft the following spring. We also graft Majetin scions on its own roots, likewise Northern Spy, and sometimes work Majetin scions on Spy roots, or Spy scions on Majetin roots. It seems to make but little difference either way; they are blight-proof stocks and all varieties worked on them do well.

Our climate produces a good stock propagated as above, fit for regrafting the following spring.

You can further experiment with New England Pigeon, Striped Beaufin, Gravenstein, Duchesse d'Oldenburgh and Irish Peach. They are seldom affected with aphis; Irish Peach, never.

Any information you further desire I shall be happy to forward, and that you may experiment with these blight-proof apples, true to name, I will forward you 12 small trees of each on their own roots, free of all charge, by the next steamer.

A Shipment of Resistant Stocks.

In a subsequent letter, Mr. Blackmore writes:

By steamship Alameda I send to you, in charge of Messrs. J. H. & Alfred Gunner Bros., a small package containing Winter Majetin and Northern Spy apples on their own roots; also scions of a few varieties seldom affected with blight—woolly aphis for experimental purposes, as advised in former letter. I intended sending much stronger plants, but through sickness I was unable to pack them myself, but had to request a respected friend of mine, W. J. Palmer, nurseryman, to do so for me. As two friends of his, Messrs. Gunner Bros., were proceeding direct to San Francisco, they offered to take charge and deliver at your office a small package; so as not to inconvenience them with a bulky package, small plants have been sent. To insure their being free from disease or insect pests, I instructed Mr. Palmer to wash both cuttings and plants before packing. I shall be pleased to send again if these fail in transit, or trees, seeds or cuttings of anything from here of use to you.

Perfection and Lord Wolseley are valuable late kinds, the former an Australian seedling, the latter of New Zealand. The varieties of apples in the hands of growers about Auckland are very numerous, one grower alone having introduced 800 varieties. The varieties of pears and plums, excepting prunes, are numerous; of peaches, a few years since there were no better varieties obtainable anywhere. Enormous crops were produced until a disease made its appearance, the nature of which is not yet known, and the large groves belonging to the natives and those planted later on by the settlers have died out, and a plentiful crop of peaches is a thing of the past, although there are several good kinds which have not been lost. I do not recommend their introduction into California for fear of introducing the disease with them.

[The small parcel of cuttings duly arrived, and Mr. Lelong donated them to the Agricultural Department of the State University for growth and subsequent distribution. The material is not in very promising condition, but a careful effort will be made to grow it.

Of course the inference that California fruit-growers do not know of the existence of varieties resisting the woolly aphis is not correct. At least ten years ago the late John Lewelling announced at a meeting of the State Horticultural Society that he had found that seedlings grown from the pips of Rawles Janet and the Golden Russet were little injured by woolly aphis. (See "California Fruits," page 97.) The resistance of the Northern Spy has also been known, but that variety is unsatisfactory in most parts of California, and has been but little planted; consequently few have had opportunity to observe its resistance. Mr. John Rock has experimented for several years with resistant stocks, and so have others, and the fact that this is a promising direction for experiment was urged years ago by Mr. Dwinelle and Mr. Klee in the University publications. But for all this we have never done much in commercial propagation in this line, and the facts stated by Mr. Blackmore should attract much attention.—EDS. PRESS]

Rooting Olive Cuttings.

EDITORS PRESS:—I saw an article in your issue of Aug. 9th from your fair correspondent at Pantz, telling her experience in rooting olive cuttings in the open air, also asking for information from any one more successful than herself.

Allow me through the PRESS to relate my experience, although a "tenderfoot," having been here but little more than two years. Last fall, though ignorant about the olive, in order to try my luck I filled boxes about four inches deep with sand, and in December put in them the cuttings, cut only long enough to have two pairs of eyes or leaves, from which I cut the bottom leaves.

I continued to put out more cuttings every month until the last of April. The first boxes of cuttings were put in a box under a single sash, but for want of room the later ones were put in a small, cheap propagating-house 6x12 feet, with four sash on the south side of the roof, each 3x6 feet.

The cuttings were well watered every day, and the sash opened warm days to ventilate, and in March they were whitewashed to prevent scorching. The most essential thing necessary is *patience*, and the next is *constant care and water*.

My cuttings are now rooted and in the nursery row, the trees being from three to ten inches high. By careful observation I found that of those put out in December and January, 90 per cent rooted; in February, 85 per cent; in March, 75 per cent; but in April, less than 60 per cent survived.

I also planted large cuttings ½ to ¾ inch in diameter and 16 inches in length, and only about 35 per cent have started as yet.

Some of the "knowing ones" claim August to be the best month to take cuttings off the trees, so I have started more, which I shall be able to report on later.

GILBERT W. SMITH.

Palermo Butte Co., Cal.

FORESTRY.

Wonderful Trees.

EDITORS PRESS:—The subject of *wonderful trees* is an almost inexhaustible one, abounding in interest and curiosity. In our own State are found the most famous groves of gigantic trees in the world, perhaps. One who visited the Mariposa Grove last year writes: "They are not trees at first sight. You can neither measure them with your eye nor sit in their shade—only take in a portion of the brown trunk as large as a good-sized house. It is only by an unusual effort of looking up that we see either foliage or limbs. They are not beautiful—simply enormous."

Imagine one tree measuring 90 feet in circumference; this is true of "Grizzly Giant." "Wawona," sometimes called "Tunnel Tree," has a roadway cut through the solid heart which is 27 feet through, 10 feet high and 10 wide, and yet the tree is vigorous and growing. There are many others equally as wonderful in this famous California forest.

The cypress, in ancient times, was considered a sacred tree, and idols were carved from it. The Pacific Coast Indians were found using it in their ceremony of purification in their wildest savage state.

The mulberry has been called the wisest of trees from the fact that it never puts forth its buds and leaves till the season is so far advanced that there is no inclement weather to be apprehended.

Rosewood is said to owe its suggestive name to the fact that when the tree is first cut the fresh wood possesses a very powerful rose-like fragrance. There are several varieties of this wood and all very valuable.

The Quinnepiac oak at Woodbridge, Conn., which was cut in 1882, was pronounced the oldest tree on the Atlantic Coast. Gen. Lafayette and other officers of Washington's army once rested under its spreading shade while on the march, and a visit to the tree by Woodworth is said to have inspired the poem, "The Old Oaken Bucket."

In front of Macedonia Church, in Columbia county, Georgia, is a quivering tree. Every limb, large and small, on the tree trembles as in fear, or as a suffering animal would quiver, and this occurs when not a breath of air is stirring.

The Scotch fir is a blessing to the country in which it grows. The poor man's hut is lighted by torches made of the branches, which burn most brilliantly owing to the resinous nature of the wood. In the barren parts of Sweden and Lapland the peasants select the oldest and least resinous of the branches, take out the inner bark, which they grind and mix with their

scanty supply of meal, making it into cakes called bark-bread.

In the islands of the West Indies grows a tree resembling an apple tree in hight and size, known as the calabash tree. It has wedge-shaped leaves, large, whitish, fleshy blossoms that grow on the trunk and big branches. The fruit is much like a common gourd, only a good deal stronger, and often measures 12 inches in diameter. The hard shell of this is cut into various shapes by the natives and is sometimes handsomely carved. It is made into drinking-cups, dishes, pails, and even pots, and can actually be used over the fire for boiling water. But the calabash pot gives out after a few trials over the fire, and is unfit for further service.

Probably the only trees which grow ready-made whistles are those found in the forests of Nubia. When this tree is swayed by the wind, strange sounds may be heard like the notes of a flute, a fife, or a penny whistle. The vocal tree was a wonder to all who heard the mysterious sounds, until explanation was given by a scientific traveler who investigated the matter. He found that at certain seasons of the year hordes of insects deposited their eggs on the young shoots and ends of branches. When the young insects emerged, small holes were left in the galls. The wind blowing through these openings caused the strange noise.

In New Zealand is a tree fatal to birds. The seed vessels give off a sticky fluid, and many a fly finds himself on the gummy stuff. These flies attract small birds, and they too get so covered with the fluid that they are unable to fly. They are also attracted by the clusters of ripe fruit, which they intend to eat, but when once covered by this fatal gum they remain, not to eat, but to be eaten by other animals.

The most important article for illuminating purposes in Japan is the candle made from the fruit of a tree which very much resembles the common sumac of this country, and is called "the vegetable wax tree." The berries are the size of a small pea, of a whitish color, hanging in clusters, and contain the wax as a thick, white coating of the seed. The wax is obtained by the berries being crushed, strained and pressed in hemp-bags, or by boiling the bruised seeds and skimming the wax from the top. From experiments made, this tree can be readily grown in this country. It is highly ornamental as well as valuable for its production.

In a part of Africa not frequently visited by travelers, the discovery has been made of a tree which yields butter. Under no system of treatment can it be made to equal that churned from milk, but by salting it is somewhat similar. By heating with a solution of potash or soda it is easily converted into soap.

The "stinging tree" of Queensland is a luxurious shrub, pleasing to the eye, but dangerous to the touch. It grows from two or three inches to 10 or 15 feet in hight, and sends forth a very disagreeable odor. Its effects are curious; it leaves no mark, but the pain is maddening, and for months afterward the part when touched is tender in rainy weather or when wet in washing.

A marvelous palm grows in the village of Pedur, in India. Some children plucked its fruit at five o'clock one afternoon and flocked early the next morning to gather more, but they found the branches now far above their heads. Observation showed that the tree had been changing its position every morning and evening. It is 11 feet in hight. One who has seen it writes: "At 5:30 the tree was almost lying toward the west. The foot of the tree was at an angle of five to seven degrees with the ground, and we were given to understand that it had already commenced to rise from four o'clock. A handkerchief which had been tied to one of the leaves, so that its other end just touched the ground, had risen six inches. At 8 P. M., the 'kerchief was eighteen inches from the ground, and at 3 A. M., nine feet."

One of the greatest wonders of Madagascar is the "Traveler's Tree." Its stem resembles that of a plantain; but it sends out its two wing-like leaves (which resemble a large expanded fan) on opposite sides of the stalk. In an aged tree the lowest of these leaves will be from 20 to 40 feet from the ground. The fruit grows in large bunches, with three or four such bunches to a tree. The leaves are used for roof thatching and the leaf stalks twirled together serve for the walls of the islanders' huts. The most remarkable property of this, and the one which gives its name "traveler's tree," is its leaf stalks, which, even in the driest seasons, always contain water; and the wayfarer, if he be thirsty, has only to pierce the thick base of a stalk to obtain fully a quart of pure and refreshing liquid.

Newton, N. C., has a curiosity that beats by a large majority the rain tree which gained such notoriety in Charlotte in 1886. It is a smoking tree, and baffles all efforts at explanation. It is a white mulberry tree, was brought from Illinois a year or two ago, and is now about 12 feet high, with a bushy top and many lateral branches. Puffs of smoke, identical in appearance to cigarette smoke, are seen starting every now and then from all over the tree; sometimes from the leaves, sometimes from the bloom, sometimes from the bark of the limbs or trunk. The puffs are at irregular intervals; sometimes two or three at once from various parts of the tree, and sometimes they are several seconds or a half minute apart. They just come haphazard from any part of the tree, and as they ascend in the air, look exactly like the smoke from a cigarette.

Professor Schelwisch, the well-known naturalist of Bavaria, while traveling with the Stanley expedition in the heart of Africa, noticed a plant with a peculiar steel-colored foliage. It was growing like other plants from the soil, but on examination was found to be practically composed of iron. The leaves, although very thin, were bent with great difficulty, and in order to secure one, it was found necessary to separate it from the branch with a file. On further examination and experiment, it was found that the plant, or tree, eagerly devoured any metal its roots might come in contact with, and changed its color to the color of the metal last absorbed.

Major Quincy A. Steele, who has been with an engineering corps surveying railroads in Central America for the last two years, gives an account of some very curious trees he met with there. Among the funniest are the electric light tree, a tree which gives milk, and the dough-producing tree. The electric-light tree gives a light so strong that you can read or write by it by night; this tree is not a large one but very conspicuous, and scores of them may be seen over the country, like beacon lights set in the hills.

The milk tree has a big tough skin that can be used for half-soling shoes. To milk the tree, a hole is bored in the trunk; then it lets down sap as white and as sweet as any ever milked from a cow.

The bread from the *bread tree* is not exactly bread when picked, but is a nice stiff dough inclosed in a nutshell about the size of a goose egg. The nut is cracked, the dough taken out and kneaded a little, then is ready for baking. By thinning it down with a little milk from the milk tree, it makes excellent pancakes.

In behalf of those who are interested in trees, I have collected the foregoing from what appears to be reliable literature, and without doubt truthfully describes these forest wonders.

National City. F. L. E.

Forestry and Railroad Ties.

Bulletin No. 4, just issued by the Department of Agriculture, Forestry Division, is a sequel to some previous publications of the division which discuss the relations of railroads to the wood supplies of the country, with reference to the conservation of our forest areas. It contains a brief discussion by the chief of the division, setting forth, upon the basis of a recent canvass among the railroad companies, the enormous consumption of wood material for railroad construction, and especially showing how future supplies are being endangered by the use of the most valuable timber and of the young growth. To satisfy this demand requires the annual culling of the best timber from probably more than 1,000,000 acres of our natural forest lands. The chief value of this part of the bulletin consists in the directions which are given for increasing the durability of wooden ties. These are found to last on an average less than seven years, so that for replacement alone an annual cut of 80,000,000 ties is required. By lengthening the life of the tie a single year, it is evident that a considerable saving would be effected, tending to reduce transportation charges and also to husband our forest supplies. For lengthening the durability of ties, various means are suggested, among which are the selection of lasting timber, proper care in the seasoning of material, attention to the drainage and ballast of the roadbed, precautions against fungi, improved methods in fastening rails, and various preserving processes, some of which are new. The information here furnished is likely to be of value to any consumer of wood material.

The bulk of the bulletin is taken up by a report of R. E. Tratman, C. E., collating the experience of the world in regard to the substitution of metal for railroad ties. It had been stated hitherto that metal ties were used experimentally, but that the time for their introduction was still far distant. This report shows that not only are there something like 30,000 miles of railroad track of the world laid on metal ties, but that where these ties have been used most extensively (namely, in Germany, India and the Argentine Republic), they have shown themselves superior to wooden ties in producing a safer, more permanent, and in the end more economical track. The report is exhaustive, full of the detail which alone can make it valuable to the engineer, and promises to be an important aid in the solution of the metal-tie question, which in this country has received little consideration, from the belief that it is either impracticable, or, with our seemingly inexhaustible timber supplies, premature. The use of the metal tie is expected to economize wood supplies, and by its cheaper maintenance and other favorable features, to reduce transportation charges and increase rapidity and safety of travel.

THE FIELD.

Effects of the Advance in the Price of Silver.

The advance in the price of silver from 94 cents to $1.20 per ounce has a wider bearing than seems to be generally appreciated. There is a general disposition to see in this new departure merely a variation in the amount of currency or a speculative phenomenon incident to a great and sudden advance in the value of an important commodity.

We have heretofore, in round numbers, exported about 20,000,000 ounces of silver per annum, the remainder of our product being absorbed by Government purchases and by use in the arts. For these 20,000,000 ounces there is now opened a market at home, and it would seem at first sight as if for their former export to pay our debts abroad we should have to substitute a corresponding export of gold; but this is not the case. In our three staple exports, petroleum, cotton and wheat, we come into competition with silver-using countries exclusively, with the exception of Australia. Egypt and India supply cotton and wheat to Europe, and with declining values of silver in terms of gold, so long as we were on a gold basis those countries were competing with us at a tremendous advantage. This is proved by the enormous increase in the exports of wheat and cotton from India during the last few years. By causing the appreciation of silver, as measured in gold, we make Indian wheat and cotton cost just so much more as the rise in the gold price of silver measures.

Of course we cannot expect to get the full measure of this advance. The augmented price of wheat and cotton in India and Egypt must, to a certain extent, react in order to meet the increased competition from America. But European markets will rise in sympathy with the higher cost of these exports from those countries measured in terms of gold. Of our cotton crop we export in round numbers 5,000,000 bales, and of our wheat crop from 100,000,000 to 150,000,000 bushels. It is fair to assume that the advance under normal conditions in the price of the exportable surplus of these two staples would reach two-thirds of the advance in silver, allowing one-third to be taken off the increased standard for Indian and Egyptian wheat and cotton, to enable those countries to export at all.

As against the export of 20,000,000 ounces of silver bullion, we have therefore the enhanced value of the exportable surplus of wheat and cotton, to say nothing of oil.

Assuming that we receive two cents per pound more for our cotton out of the now inevitable 30 per-cent rise in the value of silver, we should thus have $10 per bale added to the value of the exportable surplus of cotton, and thus the country would receive from Europe $50,000,000 more than it has received for this staple previously. The same calculation applies relatively to our surplus of wheat and oil.

We believe it will be found that this new value of silver provides the true protection to our agriculturists; and the inferences to be drawn from these facts are plain. Given $100,000,000 more in the pockets of our farmers, and it is safe to argue that an activity such as we have not witnessed in years in this country must follow in all lines and ramifications of business.—*N. Y. Sun, Aug. 21st.*

American Hops in England.

The *Kentish Observer* says that the report of the select committee of the House of Commons appointed to inquire into the causes which have produced the decrease in the acreage of land under hop cultivation has been issued. The statistics which have been laid before the committee show that there have been great variations from time to time in the acreage of land under cultivation of hops, and that this was the case even before the excise duty on English hops and the duty on foreign hops were repealed in the year 1861. The reduction in the acreage under hop cultivation has taken place mainly in the Wealds of Sussex and Kent and in Mid Kent. From the evidence received, it appears that the best qualities of hops are grown in East Kent and in parts of Mid Kent; then come the Farnham, the Herefordshire and Worcestershire hops, the last two of which have grown greatly in favor the last few years, and lastly come those of the Wealds of Sussex and Kent, where hops abundant in quantity but of less value in quality are grown. The decrease of cultivation therefore has occurred mainly in those districts where hops of inferior quality are produced, and it is from these districts mainly that complaints have been made to the committee. The immediate cause of the decrease in the cultivation has undoubtedly been the losses incurred by growers owing to the very low prices which have ruled for hops during the last few years. The great majority of witnesses engaged in the cultivation of hops attribute the fall of price mainly, if not wholly, to foreign imports. They allege that the price of foreign hops rules the market for English hops, and that foreign hops have largely supplanted English hops in the home consumption. The greater number of these witnesses favor the imposition of a duty on foreign hops to the amount of 30s. or more per cwt. By some it is suggested that this duty should be accompanied by a tax of £1 per acre under cultivation of hops in England. This, however, was objected to by the great majority of witnesses. The proposal, therefore, is practically one for a protective duty on hops. The committee, while not excluding evidence in this direction, have not thought it necessary to take evidence as to the ultimate effect and incidence of such a protective duty upon the cultivators of hops and consumers of beer, or as to the expediency of taking a step with respect to a single article of production and consumption at variance with the general commercial and financial policy of the country. The committee cannot recommend the imposition of a duty upon foreign hops. They have not, however, refrained from considering how far the reduction of late years in the acreage of hops has been due to their free importation.

The Chance at the East for California Potatoes.

The *Great Southwest* of San Diego has received a letter from Prof. W. A. Henry of the Agricultural Experiment Station, Madison, Wisconsin, concerning the failure of the potato crop at the East, from which we quote as follows:

I inclose herewith a very complete report on the condition of the potato crop of the country, taken from the Chicago *Tribune* of to-day. From the accompanying map you will observe that in the 14 great States of the Upper Mississippi Valley and Michigan only five report anything of a yield, these being the Northern States of the group from the Dakotas to Michigan, while from Kansas to Ohio and Tennessee the crop is from worse to a failure.

By this report potatoes are now selling as high as 90 cents a bushel in Minnesota, $2 in Iowa, $1.50 in Illinois, $2 in Nebraska, etc.

In parts of this State we will have fair yields, in others very poor. A letter from the central part of the State, received to-day, says that Washington, D. C., parties are endeavoring to get potatoes from that point.

Is not this serious state of affairs with us of import to your people? Cannot Southern California help out in the shortage with advantage to herself? I may be in error, but it now seems as if every potato you can raise might find a market here at a profit to the fortunate producer. This risk is certainly worth trying. Never before within my memory has there been such a shortage of the potato crop from Colorado to Massachusetts.

Another thought. The almost prohibitory prices at which potatoes will sell will make an unprecedented demand for cabbage, turnips, onions and other vegetables. Prices for these would be good, even if there was the usual amount grown, but the same drought which cut the potato crop short has, no doubt, reduced the amount of these products also.

Cannot your people grow cabbage and possibly other vegetables to help out, also? This is an opportunity the equal of which will not soon occur again in all probability.

Commenting upon the above, the editor of the *Great Southwest* says:

This is our opportunity. If early potatoes are planted at once they will mature and be ready by the holidays. Then the ground can rest a month or two and still another crop be raised and marketed before the East will be able to grow another potato. Many persons of Southern and Central California are raising potatoes during this season of the year.

If the potatoes are raised, there can be no doubt about the price. Growers will get anywhere from one to two cents a pound, and perhaps more for them in San Diego. At these prices the business is as certain to pay as any business can be.

This paper suggests that it will be safest to plant early varieties. It takes the Burbank and Peachblow from two to four months to mature, hence if planted now they will not ripen until the winter, just the worst time. Other varieties, such as Early Rose, Goodrich, Garnet Chili, Utah Peerless and Early Burpee, mature in 90 days, and hence would be ready for market if planted at once, before the cool and rainy days that are liable to come in January. It will be seen that the time is none too long, but if planted between now and the 20th of September the venture will be a reasonably certain one. However, the quicker they are planted the better, *so plant at once.* Of course those without water cannot do so.

A suggestion about soil, for those who have not had much experience, may be in order. As a rule the stiff, red mesa soil is not considered good. Sandy mesa like that, for instance, of the Highland district near National, is much better. The sandy loam of our valleys is considered best. The soil should be thoroughly wet, flooded if possible, and then the potatoes put in as soon as it can be worked.

Most planters put the seed in whole until the rains come. In the winter and spring they cut the potatoes just as the farmer does back East.

It will probably be a little difficult to get the necessary seed, should our growers go into this extensively. A receipt was given recently. It is this: Cut the potatoes for seed just as growers do East, spread them on the ground in the sun, which will cause them to wither and burn. When they are sufficiently shriveled, bury them in sand about two inches deep. Keep this sand moist until the potatoes sprout, which should be in from ten days to two weeks. Of course when they commence to sprout they will be ready to plant. Some of our growers are trying this receipt and the result will be published as soon as known.

The above is not for good seed potatoes, but for those not yet ripe or old enough to sprout readily.

It is hoped that the ranchers of San Diego county will look into this potato-raising matter at once. It is a golden opportunity. If the county could ship between now and next June, 2000 carloads of potatoes and cabbage, it would do more than a several hundred-thousand-dollar subsidy toward bringing a railroad here.

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

Preparations at Watsonville.

EDITORS PRESS:—The State Grange Accommodation Committee, under the energetic management of Overseer A. N. Judd, is progressing finely. The people of Watsonville are responding nobly to the requests of the committee and evincing a truly patriotic interest in sustaining the honor of their town and valley. They propose not only to welcome the State Grange, but to welcome it in such a manner as will not soon be forgotten.

Ample accommodations can be secured for all who may come, at a price not to exceed $1.50 per day for board and lodging, while many of our best citizens will receive visitors at their private residences for $1 per day.

Overseer Judd has drawn an accurate map of the town and can locate individuals or parties in groups at the shortest notice either at private or public houses. All Patrons applying for rooms in advance are requested to state specifically what they desire.

S. Smith, proprietor of "Camp Goodall," at the beach, will receive Patrons at the prevailing hotel rates and give them a pleasant four-mile ride free to and from Watsonville.

Everything and everybody here is working in harmony, and if (as is expected) Patrons throughout the State will, by their presence among us, second the efforts of our people, this bids fair to be the best State Grange yet held. Our "Big 40" class has gone to work in good earnest. Although such new Patrons, they have subscribed to our Grange motto, "No drones in this busy hive." As a result of our last open meeting a snug little class of 20 has been formed and will be put through at once. This being the smallest class yet initiated (with no disrespect to its members), it has been christened "the baby class." As our San Joaquin Patrons are busy initiating and have their hands in, "what's the matter" with our Lodi Star, Bro. Huffman, coming down and instructing the candidates in the I. U. W., also in some of his advance thoughts in regard to insurance and the ballot? A. P. R.

P. S.—Those wishing to secure rooms in advance can do so by addressing Box 263, Watsonville, Santa Cruz Co., Cal.

The Williams' Grove Exhibition.

The formal opening of the Grangers' 17th Annual Interstate Picnic Exhibition at Williams' Grove, Penn., took place Tuesday, August 26th, with 5000 persons in attendance. The opening address was delivered by W. S. M., Leonard Rhone, who congratulated the farmers upon the bountiful crops they were blessed with this year. He was followed by J. J. Woodman, Secretary of the National Grange, and State Senator Gerard C. Brown, who is the State Lecturer.

One of the principal features of the exhibition was the display of cereals, etc., by the Northern Pacific railroad. The horticultural display far exceeds that of previous years.

Twenty thousand agriculturists and visitors from the Shenandoah and other valleys leading to the grove made up the crowd on the 27th, which was Democratic day. Hon. Chauncey F. Black, candidate for Lieutenant-Governor, arrived at noon in a special train, and delivered a stirring Democratic address in the auditorium. He was followed by Hon. S. M. Wherry of Southampton; U. S. Senator C. J. Faulkner of West Virginia; Hon. F. E. Baltzhoover of Carlisle, and Hon. Mortimer Whitehead of New Jersey.

Thursday, 28th, was Republican day, and the crowd was estimated at 40,000, many of those present being prominent Republican politicians from all parts of the State. The exercises were opened by Hon. Leonard Rhone, who introduced Hon. J. H. Brigham, Worthy Master of the National Grange. At 2 o'clock in the afternoon Hon. G. W. Delamater, candidate for Governor, appeared before the immense audience and delivered a stirring address on the issues of the day.

The *Grange Bulletin* says the grove is "a beautiful spot naturally, and with all the surroundings of friends and creature comforts, the thousands of visiting Patrons are having a grand time. If this affair continues to grow, it will be a question as to where the room can be obtained to accommodate those attending."

Kick!

"Farmers, you make a kick, both for yourselves and your families. Kick the saloons out of the country; kick the war tariff out of existence; kick the monopolies that are grinding you to pieces so hard that they will die of reform; kick the political rascals—who make $10 for doing nothing against your $1 for doing something—out of office and put somebody not so 'fresh' in their places; kick out of your deliberations all schemes that have not the fundamental basis of righteousness and common sense to stand upon; kick high and kick hard, for it is the kickers generally that win, if they only know when and how and whom to kick."

The Master's Desk.

R. W. DAVIS, W. M. S. G. OF CALIFORNIA.

The Grange throughout every State in the Union is reckoned upon as one of the steady, sturdy, reliable organizations whose membership is loyal to the country, honest in purpose, industrious in habits and thoughtful in every word spoken and in every resolution written. It is, therefore, no wonder that some of the farmers of America are awakening to the importance of uniting with this organization. It is not wonderful to note that in many ways and places the "Grangers" are being found competent to fill offices, and discharge the duties thereof with honor to themselves and to the satisfaction of those who elect them. And right here it is well to suggest, the beginning has hardly yet been made. May the good work go on and may the seed sown now, or hereafter, bring forth a thousand-fold! Truly, we want the man to be sought, and not the office. Then will we have better laws, purer administrations, lower taxes and more general prosperity. Here's to the good time soon to be, when high and low, rich and poor, will have equal and exact justice done them by law-makers!

It would make a pretty sight if every representative to the State Grange, at the approaching session, would bring a little bouquet of flowers, a miniature sheaf of grain and a small collection of fruit, each package bearing a label with the name of the Granger from which it came. At the State Grange these donations could be given to Ceres, Pomona and Flora, and they would, no doubt, arrange the collection in symmetrical and attractive shape. Will not each one try the plan? It will cost but little labor, and I know it will be a pleasing and winsome innovation.

Bro. J. H. Brigham, Worthy Master of the National Grange, has been nominated for Congress by the Republicans of the 6th Congressional District of Ohio. Without regard to party politics, the farmers and toilers of that district ought to vote for and elect J. H. Brigham.

If you love the Grange, show it by your works, not by words alone.

A better school was never taught than is to be found in each subordinate Grange. Theory and practice are both brought in constant use together right in the Grange meetings. Don't you know that?

Sow some Grange seed just now!

There was some preliminary work done for the organization of a Grange at Burson, Calaveras county. Won't some of our friends tell us what the signs of success are in that healthful and charming part of California? How about it, Brother Waters?

We pay you for your wages
No silver, neither gold;
But with our golden pages
True wisdom we unfold.

These suggestive words are from one of our beautiful Grange songs. There is much food for thought to be found therein. Don't you know the sign of the first degree ought to remind us of the truth of the words above quoted? Do we live for silver and gold alone? Oh, no! There may be "golden pages" in our own lives, if we will only make them so.

We are making footprints every day. Are they such impressions as we care to leave for others to follow, and do we make as many trips for the Good of the Order as we should make? Are they footprints that will encourage the forlorn and shipwrecked brother to take heart again and come to the Grange? If not, then we'd better be more careful of the footprints we are making. Any effort, however small, to do good will some day receive its reward. Let us, then, *make footprints*, but be sure we make them where they will redound to our own honor and to the upbuilding and elevation of humanity.

Patrons, come to the plain
Where the waving grain
Awaits us with our neighbor,
And the bounteous yield
O' the harvest-field
Will repay us for our labor.

That means for you to go to the fair city of Watsonville, October 7, 1890, and attend the annual session of the California State Grange, Patrons of Husbandry—the grandest Order of farmers there is on earth.

AN INTERSTATE COMMERCE DECISION.—On the 5th inst. the Interstate Commerce Commission rendered a decision that the acquisition and consolidation by rail carrier under one system of management of the different competing lines of road, serving the same territory in the carriage of competitive traffic to the same markets, cannot create a right on the part of the carrier to take advantage of the consolidation of interests to deprive the public of the benefits of fair competition, nor afford a warrant for oppressive discrimination with a view to its own interests, such as equalizing profits from its several divisions by making rates and charges for one division that give profitable markets to a portion of its patrons, and higher rates and charges for another division that were destructive to the pursuits of other patrons who are competitors in the same business. But its duty to the public requires that its service must be alike to all who are situated alike. The commission further holds that a road cannot charge one rate for petroleum in tank cars and another for the same in bond. The weight of the barrels must be taken as a part of the weight of the car, just as the weight of the tank is.

Effects of Admission Day.

Evidently the Grange is patriotic in California affairs and Patrons all over the State have been interested in the Admission-Day celebration by the Native Sons and Daughters. Scarcely any correspondence or reports of Grange meetings have reached us lately. This accounts for the lack of matter in this department of our paper this week. We hope our brothers and sisters will make up for this in future numbers.

We notice that a good many members of the Order were present at the celebration in San Francisco which has occupied our citizens pretty fully for over a week. Among those we happened to meet visiting the city the week are E. W. Davis, W. M., P. M., I. C. Steele, Thos. McConnell of the Executive Committee, Past Master Overhiser and wife, J. D. Huffman of Lodi, Albert Woods of Tulare, A. D. Logan, Bro. Bronse, Jr., and wife, Nettie Bronse, Sister Smith of Merced, Bro. Cressey, W. T, Don Mills of Bennett Valley and J. M. Kerlinger of Banta.

Now that the celebration is over, we hope that all hands will push ahead in the work so as to make a good report at Watsonville on the 7th of October.

Anti-Debris Association.

The regular annual meeting of the Anti-Debris Association of the Sacramento valley took place Aug. 30th, at the Courthouse in Yuba City, the President, Dr. C. E. Stone, being in the chair. B. Hull was elected Secretary pro tem.

The report of the President was read, reciting the history of the operations of the association during the past year, and recommends that as the counties of Yolo, Colusa and Sacramento will soon join Yuba and Sutter in the efforts to put an end to the destructive mining, arrangements should be made to give these counties representation upon the Board of Directors of the association.

The report of the Manager, Geo. Ohleyer, gave a statement of the present status of hydraulic litigation.

On motion of P. L. Bunce, the Secretary was ordered to cast the ballot of the association for the present Directors, which was done, B. F. Walton, T. B. Hull, G. W. Hutchins and P. C. Slattery being elected. G. W. Carpenter was elected Treasurer for the ensuing year.

State Grange Standing Committees.

Credentials—Bros. J. D. Huffman, John Gould, A. P. Martin, Sisters G. Ohleyer, Nellie G. Babcock.

Division of Labor—Bros. W. J. Hill, James Austin, N. Jones, Sisters V. W. Still, Katie Briggs.

Finance—Bros. Daniel Flint, M. D. Atwater, W. P. Crane, Sisters G. Harris, J. Hollister.

Resolutions—Bros. S. T. Coulter, H. M. Larue, M. W. Wingate, Sisters W. L. Overhiser, D. Flint.

Constitution and By-laws—Bros. I. C. Steele, A. M. D. McIntosh, Rufus Fisk, Sisters S. T. Coulter, W. Johnston.

Good of Order—Bros. W. L. Overhiser, C. E. Howard, B. F. Walton, Sisters W. W. Greer, J. V. Webster.

Co-operation—Bros. Wm. Johnston, J. D. Lindner, J. W. De Golia, Sisters Hattie S. Jones, T. McConnell.

Legislation—Bros. Geo. Ohleyer, J. M. Moore, J. H. McKune, D. Flint, S. T. Coulter.

Literary Committee—Sisters A. P. Roache, M. B. Lander, N. E. Alling, S. H. Dewey, Eda Walton, Bros. Fay Raymond, Don Mills, Robt. G. Williams, G. C. Wardell, James Connell.

WALNUT CREEK GRANGE.—This Grange has invited Danville, Pacheco and Alhambra Granges and other Patrons to join in a Harvest Feast, on Saturday of this week. Rev. S. Goodenough, W. C. of the State Grange, Visiting Deputy, will be present and address the meeting. It is hoped there will be a large number present.

A COMPLIMENTARY EXCURSION.—Watsonville Grange has arranged for a complimentary excursion to the grand Moro Cojo beet ranch near Salinas, among other delightful entertainments for the State Grange. In a week or two a more complete and definite program may be expected to be announced in our columns.

BRO. CRESSEY IN TULARE COUNTY.—Bro. Cressey, between the 20th and 27th of September, expects to visit Selma Grange in Fresno, and Lucerne, Hanford and Tulare Granges. We hope to be able to announce the dates and particulars next week. We trust a rousing good meeting will be held at each place.

Later—Meet at Tulare, 10 A. M., Sept. 20.

PLUMAS GRANGE.—Brother Past Master Flint will visit and address this Grange and other farmers Oct. 1st, 2d and 3d. No doubt a grand gathering will be had of the sturdy farmers of Beckwith valley.

State Grange Excursion Rates.

TO PATRONS OF HUSBANDRY:—The Southern Pacific Company has agreed to give reduced rates to all who attend the State Grange at Watsonville (commencing Tuesday, October 7th) from all parts of California, over all their lines, according to the following terms and regulations:

Patrons will purchase first class [unlimited] tickets to Watsonville from their local stations, on the railroad lines, being particular to *take a receipt from the station agent*, on the certificate [blank receipt] which will be sent them for that purpose.

Upon application to the Secretary at the State Grange, this certificate will be signed, certifying to the fact that the member of the Order has attended the State Grange and is entitled to purchase a return ticket from the Watsonville station agent at one-third unlimited first-class fare. The surrender to the agent of this certificate and receipt will enable the holder to secure a homebound ticket at one-third price, making the cost of the round trip two-thirds the regular rate.

Blank receipts will be forwarded early in advance to each Grange, to be furnished to members. In case of necessity, blanks can be applied for by Patrons direct from this office. When several tickets are bought together, the names can be included in a single receipt

A. T. DEWEY, Sec'y S. G. of Cal.
San Francisco, June 28, '90.

Unlimited Rates of Fare and Mileage to Watsonville from Points Noted
Southern Pacific.

From Points on the Pacific System.

Station.	MILEAGE. Via S. F.	Via San Jose.	RATES. Via S. F.	Via San Jose.
Anderson*	350	337	$9 95	$8 70
Red Bluff	326	313	9 25	8 00
Gridley	260	247	7 90	6 65
Orland	267	—	8 25	—
Maxwell	250	—	7 50	—
Marysville	243	230	7 40	6 15
Wheatland	230	217	7 00	5 75
Roseville Junction	209	196	6 40	5 15
Colfax	245	232	7 80	6 60
Auburn	227	214	6 90	5 65
Newcastle	222	209	6 75	5 50
Sacramento	191	178	6 10	4 85
Santa Rosa	177	—	5 05	—
Vallejo	152	—	3 80	—
Tulare	292	279	10 05	8 65
Hanford	285	282	10 10	8 70
Selma	323	250	9 15	7 75
Merced	256	180	7 05	5 60
Modesto	215	142	5 90	4 50
Banta	187	114	5 00	3 60
Byron	169	—	4 70	—
Martinez	137	—	3 80	—
Oakland†	118	92	2 95	2 75
Haywards	122	78	3 30	2 45
Santa Barbara	629	556	17 80	16 55
Los Angeles	584	511	17 80	16 55

*Via Marysville.
†Market Street Station, Oakland.

From Points on the Coast Division.

Station.	Miles.	Rate.
San Francisco	101	$2 80
San Mateo	80	2 45
San Jose	51	1 55
Templeton	124	3 80
Paso Robles	118	3 65
San Miguel	109	3 35
Salinas	20	65
Hollister	30	1 05
Gilroy	21	70
Santa Cruz	20	60

Limits of Stop-Over Privileges.

Patrons taking advantage of reduced rates to the State Grange and buying S. P. C tickets to Watsonville should take receipt therefor on the certificate furnished by the secretary. They are at liberty to buy tickets as soon after receipt of certificates as they desire, and can stop over on such ticket at any points on the route covered thereby. The tickets *bought at Watsonville*, however, will *not* give this stop-over privilege, as the home-station, if on the coast division, *i. e.*, between San Francisco and Templeton, must be reached within one day of adjournment of State Grange and other points within two days of said adjournment.

The Donahue railroad offers the same reduction as the Southern Pacific. Separate blanks will of course be obtained for passengers over that road.

At the Oregon Agricultural College.

Our engravings will give the reader a glimpse of the facilities provided and a suggestion of the work done at the Oregon Agricultural College, situated at Corvallis, Benton county. The exterior views show the Students Hall, a large building recently erected; the Mechanical building, in which is situated the workshop, of which an interior is shown; and the greenhouses in the horticultural department. The interiors of the zoological laboratory and the chemical laboratory have a character suggestive of good work in these departments. Not the least interesting is the view of the cooking class actually engaged in their practical duties. We trust these views will assure our readers that there are opportunities for instruction at Corvallis worth availing themselves of, and that by making application to the college authorities they will receive a descriptive catalogue giving full information concerning the institution.

ORLAND GRANGE.—We are informed by Bro. A. D. Logan, who was present, that Orland Grange held a meeting last Saturday and made an appointment for another meeting, at which an alternate representative to the State Grange will be elected and other important business transacted.

FARMERS' INSTITUTES.

Hop-Growing in Oregon.

At the recent Farmers' Institute held at Grant's Pass, Oregon, John S D nise gave the following very interesting and detailed account of the practice of hop-growing in Oregon:

Among the many products that may be prominently mentioned as growing to perfection in the soil and climate of Southern Oregon is hops.

As early in the spring as the condition of the soil is favorable for working, plowing begins, commencing in the middle of the row, with a two horse plow, turning the furrows to the center or from the hills. The yard being gone over, it is then cross-plowed in the same manner, the object being to get as much dirt as possible from the hills to facilitate the grubbing, to kill whatever weeds and grass may have started and put the ground in good condition for after-cultivation, as quite a while will elapse before the grubbing and pruning will have been done, the poles set and the earliest started vines trained to admit of horse and plow.

Then begins a very irksome and laborious part of the culture, the grubbing and pruning. The dirt being thrown out of and away from the hills by the use of the common flat-tined fork, exposing all the runners, leaves the hill in good shape for pruning, besides serving the very excellent purpose of being equivalent to a good hoeing. There is no particular skill required on the part of the pruner, but considerable activity, and one who is entirely free from all rheumatic and malarial troubles, as it would take a good tallyman to correctly number the times he should get up and down in a day. He carries with him a short, stiff knife, sharpened on both sides, with which to cut off the runners and do what other pruning is required. Strung to his waist is a butcher's steel to whet the knife while going from hill to hill. A good pruner will keep up with two men using the forks.

Then comes the pole setting; some growers using a shovel for digging the holes, others a dibble, others a post-hole digger, each having its merits according to the character of the soil in which it is worked. From 20 to 24 inches is about the required depth for a pole to be substantially set. This, although apparently an unimportant part of the business, is something that needs to be intrusted to careful hands, as any amount of damage can follow by the poles toppling under their heavy accumulating loads and hard winds, the tops whipping each other and breaking off the arms, and poles falling to the ground, often snapping the vines from the roots. The usual practice here is to set one pole to a hill. As to the length of a pole, I believe it to be the prevailing opinion among growers here that hops ranging in yield from 800 to 1200 pounds per acre, from 15 to 18 feet; from 1200 to 2000 pounds, 18 to 22 feet, and for anything over 2000 pounds, up to 30 feet insure the best results, as such lengths allow all the hops to be exposed to the sun and air, which are indispensable to the perfect development of the essential properties, and give better satisfaction to the pickers, all light and feathery hops being avoided. The yard should be poled by the 1st of April and not possibly later than the 10th, as by that time many of the vines are up and growing vigorously.

Training should begin as soon as the vines are long enough to give at least one turn around the pole. Squares are cut from baling cloth and let lap over a string tied around the waist, the strands being pulled out in passing from hill to hill. The vine invariably climbs from right to left or round with the sun; consequently in training, care is taken to always start it in the right direction and not over 20 inches from the ground, and left slack enough to avoid any jerking at the root from the swaying of the pole. The string being passed around the pole is twisted between the thumb and finger and given a sort of tuck, but not drawn tight enough to cut the vine. From four to six vines are allowed each pole, the stoutest being chosen. Simultaneous with the training is the incessant labor of getting away with the excess of vines, either by pulling them off or cutting them, any way to get clear of them. By the time the yard has been gone over, enough hills will have started to repeat the same treatment, three or four times going over the yard being necessary to get the vines well started up the poles, owing to the unevenness of their coming out of the ground and the lopping off of many which have already been tied up, which is especially the case in cool, cloudy weather.

The general cultivation by this time should be well advanced. The soil should be brought to a fine tilth by thorough and frequent working. The depth of culture is also no insignificant matter, as in our dry climate we must keep the moisture continually rising from the bottom. Very satisfactory results follow from the use of the shovel plow, following after and in the bottom of the furrow of the side plow. About the first week in July the cultivation should cease, as about this time the burr will be found forming and the ground filling with innumerable fibers, called feeders. It will have been found necessary to have gone over the yard with a hoe to clean the hills of weeds and mellow the dirt that will have been crusted by the rains.

For awhile we have rest from the hop-yard; nothing to do in it till picking-time, save the propping up of fallen poles. But in the interim the sacks and boxes must be repaired, furnace pipes taken down, cleaned and replaced; furnace wood cut and hauled to the dry-house; hop cloth, twine, brimstone and baling cloth secured and hop-pickers and pole-pullers engaged. About the 4th of September opens up the picking season, which lasts about three weeks. Notice is given the pickers and pole-pullers in due time that all may be on the ground with their camps fitted up and ready for action on the opening day. The foreman or checkman will then start them in their respective duties.

The duty of the pole-puller is to cut the vines about three feet from the ground, pull up the poles and place them over the boxes for the pickers, to take the poles when stripped of the hops from the box and empty the boxes when filled in the sacks; each sack holds two boxes.

The duty of the picker is to pick the hops clean and whole, not wad them or allow large leaves or stems or clusters of over three hops to mingle with those in the box, and receive a check when he has his box level with the top. Every intelligent person will recognize the importance of systematic work where a number of men are employed, be it in the field or factory, and in the harvesting and manufacturing of hops it becomes imperatively so to successfully accomplish the gathering of the crop and have it grade on the market strictly choice. Enough pickers should be employed to keep the dry-house constantly running to its best capacity, and its drying capacity should be equal to the amount of hops to be harvested in a time of not longer than three weeks, as they seldom hold good for any greater length of time.

The checking should be accurately done; every check should be able to be accounted for. A very good system is to issue the checkman a certain number in the morning as he starts out. To illustrate: Say 100 at noon; if he returns with 25 it is seen that he has given out 75; then examine his time-book, and if he has 75 tallies it proves itself that each picker has been correctly tallied. Every picker's name is placed on the time-book and given a tally in the column corresponding with the day of the month when he receives a check. If the difference between the checks returned and those issued do not correspond with the number tallied, the mistake is easily corrected with the picker with whom it has been made, as no picker will forget the number of checks received from one half-day to the other. Under such, or a similar system, there is always the satisfaction of knowing the number of boxes picked, and in case of fire, should there be any insurance, the adjusting agent can be given the exact loss in boxes and very nearly in pounds. If a picker claims he has lost a check or more, it is quickly ascertained by comparing his checks on hand with his tallies, and the gratification of having a safe and ready medium by which to calculate the cost per pound for picking. The checkman also keeps the pole-pullers' time. Each night the accounts of the day are transferred to another book, which can be kept clean and for after reference.

When a load of hops is sacked it is taken to the dry-house by one whose duty it is to haul the hops, keep the pole pullers supplied with sacks, and the camps with provisions and other ordered articles. The point to be reached in drying is to evaporate the moisture contained in the hop without injury to the essential ingredients. The virtue of a hop lies in the little bright golden-colored globules covering the base of the leaf called lupuline. As to just what degree of heat will do the injury there seems to be a difference of opinion among the best authorities, but it is found to be always safe to subject a flooring to not over 140 degrees. A flooring of hops being laid, the furnace is fired up and a steady current of hot air is kept passing through them till sufficiently cured. Considerable brimstone is burned under them, saving the treble purpose of bleaching, hastening the drying and aading to their keeping qualities. Eighty boxes can be dried on a floor 22 feet square, in from 16 to 20 hours, which would be about 850 pounds dried. When the flooring has been cured it is taken to the cooling-room or bin to await the baling. After the drying has been completed, about ten days or two weeks is allowed them to go through a sweat, so as to become more uniform in color and quality before baling. The baling being done, which is similar to that of wool or hay, except the bale is covered with 24 oz. burlap, the hops are then ready to go into the hands of the dealer.

The figures for ascertaining what it costs to produce a pound of hops ready for market are taken from a strict account kept of my own yard last year, or 1889, and which I think will answer for a comparative average:

8¼ days plowing before grubbing at $2.25 per day	$19 68
62½ days plowing and grubbing at $1.25 per day	78 12
75¾ days setting poles at $1.25 per day	99 68
20 days hoeing	25 00
42 days training vines at $1.25 per day	52 50
39½ days cultivating at $1.75 per day	69 12
10 days propping up fallen poles at $1.25 per day	12 50
2000 poles, which is about what it will take to keep the yard replenished yearly, at 1¼c	25 00
2000 poles hauling	45 00
21881/2 checks issued at 40c per check	875 40
59½ days pole pulling at $1.41 per day	83 89
13 days yard foreman at $1.75 per day	22 75
13 days hauling to dry-house at $2.25 per day	29 25
13 days two men drying at $1.75 per man	45 50
40 days baling at $1.25 per day	50 00
11 days cartage at $2.25 per day	24 75
850 lbs. brimstone at .043c per lb.	36 55
574 yards of burlap, or 123 bales, at 13 39-100c per yard	76 85
12 lbs. sacking twine at 30c per lb.	3 60
15 cords furnace wood at $1.25 per cord	18 75
15 cords furnace wood cartage, 7 days, at $2.25 per day	15 75
24 days stripping poles at $1.25 per day	30 00
20 days stacking poles and burning vines at $1.25 per day	25 00
Incidentals	20 00
Total	$1779 64

Total, 18 acres, 22,136 pounds.

Using these figures to compute the cost per pound, it is found to be .08039c.



COOKING CLASS. STUDENTS' HALL AND MECHANICAL HALL. GREENHOUSE AND FORCING-HOUSE.

OREGON AGRICULTURAL COLLEGE.



INTERIOR OF WORKSHOP. ZOOLOGICAL LABORATORY. CHEMICAL LECTURE-ROOM.

VIEWS AT THE OREGON AGRICULTURAL COLLEGE, CORVALLIS, OREGON.—See opposite page.

THE American Farmers' Alliance of California has incorporated as a mutual protection society, with the following directors: W. H. Griswold, Elias Norris, W. H. Riddell, G. T. Mason and J. D. Crawford. The association has no capital stock.



The Decorative Craze.

Put away the little coal-hod that our darling wants to paint,
For she fain would decorate it with devices queer and quaint.
Hide the dustpan and the washtub, and likewize the garden hose,
Or Matilda will adorn them with the lily and the rose.

When Belinda in the morning gets the wooden chopping-bowl
To concoct the morning corned beef hash, it vexes much her soul
To behold a wreath of pansies where she fain would cut and slash;
So she scrapes it off, because the paint might penetrate the hash.

On the household rolling-pin is tied a pretty yellow bow,
And its lilies of the valley oft comming'e with the dough
While the new potato-masher and the kettles and the pots
Are magnificent with butterflies and sweet forget-me-nots.

All our articles of furniture, the ancient and the new,
Are resplendent quite with drapery and bows of brightest hue;
In the house we look about with mingled sorrow and amaze,
For Matilda is affected with the decorative craze.

Selected.

Li-ten!

Whoever you are as you read this,
Whatever your trouble or grief,
I want you to know and to heed this:
The day draweth near with relief.

No sorrow, no woe is unending,
Though heaven seems voiceless and dumb;
So sure as your cry is ascending,
So surely an answer will come.

Whatever temptation is near you,
Whose eyes on this simple verse fall,
Remember good angels will hear you
And help you to stand if you call.

Though stunned with despair, I beseech you,
Whatever your losses, your need,
Believe, when these printed words reach you,
Believe you were born to succeed.

You are stronger, I tell you, this minute,
Than any unfortunate fate!
And the coveted prize—you can win it;
While life lasts 'tis never too late!

—Ella Wheeler Wilcox.

Raising Boys.

Alice Chittenden writes to the *Country Gentleman* of her observations in California and deductions therefrom in the following suggestive way:

I want to say a word for the boys on farms, founded on some of my own experience. Somehow I feel as if some of them do not have quite a fair show. As their sisters grow into young ladyhood, the best bedrooms of the house are furnished for them as daintily as the parents can afford, and decked out with white curtains and blue ribbons. As for the parlor, it is there they receive their friends. "Boys are such a nuisance," and Jack and Tom soon feel that their room is better than their company. They have no pretty den to invite them to loll and read in its easy-chair, and so, having no resources, they stroll down to the village or cross-roads grocery, if they live in the country. As for the city boys, who are often just as much in the way of their sisters, God help them! Their homes need be attractive, indeed, to vie with the evil places, all light and merriment, that are everywhere open and ready to lure them to destruction.

A boy is not supposed to care for curtains and furniture, and so, especially in country places, he is too often stowed away in any sort of a room, perchance one that is half filled with lumber and disused trunks, without a single cosy corner for him to delight in, or one bright, cheerful, attractive object on which his eye can rest the last thing at night and the first thing in the morning. The attractiveness of a boy's room is not, as a general thing, to be measured by the wealth of his parents; it is a question of the loving heart and deft fingers of a mother or sister working for love of the bright-eyed lad who feels that his home is the dearest spot on earth.

Let me illustrate. Side by side, in the lovely foothills of the Contra Costa range, lie two ranches, alike beautiful for situation, on each of which I spent several months a few years ago, with nothing to do but to enjoy the charming California winter, pick up the raveled threads of my health, ride the fleetest of Mexican mustangs and make observations.

The eldest son of my first host—Mr. Rodney—never spent his evenings away from home, much to the chagrin of the "boys," for Rob was universally voted a "good fellow." Fun was seldom inviting enough to tempt him away from his home; so one evening the boys accepted Rob's invitation to "come up to the house." Anticipating their shyness if he took them into the family living-room among his bevy of pretty sisters, Rob ushered them at once upstairs to his own den. It was only a garret room, with large floor space and lath and plastered sloping roof, with dormer windows, but there was a brightness about that room that went at once to the heart of every one of those lads, as I, who had seen the homes of some of them, knew. Rob had tinted the walls a delicate robin's-egg blue, with trimmings of terra-cotta, but it was done with kalsomine, not paint. Now a robin's-egg blue is as much green as blue, and everything in this room was in charming harmony. A loving mother or sister had hung white cheese-cloth curtains at the windows, which, although they cost only a few cents a yard, had a pretty border of coarse drawn work, and were looped back with pale green and terra-cotta ribbons. The bed was as daintily white as those of the spare beds at the homes of the other boys. It was not even covered with a counterpane, but wore a home-made affair of cheese cloth, knotted like a comfortable with worsteds of the same shades as the ribbons at the windows. The prints on the walls had been taken from illustrated papers, copies in wood of good engravings or paintings, and Rob and his sisters had fashioned frames of moss, or bark or lichens from fence rails, or from the golden straw of wheat and rye, interwoven with the dainty, fibrous green moss found on decayed tree trunks and fences.

The sofa was a mere frame of Rob's own manufacture of rough, unpainted boards, with barrel staves nailed across, and on this a plenteous upholstering of soft hay covered with stout, coarse muslin; over this was thrown a rug that showed again sister love, and originality as well, for these young girls knew nothing of the artistic possibilities of denim as set forth in the present day by the various fancy and art magazines; they did not even know it was called "denim." To them it was only blue jean or overalls goods, but they had taken a strip sufficiently long and wide to cover Rob's improvised sofa, and bordered it with a fringe of coarse yarn of a terra-cotta shade, home dyed, working it here and there with clusters of oak leaves outlined in the same shade and drawn from nature, for the nearest village was too primitive to have a store with a stamping outfit. There was a big, soft pillow for it, and a bracket for an oil lamp at the head of it at such an angle that Rob could lie and read in comfort.

There was also a set of book-shelves which Rob had made, containing his few books. His gun hung on a rack of rustic boughs which he had cut in the forest and nailed up. It was of the gnarled, rich red manzanita wood, but if any Eastern boy is enthused by this recital to adorn his room in like manner, he will find in our own beautiful forests many a substitute. The dominos and checkers with the checker-board were likewise of home make, and the boys spent so pleasant an evening that they comprehended at once why the store had no attraction for Rob.

Parents do not always realize what a lodestone such a room is to a boy, nor how powerful an agent in keeping him away from evil associations. Rob was going to be a farmer, but it was from choice. Sensible Mr. Rodney believed that in the matter of a life-work every boy should have his choice, and one younger lad was away at an Eastern trade-school learning brick-laying. I expect to hear of him yet as a prosperous master builder. Of the five girls, from baby Beth the twelve-year-old, rosy-cheeked, efficient little housekeeper, to grave and earnest Ruth, the kindergarten teacher, every one was able to earn her own living if necessary.

My other picture is not so pleasant. My second host had seven sons and one daughter. The latter had graduated at a young ladies' school in San Jose, and had returned home prepared to look down upon her family and surroundings and to be discontented with her lot. The youngest of the boys had almost reached manhood, but not one had been taught any useful trade. The ranch, which was not a large one, promised them no future when it should be parceled out among so many. In short, they had no prospect beyond that of ordinary laboring men. It used to make my heart ache to see the hopeless and yet doggedly filial way in which these boys went about their daily duties, working all day at an employment in which they had no pecuniary interest, and tumbling at night into hard beds in cheerless rooms. One of the lads had worked out for himself a sort of career, and was known as the best whip and horse-breaker in the county. The last I heard of him he was driving the four-horse stage between Truckee and Lake Tahoe. Another brother hired himself out to a neighboring nurseryman with some vague idea of learning something by which he could raise himself above the level of a Chinese coolie.

I asked the mother, a handsome, brown-eyed and white-haired lady of 55, why she had not had her sons taught some trade. She replied that her husband was very "set in his ways," and when he found that the boys displayed no special aptitude for books, had become discouraged with the idea of making anything out of them.

This was the spirit of the old Scotchman, who when asked if he intended to send his boy to college, replied, "God forbid that I should spend $5000 on a ten-cent boy."

Don't think that because your boy is no genius he is not fit for anything. Guided and directed, he will at least make a good and useful member of society. Find out his one talent—he is sure to have at least one—and cultivate that to the best of your ability. The more I study the lives of boys and young men, the more I see the practical value of such institutions as trade schools. A boy who would make a poor accountant or lawyer, may have a genius for engineering. He might make a bad preacher but a good bricklayer. If he elects to be a farmer, let him learn the scientific side of that noble profession.

Mothers and sisters, let your sons and brothers feel that the nicest thing in the world is to have a wide-awake, romping, whistling boy about with all his boyish spirits and nonsense. Teach him to be neat if you can, but don't nag him. Don't make him think it a sin if he shies his hat across the room instead of hanging it on a peg. The boy who grows up with the feeling that the best place in the world is home, and the best part of home is mother, will seldom go wrong. This is your work, mothers, your first and best work. Far better is it to teach our boys to be good men and right voters than to vote ourselves. We can safely leave the ballot in the hands of men who have had the right home and mother training.

Girls and Values.

[Written for the RURAL PRESS by MARGARET B. HARVEY.]

In these days, the majority of parents are anxious that their daughters shall earn money. Shall we say *too* anxious? I am afraid that in many cases this question can only be answered in the affirmative.

It may be all right enough for girls to earn money, and all right enough for parents to desire that they should. But why do parents, as a rule, take so little trouble to tell or teach their daughters or themselves what money is *for?* In other words, to give an intelligent reason *why* young women should earn money?

Why, exclaims the careless reader, anybody ought to know that much. To get clothes, to relieve their parents of the burden of their support, to help their younger brothers and sisters. Softly, my friend. You don't quite understand.

According to all accounts, in old times a girl was told that it was her duty to stay at home and do a servant's work, but without wages. Now she is ridiculed as lazy if she wants to stay home, and told that her board, at least, is worth $5 or $6 a week. She must find some way to pay this, just as much as if she was a stranger in her father's house.

We are informed that years ago a girl was satisfied with the occasional gift of a calico frock and a sunbonnet, while now a girl wants to wear silk and jewelry. But the fact of the matter is her parents would not be satisfied to see her in a calico frock and a sunbonnet. The average girl of to-day is *not* considered the rightful heiress in her parents' home, however humble, nor is she entitled to a present share in whatever goods it may contain; she is a tolerated interloper, who must scramble for her own board and clothing. She must earn money or else feel herself a pauper.

Do you consider this a desirable state of things, or can you not see that a girl may earn money, not so much to get clothes, etc., as to save her own relf-respect?

Can you not also see that this may involve too great a sacrifice? May she not feel forced to work merely for work's own sake? May she not come to believe that the money she earns is worth more than herself—more than her health, her rest, her time or her daylight? Is it not possible that by overrating the necessity of work, and not teaching the relative value of money, parents may rob their daughters?

To illustrate: Against her own prayers and wishes, a young girl was forced by her parents to send to their sectional board an application for a situation as teacher. Her name was forthwith placed on the "substitute list." Soon after, she had an opportunity to teach one day—and a day of terror it was—for which she received one dollar. Now what should she do with that hard-earned dollar? Her mother advised her to buy *two white aprons!*

The girl remembered her aching head, her tired limbs and her tortured nerves, and thought what a mockery was such a price for such a day's toil. She could have done without the aprons fifty times over; gladly would she have rested her weary head upon her pillow for but one-quarter of the day; but then somebody would have said she was lazy. While teaching, she was out of her mother's way, and her mother economized on her board by giving her two meals instead of three.

You can scarcely believe this, you say? Well, I can give you dozens and dozens of variations on the same theme, such as this: A mother takes her daughter's dollar and goes out and buys a trashy lithograph, most offensive to the daughter's artistic sense. The girl says, with a sinking heart, seeing how little are her best gifts appreciated, "If I had known you wanted a picture, I could have hired a substitute with that dollar, and stayed home a day and drawn you something prettier than that." Just think—one day blotted out of a young girl's life for a hideous caricature not worth a place in an attic!

I have known of a girl sitting down all day and crocheting a yard of lace, receiving therefor twenty-five cents—and then spending it all for candy, because her mother remarked that she was "stingy and selfish if she didn't treat;" and I have known of a girl tramping out in all kinds of weather for a whole month, to earn forty dollars, and then paying the entire amount for a gold chain because her mother wanted her to "look decent." The chain is out of fashion now, but that month will neve come back.

Don't misunderstand me. Gold chains are well enough in their place, and candy is nice sometimes; but there is such a thing as paying too dear a price for either. Had one girl not felt obliged to buy candy or crochet lace, she might have taken that day to visit a picture gallery; and had the other girl done without the chain, she might have purchased blessed freedom for a month, and attended a course of historical lectures, or practiced music or painted a landscape. There are better things in the world than money, or jewelry or dress—and our girls ought to have them and feel that they have a right to have them.

"But," you ask, "why do so many girls put all they can get on their backs? Don't they know that is bad taste?"

Yes, they *do* know it, in spite of all popular assertions to the contrary. But they also know that by putting their money on their backs they are most likely to get the good of it. If they save it for a rainy day, for education, for art, for travel, like as not, just as soon as they get a respectable amount, some relative is going to beg, or coax or threaten it away from them, and they'll never see a penny of it again.

Altogether, the world is a hard place for girls. Any girl who has her own living to make has quite enough to do. Don't talk to her about "gentle ministry" and "unselfish devotion," etc.—she has already found out all that you can say, and perhaps wonders why you don't take your turn in exercising a little "devotion" and "ministry" toward *her;* that is, if you are a brother, perhaps a parent, for these are the only ones who can make a girl's lot easier. In spite of all that has been done to open new avenues of employment for women to increase their wages, to shorten their hours or to respect their efforts, the fact remains that a girl's own relatives are most likely to prove her worst enemies.

If parents only realized that dress, simply *as* dress, is not worth working for; that a right-minded girl is not going to sell her liberty for candy and gold chains; that by doing without trifles it might be possible to enjoy rest and leisure, would the same necessity exist for girls working so hard as is supposed to exist now? Could not some feel that they had a right to stay in their father's houses, the charm of their presence constituting a fair equivalent for board and lodging? Could not others take a longer time in preparation for work, and thus in the end be fitted for a higher grade of employment? Could not still others find occupations which only took a portion of their waking hours and gave them sufficient for their every-day necessities? And would not the result be that the ordinary avenues would be less crowded, giving more opportunities to those who actually needed to walk therein?

How many people really know the value of a dollar? Why, a dollar will board a person for a whole day. It will buy you three meals at twenty-five cents each, and give you a bed all night. No one's board need be worth more than this, unless it is extravagant. Any girl can do a dollar's worth of work about a house in a day. The value of her work is at least equal to the value of her board—*good* board at that. Nobody need say a word about "keeping her;" if she has two eyes, two hands and two feet, she can keep herself. The chances are that her services in a house in one day will be worth more than a dollar. When we consider how many working women have to spend all they make for board, and depend upon precarious gifts from their relatives for clothing, the advantage is rather on the side of the girl who can stay at home. The great trouble is, so many girls are made to feel that they are not welcome at home, or are a trouble and an expense.

But then, people have queer ideas of expense! I knew one woman who thought a silk dress a necessity and a pair of rubber overshoes a luxury, and another who thought a Webster's dictionary quite an extravagance and gilt jewelry an economy. The queerest perversion or inversion of ideas that ever came to my notice was in the speeches of a hard-working dressmaker. She made it her business to peer curiously into a package carried by one of her young lady customers, and found therein two little walnut brackets. "How much did you pay for them?" asked the dressmaker.

"Fifty cents."

"Fifty cents! You ought to be shot! You might have got a *nice cake* for that!"

"I can't afford to spend fifty cents for cake," said the customer. "The cake would be gone in an hour, but these will decorate the parlor for years."

"Well, *I* can afford to have cake," declared the dressmaker, "and I won't have common cake, either. I'll have the most expensive black fruit cake." And the customer thought she began to see why the dressmaker was always poor and lived in a shabby house. The worst of it was that she was not cheating herself so much as she was her children. In later

years her son was known to declare that he "never had a home." Is all this foreign to the subject? Hardly. What I am trying to impress is the idea of relative values.

Which is worth more, a girl herself or what that girl can be made to do?

"But is it not right that she should help others?" you ask. "Suppose her parents, her brothers or her sisters need her assistance?"

Suppose they do—it *is* right for her to assist them; perhaps her bounden duty. But then we have heard so much of this side of the story that we forget the other. Any desirable thing can be carried to excess. A girl herself is likely to be quite as good as anybody she helps; but others are not going to think any too much of her if they find that they can impose upon her. She may injure them by relieving them of a due sense of responsibility and thus strengthen the selfishness in them. Remember the homely old proverbs, "It is the pulling horse that is whipped," and "The toad under the harrow stays under the harrow."

How much do you think that girl helped her mother by buying white aprons? I think she only cheapened herself; and something like this is what the greater part of girls' work is made to amount to when estimated outside of the business world. By a mysterious home-alchemy, its price is transmuted backward, from gold into a baser metal.

These things ought not so to be!

Chaff.

WHIPSOCKET asks: "How expensive is it to keep a horse?" That depends. In some parts of Texas it is impossible to keep a horse at all.

PREPARED MEAT MANUFACTURERS can all they make and make all they can.—*Siftings.*

A MAN is very much like a hen; he likes to sit on more eggs than he can cover.—*Atchison Globe.*

IT seems quite natural that the threads of conversation should sometimes produce a long yarn.—*Binghamton Republican.*

VERY many people who take in summer boarders have seen better days and lived better. So have their boarders.—*N. O. Picayune.*

NEEDLESS ALARM.—Sentry: Stop! Who goes there? Country woman (with a large basket): You needn't be afraid; I shan't hurt you.—*Bilder Kalender.*

THE school children of Brooklyn voted in favor of the golden-rod as the national flower. The hickory rod didn't get a single vote.—*Norristown Herald.*

NO JOKE—The one played on ourselves.—*Siftings.*

PARCHED EARTH is not good for the growth of parched corn.—*Picayune.*

CONSCIENCE is that within that tells us when our neighbors are doing wrong.—*The Epoch.*

ROBINSON: Do you know that you have the reputation among your creditors of being very polite? Travers: Of course. I always ask them to call again.

IF an ordinary man was muscled like a flea, he could throw a book agent two miles.—*Indiana Ram's Horn.*

THE prospect is that potatoes will circulate on a par with silver dollars before snow flies.—*Sioux City Journal.*

"WELL, Misther McPhelim, how'd ye schlape last night?" "Ah, bhad, Denny, bhad! Unconscious a good dale av the toime."—*Harper's Bazar.*

THE man who can't sing and won't sing deserves the sincere thanks of a musical community.—*Somerville Journal.*

W. CHILDERS KIDD (looking for board): Oh, I forgot to mention that two of my party of four are small children. I hope that will not make any difference. Mrs. Hashton (sweetly): Oh, not at all! I shall charge just the same as if they were grown up.

LATEST INTELLIGENCE.—By the way, where is that place Heligoland they're all talking so much about? Oh, don't you know, dear? It's one of the places lately discovered by Mr. Stanley.—*Punch.*

QUEER FREAKS OF COLD TYPE.—In "making up" newspapers, or piecing together different paragraphs into columns, items will sometimes be jumbled together and amusing results appear. A French newspaper has a good specimen of this kind of mixture: "Dr. X. has been appointed head physician at the Hospital de la Charite. Orders have been issued by the authorities for the immediate extension of the Cemetiere de Pardasse." The New Haven *Journal* some time ago made a curious jumble of two items. One read: "A large cast-iron wheel, revolving 900 times a minute, exploded in this city yesterday after a long and painful illness. Deceased was a prominent thirty-second degree Mason." The other paragraph detailed how "John Fadden, the well-known florist and real estate broker of Newport, R. I., died in Wardiner & Russell's sugar-mill at Crystal Lake, Ill., on Saturday, doing $3000 damage to the building and injuring several workmen severely."—*Exch.*

THE HUMAN EYE.—It is a well-known fact in science that the eyes are more the epitome of the man than all the other features that may help to suggest character.

YOUNG FOLKS' COLUMN.

Anecdotes of Canaries.

EDITORS PRESS:—Canary birds are believed by many persons to possess the power of reasoning, as many of their habits cannot be accounted for on the theory of instinct.

One lady, who had raised many birds for market, learned by observation that the grandfather bird, although hanging in a cage in a separate room from the young, and entirely out of sight even when the doors were open, always seemed to know when anything was going wrong with the young birds, and on one occasion he was heard uttering peculiar notes of distress while flying repeatedly from his perch to the bottom of his cage and back again.

A careful examination revealed nothing wrong with his cage and he had plenty of seed and water, but he still kept up his signs of distress until at last it was discovered that a perch in a young bird's cage had fallen down. As soon as that was placed in position the old bird commenced singing again at the top of his voice.

On another occasion he manifested similar signs of distress and would not be quieted, and as everything about the young birds' cages seemed to be in perfect order, it was hard to account for his pitiful cries. But at last it was discovered that one of the water-cups had been so placed behind the wires that the birds could not thrust their heads through for drink. As soon as that was righted, all signs of distress ceased at once.

As fast as the young birds matured they were sold and taken away, mostly by one man from an adjoining city, and in a short time the old bird became so fearful of him that the moment he stepped on the plazza in front of the window, cries of warning and a constant fluttering were kept up until the man would leave the house.

One bird had just hatched a nest of little ones, and while they were yet very young the mother commenced laying again. But it not being deemed advisable to allow her to raise another brood so soon, the eggs as fast as they appeared were removed from the nest by inserting a spoon-handle between the bars of the cage. In due time the young birds matured, and together with the nest were removed from the cage. In a short time the mother-bird commenced building a new nest, but before finishing it she tore up two whole newspapers, with which the bottom of her cage was covered, and constructed a barricade across the side of the cage where the eggs had previously been removed. It seemed as though this must have been done with the intention of guarding her nest from further annoyance.

One lady who had never raised any birds had one sitting on a nest of eggs, and as she thought sufficient time had elapsed for the young to appear, she became disgusted and threw the eggs out on the ground, when she discovered that each contained a live bird. This seemed to incense the father-bird to such a degree that he never allowed the mother to make another effort to hatch a brood, but persistently rolled the eggs out of the nest and broke them as soon as they appeared.

One pet bird was always accustomed to take a nap after the noonday meal, and as her cage hung in a window where the sun sometimes came in quite warm, she would chirp until the shutter was closed. It so happened on one occasion that on closing the shutter the cage was loosened and fell to the floor, and birdie was picked up badly frightened; but after awhile she was returned to the same place and seemed as happy as ever, although she never again chirped to have the shutter closed.

Canaries, like human beings, often have a fondness for certain articles of diet. Some prefer bread and milk, others boiled egg, peppergrass, raw apple, etc.; and it often happens that if one of their number is supplied with any such dainty, the others will keep up a constant call until they are supplied also.

They seem to understand readily whenever any such dainties as they are fond of are brought into the house, and we believe they understand enough of our language to know when we mention such articles as they relish.

They learn to sing each others' songs very readily, and can be taught a great number of amusing tricks. We once saw one which would mount a pet chicken and ride around the room on its back, seeming to enjoy the sport highly. Another had been taught to "play dead," and when taken from the cage and laid on its back in one's lap and told to lie still, it would remain perfectly quiet for some time before making an effort to escape.

When Signor Blitz was traveling as a magician, he had a pair so well trained that they would sit perfectly motionless on the barrel of his revolver while he fired it before his audience.

We are therefore strongly inclined to the belief that they are capable of exercising the faculty of reason. IRA S. THOMSON.

National City, Cal.

BIRD SONGS.—It is proposed that a permanent record be made of the songs of birds by means of the phonograph. "This done," says a correspondent, "the song could be reproduced leisurely and 'scored' by a competent musician. Thus art and nature would go hand in hand."

GOOD HEALTH.

Effects of Poisons.

One of the most mysterious of physiological phenomena is the influence of minute quantities of certain substances when introduced into the circulatory system. The wonderful effect of vaccination is familiar to all, and even more remarkable are the terrible results produced by a mere trace of saliva from a hydrophobic animal—a poison which, apparently, remains dormant in the body for days, weeks, or months, and then suddenly springs into fatal activity. Similar effects follow from inoculation with the venom of serpents, but in such cases the poisonous effects occur almost immediately.

Even more powerful are the poisons used by the natives of Africa to render fatal the wounds made by their arrows, as described by Mr. Stanley in his recent work on Africa. These, when fresh, are of most extraordinary power. Faintness, palpitation of the heart, nausea, pallor, and beads of perspiration break out over the body with extraordinary promptness, and death ensues. One man died within one minute from a mere pinhole puncture in the right arm and right breast. A headman died within an hour and a quarter after being shot; a woman died during the time that she was carried a distance of a hundred paces; others, in varying spaces of time up to a hundred hours. The activity of the poison seemed to depend on its freshness. The treatment adopted was to administer an emetic, to suck the wound, syringe it, and inject a strong solution of carbonate of ammonia. This carbonate of ammonia injection seems to have proved a wonderful antidote if it could be administered promptly.

One of the poisons with which the weapons are smeared is a dark substance like pitch. According to the native women, it is prepared from a local species of arum. Its smell, when fresh, recalls the old blister plaster. It is strong enough to kill elephants. This poison is not permitted to be prepared in the village. It is manufactured and smeared on the arrows in the bush. All these phenomena are certainly wonderful and unexplainable; but for that matter, there is hardly any action taking place in the living body of which we can form any satisfactory conception of the true nature.—*Popular Science News.*

A MUCH-NEEDED ENTERPRISE.—San Francisco is to be blessed with a medical and surgical dispensary, one of the largest in the world, to be known as the Cosmopolitan Dispensary. The gentlemen in charge of the enterprise, who are men of means and great experience in medical matters, have leased and thoroughly remodeled the building at the junction of Market, Stockton and Ellis streets. There will always be in attendance a staff of eight physicians, six of whom will be in charge of the four consultation-rooms, which will be open to the public from 8 o'clock in the morning till 10 o'clock at night. Upon one physician, assisted by a pharmaceutical graduate, will be imposed the task of managing the medicine and express rooms, where all medicines intended to be sent to out-of-town patients will be prepared. The physician-in-chief will have charge of all correspondence, and will be assisted by 16 stenographers. All prescriptions will be carefully compounded by a skilled graduate, and all drugs will be bought at wholesale and retailed to patients at first cost. All correspondence will be kept perfectly secret and either burned or returned to patient. No charge will be made patients for examination, and if there is no cure the patient will be informed of the fact. The gentlemen in charge will only take cases they can cure, and whenever they fail to effect a cure they will make no charge.

HOW TO WATER PLANTS IN POTS.—Success or failure in the growing of house plants is largely due to the care and attention paid to watering. Like everything else, what is worth doing is worth doing well. When plants require water, give it unsparingly. The system to adopt is to be thorough rather than regular. Many persons water their plants as regularly as they wash their faces, which will not do. A plant should not be watered unless it needs it, and it does not need it so long as the soil contains sufficient moisture for the plant's use; more than that is an injury. Water should never be given until the plants show by the drooping of the leaves that they need it. Then give with a liberal hand, not simply a surface wetting, but give until every particle of soil in the pot is wet; let it go to the bottom. Many plants have been so long potted that the ball of roots and earth is almost impervious to water. Water applied to such, ten times a day, will do but little good; the pots should be put in a tub of water occasionally, and left there for 24 hours, the pot all under water, then they will get a wetting that is useful and lasting.—*Agriculturist.*

THE PHONOGRAPH AS A DISSEMINATOR OF DISEASE.—It is reported that the Philadelphia park commissioners have ordered the disuse of the public phonographs heretofore in use in Fairmount Park, on account of the danger of their serving to disseminate disease. This danger is doubtless very slight, like that of injury to the ear, and probably neither danger is worth consideration if the instrument is kept reasonably clean and used properly, but its promiscuous use in a public park does not seem to admit of perfect security in this respect, and the announcement that the phonograph company intends to substitute a plate ear-piece for the penetrating one now in use, avowedly for the reason that there are persons who object to the present form, goes to show that the Philadelphia commissioners are not the only people who entertain the idea of danger in the phonograph.—*N. Y. Med. Jour.*

FAITH AND MIND CURE.—Charles Dudley Warner is quoted as saying that the difference between "faith cure" and "mind cure" is that the "mind cure" doesn't require faith and the "faith cure" doesn't require any mind.

DOMESTIC ECONOMY.

Apples Properly Cooked.

We have learned the value of the apple as an every-day luxury, and have them to use freely. We begin on green fruit in August, and I have good, sound Roxbury russets in my cellar in July, and shan have them till nearly the end of the month.

I call cooked apple a luxury on the table at any time. I use the term "cooked," for stewed, mashed, mangled, murdered apple is not good at any time of the year. An apple that has flavor should not be cooked till all the flavor passes off in steam and nothing is left but pulp. My housekeepers are taught to pare, cut and quarter every morning for use during the day. When to be cooked, they are put in a tin pan or other broad-bottomed vessel and set on the stove or cooking lamp with a little water in the bottom. The apple in the vessel should not be more than ten inches deep and should be covered tightly to keep in the steam. They will cook very quickly, and just before the top ones get soft, sprinkle over sugar, cover again and set away to cool. The quarters should not fall to pieces. Cooked in this way they are delicious. Many a cook in the farmhouse needs to understand the right way of cooking apples.

In the fall and early winter we leave the peel on, especially if it is high-colored, as the best flavor is next to the skin. I don't allow apples pared with a knife; they should be pared with a machine that takes a thin peeling.

I believe farmers in general, and their wives in particular, do not value cooked apple as an article of diet as they should. Less tea and coffee and more apple, no doubt, would conduce to longevity. So much sweet is used nowa days, I think the acid of the cooked apple is needed to keep up good digestion. I have no doubt the free daily use of cooked apple would diminish the use of hard cider. This beverage is craved most in springtime, when the system is inclined to be bilious. Take pains to have a full supply of apples at this time and use them freely, and no excuse can be got up for frequent visits to the cider-barrel. The cider is best kept within the peel of the apple; kept there, it can be taken into the system in its normal condition and appropriated to a useful purpose. I want no barrels tighter than common flour-barrels to hold my cider.—*Z. Breed in New England Farmer.*

GOLD FEATHER CAKE.—One and a half cups sugar beaten to a cream with half a cup of butter, half a cup of cold water, two cups sifted flour, one and a half teaspoons of baking powder, three eggs. Flavor with one teaspoonful of lemon extract.

VANILLA SNOW.—Cook one cupful of rice in a covered dish to keep it white. When nearly done, add one cupful of cream, a pinch of salt, the beaten whites of two eggs and a cupful of sugar. Flavor with vanilla. Pile in a glass dish and dot with jelly. Serve with cream and sugar.

SUGAR CAKES.—One cup butter, one cup sugar, four cups flour, two eggs, one teaspoonful vanilla. Cream, butter and sugar, mix with the beaten eggs, add the flour and the flavoring, roll out very thin, and bake in a moderate oven, sprinkling the cakes with granulated sugar just before baking.

CROQUETTES.—A nice way to use cold beef for supper or luncheon is to take one pint of chopped beef, four medium-sized potatoes, juice of half a lemon, half a cup of stock or hot water, one teaspoonful of onion juice, salt and pepper. Mix all together, shape nicely, dip in beaten egg and cracker crumbs, and fry in boiling lard two or three minutes until they are a delicate brown.

CREAM COOKIES.—To one cup of thick, sour cream add one teaspoonful level full of soda, one and one-half cups granulated sugar, one egg, one heaping teaspoonful of baking powder, a pinch of salt, caraway seed or any other flavoring you prefer, and flour enough to make a stiff dough; roll out thin, sprinkle sugar over it, and pass the rolling-pin over; cut out and bake quickly.

SMALL CUCUMBER PICKLES.—Wash and wipe 100 small cucumbers, and place them in jars. Cover them with boiling brine, strong enough to bear an egg; let stand 24 hours. Then take them out, wipe, place in clean jars, and cover with hot vinegar spiced with an onion, 12 whole cloves, one ounce of mustard seed and three blades of mace. They will be ready to use in two weeks.

PACIFIC RURAL PRESS

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SAN FRANCISCO:

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Business Announcements.

[NEW THIS ISSUE.]

Rubber Goods—Goodyear Rubber Co.
The Mount Shasta Route—Southern Pacific Company.
Fruit Truck—Smith McGarvin, San Jose.
Nursery Stock—Wirt Brothers, Salem, Oregon.
Poultry—J. M. Garrison, Forest Grove, Oregon.
Poultry—Geo. O Sloan, Forest Grove, Oregon.
Roofing and Preservative Compounds—Paraffine Paint Co.
Horses—M. W. Dunham, Wayne, Ill.
Washing Machines—E. W. Melvin, Sacramento.
Fig Trees—H. R Schell, Knights Ferry.
Trees and Plants—Sydney Tuttle & Co., Bloomington, Ill.
Jersey Cattle—Henry Pierce.

See Advertising Columns.

The Week.

The great overshadowing event of the week in the metropolis has been the Admission Day celebration, under the auspices of the Native Sons of the Golden West. The events of the celebration, outlined in our last issue, were carried out with a volume and enthusiasm exceeding the anticipation of the most sanguine, and the occasion will not be forgotten by the present generation of Californians. There was wonderful breadth to the event because of the participation of good delegations from all the sides and corners of the State; delegations of stalwart youth, filling mile after mile of the procession; delegations of gray-bearded Pioneers—a greater number of them probably than ever convened before in the history of the State. The Native Daughters and their beautiful mothers were also present in force, and gave the events a grace and social significance, an inestimable contribution to the general success of the celebration. It is estimated that in the grand parade, the crowning event of the week, there were not less than 25,000 persons participating, and it occupied two and a half to three hours in passing a given point. It is the popular judgment that San Francisco never witnessed anything like it in extent, variety and spirit. The Native Sons have shown themselves worthy of their birthright.



VIEW IN THE PALISADES ON THE COLUMBIA RIVER.

The American Race.

We have none. We are one people only by law, language, industry and commerce. In all else we are wide apart. Race, color, religion, thought, habit and condition, oh, how wide apart! We are gathered from the ends of the earth and exhibit specimens of the highest and lowest degree in all.

But come back here in a thousand years and you shall find all this vanished into thin air. We shall be one race—the American race. All trace of these distinctions will have passed away. There will be only one blood, bone, flesh, color and form—the American people will be one great family.

In a thousand years the white blood will have worked down among the darkest and lowest, and the black, Chinese, Indian and other blood will have crossed and streaked the first families. They will all be one flesh and the distinctive features will have passed away.

What will that race be? White, without a doubt, from light blonde to dark brunette. But all will pass for white. The prevailing element, the wealth, education, mental force and mastery and the numbers of the whites will make them the type, the race; but all the rest will leave their mark, here weak, there strong, but seen more or less all round.

Shall we be a superior race? How shall we compare with Europe, with the English, French, or German? Will the pure or the mixed prove the superior? Will there be a white race anywhere that will loom up above us and look down upon us as we do now upon the Chinese? Who can tell? History gives us no guide, no solution of this question. Pure races yet stand at the head of civilization.

Among ourselves, blot out the white element, and we should step down from the front rank among the nations; England, Germany or France would soon regard us as an easy prey; and when the mixture is thorough, and we are one people with all this mixed blood, shall we still hold the first place or drop to a second or third, and look up to the purer blood of Europe as something away above us?

We would none of us wish to have it. We are proud and we shall always be proud to be called Americans. We would have the American race first in the world. We would all be willing to do something to make it so. What can we do?

We cannot avoid the mixture of our races. It is not possible. The proudest family in the land cannot do that. For a time, perhaps; in the end, never! Time will bring us all into one pool. Beauty, talent, wealth and erratic love will do that for us in despite of all our efforts to prevent. A thousand years is a long time.

There is probably not a man in England who could not trace his lineage to King Alfred, and also to the shepherd who kept his herd.

Again, then, the question recurs, what sort of a people shall we be in the year 3000? We are working out the problem now. We are fixing the factors. We are mixing the dough to make that bread, and settling whether it shall be white, brown or black, and what it shall be in all other respects.

If we are wise we shall be very sparing of inferior elements. We shall close our doors in the face of all who will tend to degrade us. If they come they will increase and leaven the whole lump, as we have seen. Is it not enough to make us resolve "that no more shall come to stay and live among us who will not tend to improve rather than deteriorate our general average"?

We should begin this work now. Begin with the lowest, the most objectionable, and let the work of exclusion go on till none can come among us who bring objectionable form, defect or disease.

There is no fear that our numbers will suffer by this process. Indeed it is certain that within two centuries the tide of population must set away from us, for the reason that we shall be too thick upon the ground.

God made mankind so prolific as to stand the wear of savage life in the woods, and still hold their own and increase a little all the time. When war, famine, pestilence and death by wild beasts are removed, almost entirely, as with us, we increase very fast. Some aver that we may double every 25 years, till want of space forbids.

Now let us make it 50 years, to be sure, and what remains? In 1990 we shall be 80,000,000; in 1950, 160,000,000; in 2000, 320,000,000. We shall still be less than 50 to a square mile, and may double again before the year 3000. But that will perhaps be all we can do.

Numbers are no longer an object with us, either for strength or progress; and the time is not distant when we must not only accept none from the outside, but must begin to prune those within, with a view to maintain the purity of our race and security for our peace, happiness, liberty, and our republican institutions.

Oregon Scenery.

The beauty of the Northwest is the theme upon which every visitor delights to descant. It is of a type wholly different from that of California, and it is conceded, we believe, to be far more grateful to the eye. The whole Pacific Coast is, however, so well endowed with Nature's best work that comparisons are needless—each has enough to stimulate and ennoble all who attune their hearts to Nature's sublime lessons.

The Northwest has many scenic features, but the scenery of the Columbia has commanded the greatest effort from poet and painter, and it is indeed grand and entrancing. Our photoplate gives a glimpse of a beautiful scene in the palisades. Of the scenery of the Columbia an admiring local writer has penned these words:

The Columbia river passes through a country which, among other features, affords the grandest and most picturesque of scenery. Tourists who have traveled in many countries pronounce the ride up the Columbia from Portland the finest within the range of their experience, and even declare the scenery to be the most magnificent along any river on the globe. The Columbia receives its large tributaries, with the exception of the Willamette, before breaking through the Cascade mountains. The whole course of the Lower and Middle Columbia is through a mountainous country. The towering rocks, abysmal chasms, wooded cliffs, gloomy caverns, cascades and cataracts are made familiar to the voyager on the Columbia, who can spend any time he chooses at specially interesting points along the shores.

The palisades of the Hudson, the pictured rocks of Superior, the rugged crags of the Alps, the picturesqueness of the Rhine, the deep wildness of the Amazon, combine on the banks of the Columbia to make a continuous scene of rare beauty and sublime grandeur. The steamers, which ply regularly on the river, carry thousands of delighted tourists annually through this American wonderland, any attempt to describe which only makes evident the poverty of language.

Why Not Plant More Native Conifers?

[Written for the RURAL PRESS by WILL C. AIKEN.]

In a recent trip through the central and southern portions of the State, the absence of our native *conifera* was generally noticeable in the valleys and cultivated areas. The different palms, as well as the Australian trees, the pepper and the eucalyptus, have everywhere been the favorites for planting. Of course, there are some supposed reasons for the choice of these trees. They are handsome and give to the landscape a semi-tropic air; they are all quick-growing and therefore find favor; but that they have been propagated more largely by nurserymen and hence are easily procured is another reason why they have been so liberally planted.

The Monterey cypress and pine are occasionally found, as well as the *Araucaria Excelsa* (Norfolk Island pine), and these have grown thriftily in all locations; but that the palm and the pine are not more frequently seen side by side is a subject of remark.

Some of our grandest conifers have been quite neglected, namely, the incense cedar, *libocedrus de currens*, and that noble spruce, *abies Douglasii*. In their native voluntary state these trees are found in moderate altitudes, but that they thrive at sea level and wherever propagated is well known. The first named has been planted to some extent around Fresno and elsewhere, but the Douglass fir or spruce is, if anything, less known. When left to itself on dry slopes where the seed starts, this evergreen is of comparative slow growth, but with care and cultivation in the nursery row, it makes a more rapid growth. A specimen growing in adobe soil in Berkeley, that is probably not over six years old, and which has been entirely neglected, has made an excellent growth and is now a good-sized and beautiful tree, showing some of its possibilities under quite unfavorable circumstances.

I noticed some excellent though small specimens in the Sierra Madre hills above Pomona, though not yet old enough to bear seed that would germinate.

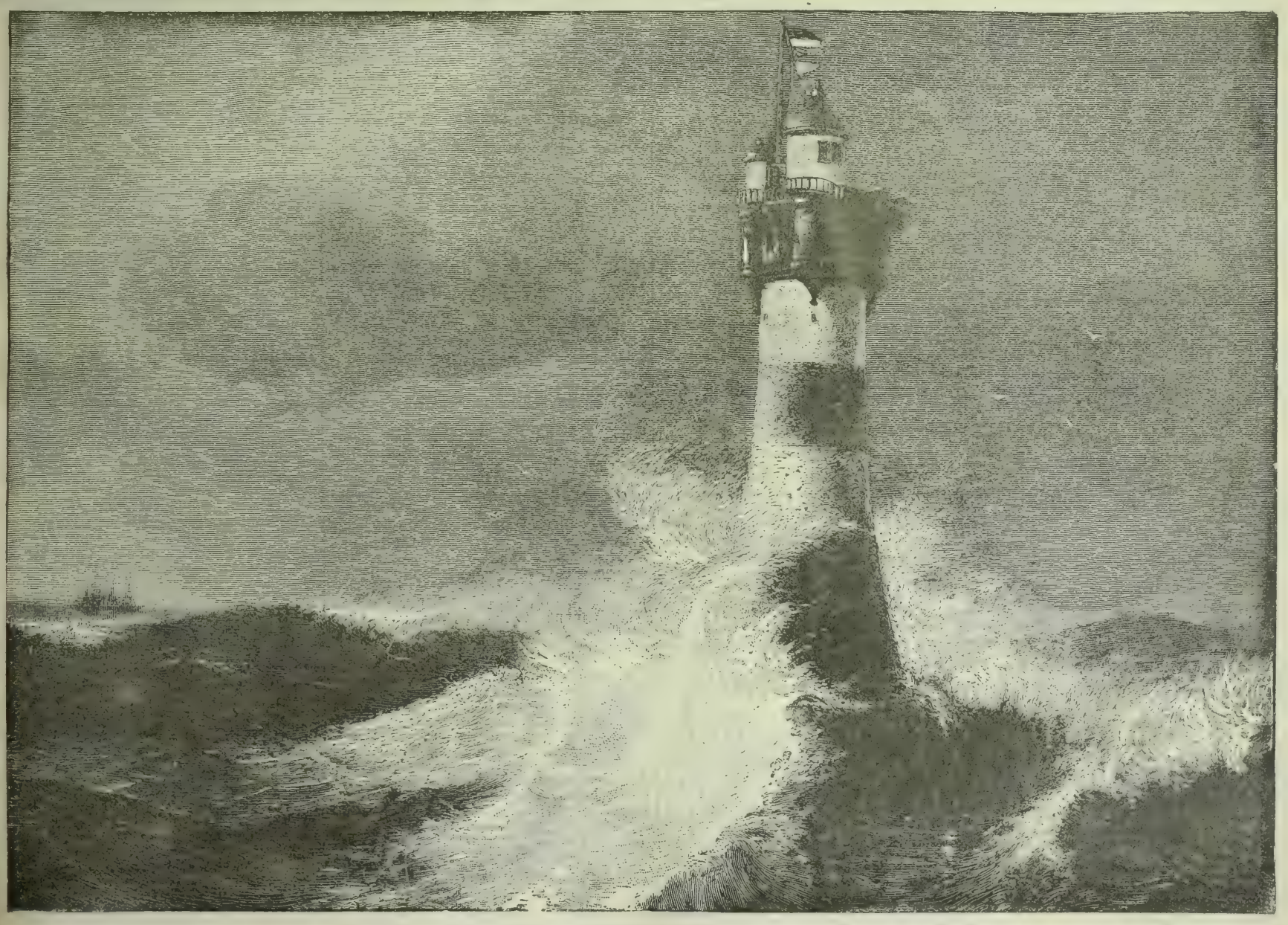
With us, on the mountains north of San Francisco, the Douglasii is our grandest forest tree, standing as an effective barrier against the northers and autumnal storms.

St. Helena.

GRAPE SYRUP.—According to the Yolo *Mail*, the manufacture of grape syrup is being brought upon a profitable basis by Snavely & Baker of the Woodland winery. They hold their process as a secret, but they report results as follows: "The syrup made by us last year went like wildfire, and we have several orders from the East, one from Washington, D. C., for two carloads, which will soon be shipped. We receive 55 cents per gallon for the liquid. This is the top price. We take great pains with our work, and will this season make 25,000 gallons, against an output of 20,000 gallons last year." The syrup-makers are reported to be offering $11 per ton for grapes, or $2 more than they paid last year. Samples of this season's syrup will be placed in the Yolo exhibit at the State Fair.

Eddystone Lighthouse.

The Eddystone Lighthouse is built upon one of a group of gneiss rocks, daily submerged by the tide, in the English channel, nine miles off the Cornish Coast and fourteen miles south-southwest of Plymouth breakwater. The frequent shipwrecks on these rocks led to the erection of a lighthouse on them by Mr. Winstanley, 1696–1700. It was a wooden polygon, 100 feet high, with a stone base; but a storm in 1703 completely washed it away with the architect. Another lighthouse was built 1706–9, also of wood, with a stone base, and 92 feet high, by Mr. Rudyerd, a silk-mercer. This erection was burned in 1755. The present building, known as the Eddystone Lighthouse, and noted for its strength and the engineering skill it displays, was constructed by Mr. Smeaton in 1757–59 on the model, it is said, of the trunk of the oak tree. It stands on the sloping side of one of the rocks and is built of blocks, generally one to two tons weight, of Portland oolite, encased in granite. The granite is dovetailed into the solid rock. The whole forms a circular tower 85 feet high; the base is 26¾ feet in diameter and has 13 feet of solid masonry on it, and the tower contracts to 15 feet diameter at the top. The light, a fixed one, 72 feet above the water, is seen at the distance of 13 miles. As the rock on which the tower stands is worn and greatly weakened, the lighthouse is to be taken down and rebuilt on another part of the reef.



THE EDDYSTONE LIGHTHOUSE.

HOP LICE IN OREGON.—A dispatch from Eugene City says that Prof. Washburn of the State Agricultural College visited the hop-yards on McKenzie river, Lane county, last week for the purpose of ascertaining as to the presence of the reported hop louse in the yards of Lane county, and that he found the genuine hop louse (*phorodon humuli*) in considerable numbers.

Notes on the Fairs.

Marysville—13th District.

The fair for the 13th Agricultural District—now embracing only Yolo, Sutter and Yuba—came off last week at Marysville. The *Bulletin* correspondent observes: The display of fruit in the pavilion this year is up to the high standard of excellence maintained by the horticulturists of the district, and there is a great deal of it on exhibition. Every description of deciduous fruit grown in California is well represented here, and the citrus family find representatives in a pile of green oranges, which, even at this early date, are almost the size of baseballs, and in the course of another month would be turning yellow on the trees. The orange orchard of 100 acres, six miles south of Marysville, on the open plain, is making a vigorous growth, having passed its first winter without the least injury from frost. The fine fruit and big vegetables shown in the fair were all grown without irrigation.

One hears at the fair more talk about fruit than anything else, and the coming season is likely to bring some extensive planting of deciduous fruit trees. The farmers all admit that something more profitable than wheat is needed, but not very many of them in this part of the State have yet cut loose from the grain-growing habit. If you argue that alfalfa, orchards or vineyards pay far better than grain, the fact will be readily admitted. "Yes, I know it," said an old farmer to-day; "but I know how to grow wheat, and I don't know anything about alfalfa or fruit." The past wet winter was severe upon some of the best orchards on the Feather river, and greatly lessened their yield of fruit this season. But the experience has been valuable and on lands liable to become excessively wet, the Bartlett pear will succeed stone fruits.

Perhaps the most interesting exhibit in the pavilion here this week, from a strictly agricultural standpoint, is a big bottle of sorghum syrup. It is a clear, amber substance, thick and heavy. Its flavor is excellent. It is remarkable for the absence of that slight degree of acidity commonly found in such syrup, and which many persons suppose to be a necessary characteristic of sorghum. Many gallons of this syrup have been sold at retail by the maker. His price is 75 cents a gallon, and he can see millions in the business at a much smaller price.

Inquiry suggested by a bale of alfalfa at the stock grounds brings out the information that a piece of land near Yuba City is paying from $75 to $100 an acre in alfalfa. It is not river bottom, and is not irrigated. There are occasional bunches of alfalfa in bloom on the top of the Marysville levees from seed accidentally sown. The roots of these blooming plants must go down 10 or 15 feet for moisture.

Outside of the pavilion, interest centers in the racetrack, where the "speed trials" excite as much attention as usual, and hundreds of people there attest devotion to agricultural pursuits and rural joys. With a "wheel of fortune" and other facilities for losing money, the industrious farm hands have sufficient opportunity to get rid of their hard-earned harvest coin. Mere "literary exercises" are dispensed with in the fair program of this 13th district. There is no opening address nor intrusion of essays on agriculture or horticulture. No premiums are offered for the best yields of any description of farm or orchard products, or for descriptions of new processes or improved methods. If the visitor to the fair desires information of any of the methods by which the results he sees were obtained, he must get it by personal application to the grower. There are no written descriptions embodying such information. The educational value of the District Fairs could be greatly improved by attention to matters of this kind, and the innovation would not give rise to any injurious or dangerous competition with the races. It has been suggested that if the races were held subsequent to the pavilion display and the exhibition of live-stock, more benefit might be derived by the farmers, and that, in such case, their attention would not be diverted from the more strictly agricultural features of the fairs by the horse-races. But the answer to this suggestion is that the farmers would not come into town until the racing program opened. The experiment, however, might well be tried.

The display of cattle at this fair is not so large as usual, but a good representation of heavy horses for farm work is made. The sheep industry is represented in no more direct way than by the exhibit of fine blankets and other goods from the Marysville Woolen Mill. Of poultry, a foothill farmer shows fine specimens of noted breeds, and says that this season he has filled orders for 600 fowls of high degree. Some beautiful displays of flowers are to be seen in the pavilion, and the decorative efforts are in general good.

Taken as a whole, the fair is regarded as a success from every point of view, and the management have worked hard to supply the usual range of attractions and facilities for the public.

Arroyo Grande, of course, contributed heavily to the showing of vegetables, fruits and

(*Continued on page 237.*)

AGRICULTURAL NOTES.

CALIFORNIA

Alameda.

MAKING HIS OWN BRAND.—Livermore, Sept. 4: J. E. Stover will dip his Muscats this season, and expects to make a large pack of raisins. He proposes to establish a brand the leading attraction of which will be the beautiful amber translucency of the raisins, owing to the dipping process to which the grapes are subjected.

HAY SPOILING.—Livermore *Herald*, Sept. 4: The farmers of the Altamont region have a genuine grievance. They are baling and shipping their hay and can get no cars. Other sections are in a similar fix, but as there are practically no hay warehouses at that point, and hay is the only crop produced, the position of the Altamont farmers is unique. Their hay is bleaching and losing in weight and value daily, while they are unable to either ship it or get it under cover. They file orders daily for 25 cars and get two or three. There is a general scramble for these, with a good likelihood of engendering bad blood. The platform of the depot is piled to the roof with hay, and a portion of it has broken down under the load. Hay is everywhere and cars are nowhere.

FOOD FOR CATTLE AND HOGS.—Livermore, Sept. 4: Some of our farmers should experiment with the carisa plant in their wet gulches. Wherever there is a stream of water, however small, the carisa will grow to an enormous size, and as it is an excellent fodder for cattle and probably for hogs, it should prove of great value to the farmer. If it grows as it promises from the few specimens in our town, a half-mile of wet gulch would produce ten tons or more of fodder. This land is now comparatively worthless. Suckers can be procured in this place, and a few plants will soon supply all that are needed. The crop is cut annually, the roots living in the ground. There are hundreds of such gulches on our hill farms, and we believe they could be made very remunerative in this way.

Contra Costa.

FRUIT PROFIT.—Martinez *Democrat*, Sept. 3: Our fruit-growers express themselves well pleased with the result of this year's fruit crop. The crop of French prunes was remarkably abundant and of fine quality. Peaches were sold at four cents per pound by the box, and we think we have never seen any better in size or quality. Bartlett pears have also been sold at very satisfactory rates.

El Dorado.

LAND TROUBLES.—Placerville *Republican*, Sept. 4: The United States Circuit Court some time ago rendered a decision affecting the title to all lands in the odd sections granted to the Central Pacific Railroad Co. which had been obtained under mining applications from the Government subsequent to the grant. The effect of the decision was to confirm to the railroad company all lands in the grant, whether mineral or agricultural, from the time the grant was made, and to vitiate the title of lands held under mineral patents. Following this decision, the railroad company has notified owners of such land, a number of whom reside in this county, that suit will be commenced against them to recover the land which the company claims under the grant from the Government.

Fresno.

RAISIN ITEMS.—Oleander, Sept. 3: Our two packing-houses, the Curtis Fruit Co. and the Fresno Raisin Co., are hard at work getting ready to pack the largest pack of any season yet. Our vineyards are all dotted over with dark human beings picking the luscious fruit from the vines, and by the looks of the well-filled trays, it has every appearance of an increased crop this year. Some of us have had trouble with Chinamen this season. The talk is now that we will try to be prepared for white help another year.

Lake.

FRUIT LAND.—Middletown *Independent*, Sept. 6: It is remarkable that more land is not purchased in the southern portion of Lake county. Good fruit land can be purchased at from $20 to $60 per acre, which, if in Napa county, would readily sell at $200. Finer fruit cannot be raised in any portion of the State, but still people do not care to invest simply because we have no railroad. Our advice is to buy now while land is cheap, as this county demands a railroad, which will be built long before trees would come to bearing if planted this winter.

Los Angeles.

GRAIN SHIPMENTS.—Redondo, Sept. 1: Every day, for several weeks past the steam thrasher has been at work in the great wheat and barley fields around Redondo. Vast quantities of grain have passed through the thrasher. Redondo is consequently enlivened by long lines of six-horse and mule teams drawing load after load of sacked grain to our pier for shipment. Within the past six days there has been shipped nearly 7000 sacks of grain and fully as many more are piled upon the wharf awaiting boats. Seven thousand sacks are still to come from the Dominguez ranch.

FRUIT BONANZA.—L. A. *Express*, Sept. 4: As showing what can be realized from the industry of fruit-growing in Los Angeles county, the information furnished by Ernest Dewey of Pomona, in the blanks sent to him by the Chamber of Commerce, is authentic and instructive. Mr. Dewey has six acres in prunes, from which he gathered 38 tons of that fruit. He sold it dried at 10 cents a pound, realizing $3147. The cost of production was $403, leaving a net profit of $2744. The amount of water used was one inch to ten acres. The soil was a sandy loam, and the increase in production and price compared with last year 50 per cent. In Golden Cling peaches he did still better. He has ten acres of seven-year-old trees. From this he produced 47 tons of green fruit. He sold them dried at 20 cents a pound, realizing $4800. The cost of production was $243.70, leaving a net profit of $4556.30. The fruit was raised in a sandy loam soil without irrigation.

TWO CROPS.—Florence, Sept. 4: Some of our farmers have harvested a fine crop of barley this season, and have now on the same land an immense crop of corn. With proper irrigation and cultivation it can be made to yield equal to any spot in the quantity and quality of its products.

LARGE SHIPMENTS.—Florence, Sept. 4: Within the last three months about 350 carloads of vegetables have been shipped from our little station, and ten carloads of barley during the past month.

FRUIT PROFIT.—Long Beach *Breaker*, Sept. 6: Mr. Sexton sold 122,000 lbs. of Royal apricots for $1525 from 290 trees—less than three acres. R. F. Cunningham sold $3000 worth of peaches from ten acres he offered for sale at $2700 with no taker. William Edmunds sold two acres of Bartlett pears for $1132, at $75 a ton. Ten acres of peaches produced from seven-year-old trees 48 tons of fruit. Amount realized from sales, $4800; cost of production, $243.70; net profit, $4557 30. Six acres of prunes produced 38 tons of fruit. Sales, $3141; cost of production, $403; net profit, $2784. Both of the above crops were raised without irrigation. Total amount of net profit from 16 acres, $7294 30. "Does fruit-raising pay?" N. Hayden's 3½ acres and another one-half acre produced this year 685 boxes of oranges, 15 boxes lemons, 8000 lbs. apricots, 2200 peaches, 200 loquats, 2500 nectarines, 4000 apples, 1000 plums, 1000 prunes, 1000 figs, 150 lbs. walnuts and 500 lbs. pears. The total receipts amounted to $4650. The above is vouched for at home.

LAND ADVANCING.—Pomona *Progress*, Sept. 4: The Jackson orchard, that was offered for sale for $350 an acre, was withdrawn from the market last month. The crop from the place this season sold for $277 an acre, and the property had little or no care, either. A gentleman offered $420 an acre for the orchard last week, and the offer was declined.

Mendocino.

HOPS.—Ukiah *Dispatch and Democrat*, Sept. 5: The ruling figure for hops in Ukiah this week has been 32 cents. We are informed that Wm. Clark of this valley has sold his hops for 32 cents a pound. T. R. Lucas of Ukiah valley has sold a large quantity of his hops for 30 cents a pound.

Napa.

GRAPE PRICES.—St. Helena *Star*, Sept. 6: E. J. Van Vleet has sold about 50 tons of table grapes to the Napa Valley Fruit Co. at $30 per ton, and work has already been commenced gathering and packing them. We understand that that company is buying up a great deal of fruit in this valley this year, shipping it direct to the East and paying to the producer a liberal price.

Orange.

OSTRICH FARMING.—Santa Ana *Blade*, Sept. 4: The property of the California Ostrich-Farming Co. of San Francisco is located about 1½ miles southeast of Fullerton. We found 120 full-grown and 54 young birds of all sizes on the farm, and as the keepers were just commencing to feed them, we were kindly permitted to visit the various inclosures in which the birds are kept. Edward Atherton, one of the keepers, informed us that the original "plant" consisted of 18 ostriches, imported from Africa at a cost of $18,000, or $1000 per bird, and of this number two have died. The older birds are kept in pairs, while the younger ones of about the same age are kept together.

San Benito.

LARGE BULL.—San Benito *Advance*, Sept. 5: The Bonnie Brae Co.'s prize Holstein bull was placed on the scales of the warehouse company yesterday, and tipped the beam at 2240 lbs.

San Bernardino.

FIG PRICES.—Ontario *Record*, Sept. 3: Ontario's fig crop is not large, but those who have trees enough to give them a surplus for sale are realizing $50 per ton for the green fruit. Barnard & Benedict of Los Angeles are the purchasers.

San Diego.

CITRON CULTURE.—National City *Record*, Sept. 4: F. A. Kimball has received from the Department of Agriculture a large consignment of the citron tree of commerce, which was shipped from Naples and Calabria. Two shipments were made—one of 400 and the other of over 1300 pounds, and of these, only two trees were lost. With them came a list of the persons to whom they were to be distributed, but there are still a few left which will be given away to persons living in favorable localities. Mr. Kimball himself is going to test the growth of the tree in this climate quite extensively. He has men and teams at work grading ten acres of land, directly west of Col. Dickinson's, in which will be set out the Sorrento, Calabria and Amalfi varieties, and in a second ten acres to be put in condition soon, these and the Macrocarpo, Pome d'Adamo, Icompio, Pereltone and Citrus Medica will be set out.

Santa Barbara.

SUCCESSFUL FARMING.—Lompoc *Record*, Aug. 30: A man to be a successful farmer must watch the markets and farm intelligently. The most notable success in our colony is that achieved by I. M. Clark, who cleared $1750 from seven acres of potatoes last year, and is now clearing $300 per acre on onions. Mr. Clark has never made a failure, and attributes his success to a close watch of the markets and in adapting his crops to the soil.

Santa Clara.

SHIPPING FRUIT.—San Jose *Times*, Sept. 6: One of the busiest places in the city yesterday was J. Z. Anderson's packing and shipping house. One hundred and fifty thousand crates closely packed in cars, arrived yesterday afternoon. They are to be used in packing and shipping grapes, which will soon begin to come in for attention. Five carloads of fruit daily are being sent from San Jose by this house. Fall pears, peaches and plums now form the bulk of the shipment. Goodell combined refrigerator and ventilator cars are being used for the shipment. These cars are constructed with large troughs in the top which are filled with ice. The air is permitted to blow through ventilators at either end. These ventilators are closed during the journey and only opened when the fruit is near its destination. Air is then permitted to circulate freely through the car, thus removing the "sweat" which collects on the fruit during its close confinement. Much of the finer fruit is packed in tissue paper before shipping.

AN ORCHARDIST'S SUCCESS.—San Jose *Times*, Sept. 4: S. A. Moulton's fruit-drying work, at Campbell's, has been putting out from 50 to 60 tons of prunes each day for the last ten days. During the season they will dry about 1200 tons of prunes. They have also turned out a large amount of apricots, peaches and plums. This immense business has grown almost by itself. Five years ago Mr. Moulton concluded to dry the fruit on his orchard of 15 acres. He was so successful that the next year he bought the fruit of his neighbors and the next year he bought more. He saw the business increasing rapidly and purchased 11 acres of vacant ground on the railroad and erected the present works. He is likely to double his operations next year. He employs none but white labor, and utilizes women and children whenever possible. About a hundred names appear on his pay-roll during the season.

San Joaquin.

GRAPE SHIPMENTS.—Stockton *Independent*, Sept. 5: W. E. Aiken makes a regular business of shipping fruit from here to New Orleans and San Antonio, Texas. Grapes are at present engaging his attention, and he shipped one carload Wednesday, another yesterday, and will ship two more today. He finds difficulty in obtaining cars enough for his purpose. He says that New Orleans and San Antonio will each take three cars a week, but he cannot always get cars when he wants them. The varieties in demand are the Black Prince, Black Hamburg, Tokay and Muscat Alexandria. The price per ton ranges from $35 to $45.

Shasta.

A TRANSFORMATION.—Anderson *Enterprise*, Sept. 4: One fact some of our people are just beginning to learn is, that we have no poor land, though they have been decrying it for years as worthless and discouraging settlers from taking and improving it. Happy valley, which a few short years ago was a wilderness where nothing would grow but chaparral, manzanita, poison oak and scrub oak, has hauled to the cannery, from her many magnificent small orchards, ton after ton of the choicest fruit ever seen; and this fruit is not confined to one variety nor two, but takes in the whole catalogue of fruit plants. Anything that has good roots and the fruit germ will thrive there and bear fruit.

Solano.

THE ALMOND CROP.—Dixon *Tribune*, Sept. 6: R. E. L. Stephens informs us that his almond crop is very promising this year. The hulls are bursting open better than usual, and the nuts appear to be of an excellent quality. His crop will be gathered next week, and he expects from 75 to 100 sacks.

Sonoma

FRUIT FOR DRYING.—Santa Rosa *Democrat*: At the fruit-driers, Monday afternoon, the quotations were as follows: Apples per ton, $12@20; plums, $20@40; peaches, $30@45; prunes, $40@51; pears, $12@14—the preference being given to plums and prunes. Of the latter, a large quantity is being handled. Bannerman Bros. & Elder have a contract with Mr. Crawford to cure his entire prune purchase this year. They have over 40 tons of fruit in the process of drying at present. The prunes this season are of an unusual size, many of them averaging only 20 to the pound.

Tulare.

LARGE FRUIT YIELD.—Visalia *Times*, Sept. 4: We publish an affidavit from C. W. Clarke of the well-known firm of Cox & Clarke of Sacramento, as to the product of a tree in the Briggs orchard, four miles southeast of Visalia, where the gentleman witnessed the gathering of the fruit, saw it run through a cleaner and deprived of leaves and twigs, and then saw it weighed. Other reliable gentlemen were present and testify to the statement of Mr. Clarke, and all concur in the statement that the prunes from this one tree weighed 1102 pounds. The tree from which the fruit was gathered was set out in orchard only six years ago, and there are numerous other trees in the same orchard, of the same age, that are as heavily laden with prunes, and other trees that probably contain more fruit than did the one particularly mentioned.

BIG YIELD OF GRAPES.—Visalia *Delta*, Sept. 4: W. F. Kelsey, living about 3½ miles from this city, set out 200 acres in Muscat grapes on his place last spring. The vines have borne two crops already, and another crop is in bloom. It seems as if the soil is specially adapted for grape culture. Mr. Kelsey has a vineyard which is certainly a marvel. When the vines reach their maturity the grapes will yield six, seven and eight tons per acre; in fact it is thought the crop will be ten tons on some acres. When it is stated that Muscat grapes are sold for $20 per ton, one can figure mentally the profit. Mr. Kelsey states that a Fresno gentleman, well posted in grape culture, says his vineyard will yield $100 per acre next year.

WHAT IT REQUIRES.—Visalia, Sept. 4: It requires usually 5½ to 6½ pounds of green peaches to make one pound dried, and 2½ to 3 pounds of prunes from the trees to make a pound of the dried fruit. Prunes can be picked and dried ready for sacking at a cost of about a quarter of a cent a pound. It costs about eight cents per 100 pounds to gather peaches, and to pick, cut and dry them costs about 20 cents per 100 pounds.

DIVERSIFIED FRUIT ORCHARD.—Visalia, Sept. 4: At the fruit farm of Jos. Spier & Son in Visalia, there are growing, in addition to many varieties of peaches, plums, prunes, pears, apples, etc., California and Eastern black walnuts, butternuts, Japanese and Italian chestnuts; also bearing olive trees, a fine bunch of bananas, and in the nursery are 10,000 orange seedlings. The last ripe oranges were picked from his trees only a few days ago.

FIRST OUTPUT FROM THE CREAMERY.—Visalia, Sept. 4: The Visalia creamery, under the management of J. G. Cohoe of Hanford, commenced the manufacture of cheese on Monday morning, and starts out under most favorable circumstances. There were 2312 pounds of milk delivered early in the morning, and before the noon hour arrived there were 12 cheese in the press—eight large and four small ones.

SACKING RAISINS NOT GOOD ENOUGH FOR PACKING.—*Register*, Sept. 6: Erwin Brothers will sack their raisins. The reason for this is that the greater portion of their vines are too young to produce large bunches and consequently the pack would not present the appearance of the first grade of raisins. Messrs. Erwin are starting out with the purpose of establishing a permanent business and they do not wish to send out anything which is not able to hold its own with the best.

RAISIN ITEMS.—Traver *Advocate*, Sept. 4: The curing of raisins has been commenced in the colonies hereabout, and trays and sweat-boxes are in great demand. These latter are going to be scarce and the manufactured article is not to be had. Horticulturists who have not obtained a supply will have to turn carpenters and make their own boxes, etc. The mills at Madera and Sanger have all the orders ahead that they can fill and refuse to take more, and other mills are also overrun with work in that line, owing to the large acreage of new vines that will come into bearing this year.

GRAIN YIELD.—Traver, Sept. 4: One of the heaviest crops of wheat raised about Traver this year was that put in by Joseph House on a quarter-section of A. P. Davis' land, a few miles northeast of Traver. There was less than a quarter-section — about 150 acres — and it yielded 1934 sacks, or nearly 13 sacks to the acre. All the warehouses in the 76 country are full of grain, and at most of them there is a great deal more grain stacked up outside—on the platforms and along the track—than there is inside; besides which there is a large quantity lying in the fields where it was harvested. This is due to scarcity of cars, the railroad company not having near enough cars to transport the grain to tidewater.

Yolo.

FIRST SHIPMENTS.—Woodland *Democrat*, Sept. 4: The first carload of dried grapes of the season left Cashmere, in the Capay valley, Wednesday. The shipments of this article this year will far exceed those of any previous year. The Southern Pacific Co. also took East the same day, from Santa Rosa, the first carload of French prunes shipped this season.

YOLO COTTON.—Winters *Express*, Sept. 6: Maudred Chapman has sent us in a boll of cotton raised by him on his father's place northwest of Winters. Judges say it is of good staple, and Mr. Chapman says it grows well and yields abundantly.

ARIZONA.

FRUIT CULTIVATION.—Yuma *Times*, Sept. 3: The fruit-growing interests of the valleys bordering upon the Gila and Colorado rivers will prove of paramount importance to the entire county within a comparatively short space of time. No portion of the country from the Atlantic to the Pacific, or from British America to the Gulf of Mexico, can vie with our section in the earliness of the fruits produced in this locality, nor can they surpass the local products in beauty, size, lusciousness and shipping qualities. Counting upon these advantages alone, without bringing into discussion the numerous remaining resources ready at hand, our future is promising almost beyond conception.

SPEED OF FISHES.—**The dolphin and bonito are thought to be the fastest fishes, and although their speed is not known, those who claim to have made close observations say they are fully capable of 20 miles an hour. The writer has seen a school of four or five dolphins sport back and forth in the foaming water in front of a ship's prow, which must have been moving through the water at least 12 miles an hour, almost as if the ship was still. Of course the dolphins must have made a turn at every boat, and the boats were not less than 20 or 30 feet in length. A fish that could do that must have had the power of moving much more rapidly than 20 miles an hour in a direct line.**

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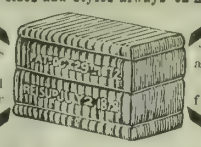
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PUBLIC ATTENTION

Is called to the following letter from Professor Palmer to R. B. Cunningham, Agent of the Mexican Phosphate and Sulphur Co. at Guaymas. Mr. Palmer has been connected with the Smithsonian Institute for over 30 years:

GUAYMAS SONORA, MEXICO, January 9, 1890.

R. B. CUNNINGHAM, ESQ.—DEAR SIR: In answer to your communication regarding localities likely to furnish a market for Guano, I would state that in my opinion the whole of Southern California will furnish a market for your Fertilizer.

The Vineyards are troubled with a disease in the sap of the plant (or circulation). The cause of this disease has not been found out, but it is a fact, witnessed in animals and vegetables, that most diseases manifest themselves more readily when the animal or plant has not the proper food.

It is my opinion that by applying a liberal quantity of Guano to the Vineyards the disease will be suppressed. The remedy must be administered through the means of the soil, the disease being in the interior of the plant which is controlled entirely by what is derived from the soil.

If the said disease was on the outside of the leaves, stems, or roots, then the remedy would be external only. Experiments with Chemicals have failed, so far as I am aware of, to exterminate the disease.

Why not try a Fertilizer as a remedy? It will strengthen the living plants to withstand disease, and may be relied upon as a cure in the diseased plants, the remedy for which must be one that will change the constituents of the plant fluid which impart healthy life.

Southern California also requires a Fertilizer for her Orange Groves and Fruit Orchards. The Public Press and the Fruit Growers assert this fact that they must resort to Fertilization at once. This was proven to my mind on visiting Southern California last year. Trees, like grain, as the crops are gathered, remove from the soil its strength, and in order to continue the ability to produce a healthy and abundant crop, you must convey to the soil a competent supply of Fertilizer, and that section has no means of producing the desired supply from its domestic animals. Yours respectfully, [Signed] EDWARD PALMER.

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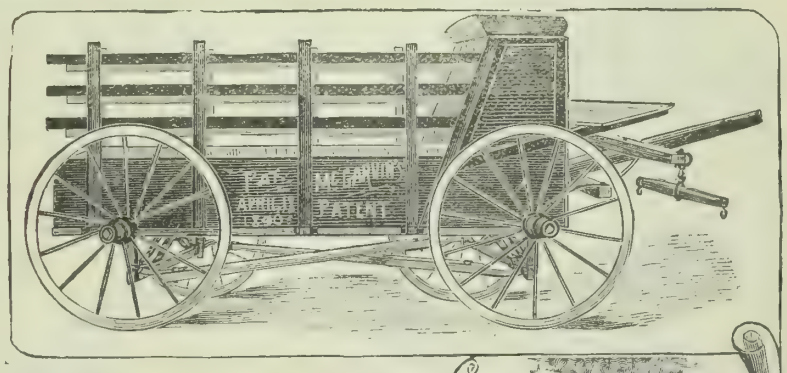
And will sell in lots to suit.

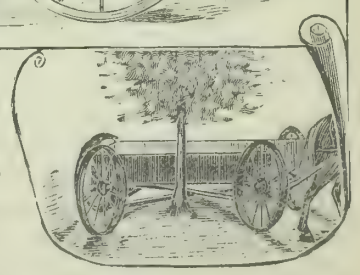
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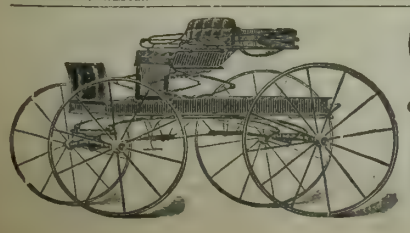
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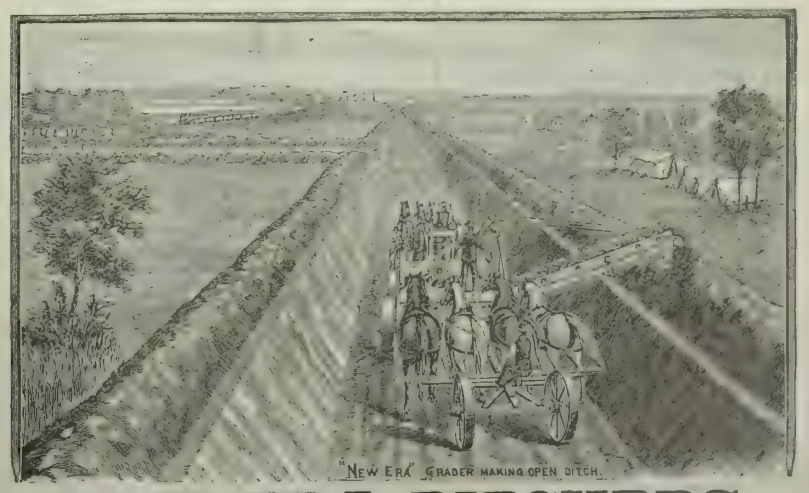


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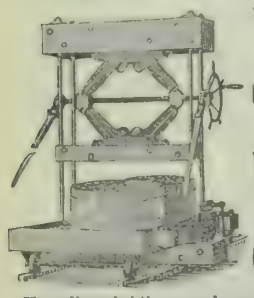
Entries for premiums close Monday at 7:30 P. M. Exhibitors are urged to make as many of their entries on Saturday before the fair as possible. Goods, animals and articles for exhibition must be in their places by 10 P. M. on Monday.

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The wine press worked quite satisfactory.—JAMES FINLAYSON, Healdsburg, Cal.

The wine press bought of you gave entire satisfaction. WM. HILL, Petaluma, Cal.

We take great pleasure in attesting the true merits of your wine press. The one in our winery gives the utmost satisfaction. We cheerfully recommend it as good as the best.—DOWNEY FRUIT AND WINE CO., Downey, Los Angeles county, Cal.

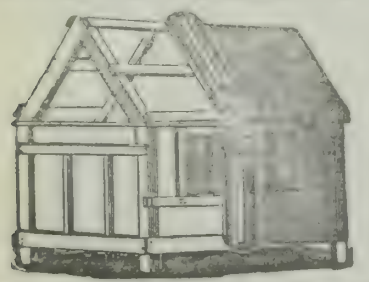
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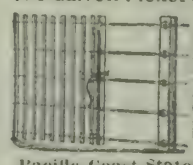
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Plums and Prunes.

At the meeting of the State Horticultural Society held Aug. 29 h at the State Board of Trade, Dr. Gustav Eisen was called to the chair in the absence of the regular officers. The attendance was large.

The secretary read the following letter:

SAN JOSE, Aug. 4, 1890.

Mr. E. J. Wickson, Sec'y Board of Directors State Horticultural Society: The Doyle Fruit-Growers' Association request me to inform you of their organization, and say that they will be pleased to co-operate with the State Horticultural Society in all practical ways toward obtaining and disseminating information that may be of benefit to fruit-growers. I inclose a copy of our Constitution.

E. T. PETTIT,
Sec'y Doyle Fruit-Growers' Association.

The secretary stated that this communication was gratifying in that it expressed a desire for affiliation between the State Society and the various local societies, and that such affiliation might prove of great benefit if it could be made general.

The discussion on fruit-drying was opened by Leonard Coates of Napa. He spoke of the varieties of the prune now claiming public notice. He believed there were two main divisions of prune varieties, one of which is now being grown in this State under the name "Robe de Sargent," the other as the common "French prune." Mr. Rock and he introduced a prune from France about the same time, under the name Robe de Sargent. He obtained Mr. Rock's variety, and when it fruited it proved the same as that he had himself imported. He finds the plum called Robe de Sargent larger and rounder than the common French prune, or Prune d'Agen; the wood is larger, more sturdy and more pithy than the French prune; the leaves are longer and more glabrous or shiny. Even in nursery rows the Robes can be distinguished by their characteristic foliage. The Robe does not unite well with the peach, while the French prune does. It bears as heavily as the French and is perhaps more juicy; it is blacker and more shiny than the French when dried, and makes a larger prune. Robes ungraded averaged 40 to the pound; French, 80 to the pound—all conditions being identical. It has more acidity than the French. The question arises: Can the Robe be grown to make a prune to go in the trade as a French prune as a larger grade? If so, it may prove very valuable.

Dr. E. Kimball of Haywards said he had dried the Robe and the French in the same way and shipped them to the same Eastern house, marking the Robes "large French prunes." They sold for 3½ cents per pound more than the French. Dr. Kimball said he had procured the Robe de Sargent from three sources, and when the trees fruited they were found to be identical. They also agree in growth and other characteristics.

James Shinn of Niles called to mind the decision of W. B. West, after studying the French prune in France, that the variety grown here as the Petite d'Agen was the prune of France. He apprehended that the Robe might be too tart for common taste.

Mr. West of Stockton stated that his observation in France was stated by Mr. Shinn, but the orchards are small and widely scattered and he could not see all. He had no doubt there were sub-varieties of the same prune in France grown from the seed, etc.

I. A. Wilcox of Santa Clara expressed a preference for the Robe de Sargent over the common French.

L. F. Moulton of Colusa said he had given considerable time to hunting up varieties called Robe de Sargent and Petite prune, and he had concluded there were but two varieties—all the Robes were the same and all the Prunes d'Agen were the same practically, at least so far as grown to any extent in this State.

The secretary exhibited dried and fresh prunes sent by J. L. Mosher of San Jose. One variety seemed to show marked divergence from the common French prune grown in the same orchard. Mr. Lelong said he had seen the tree and believed the variety to be distinct.

As there were other samples shown by different speakers, there was, upon motion, a committee appointed to report upon the subject of prune varieties at the next meeting, viz.: Messrs. Leonard Coates, Edwin Kimball, B. M. Lelong, J. L. Mosher.

Other Prunes and Plums.

Judge Blackwood finds that the Bulgarian and Fellenberg prunes do not sell as well as the French.

L. F. Moulton of Colusa considered the Bulgarian as a good prune to let alone.

C. W. Hatheway of San Lorenzo said the same buyer paid him one cent per pound more for Bulgarian than for French.

Mr. Coates said he supposed that the Bulgarian was better than the French for Alameda county, but that does not apply to all localities.

Dr. Kimball said the difficulty with the Bulgarian may arise in part at least from the bearing habit of the tree. It bears on new wood, and not on old spurs all through the tree like the Robe and the French prunes, consequently, if pruned closely, there will be little fruit. Also, if the Bulgarian does not get thoroughly ripe, it will not make a good prune, but will puff up. All French and Robes make prunes, and will ship well even if picked quite green.

Dr. Kimball showed fine samples of amber-colored prunes he made from the Jefferson plum. It has a fine color and a better flavor when cooked than the Silver prune. He dips the Jefferson just as he does French prunes and sulphurs one-half hour.

Judge Blackwood said his Jeffersons treated in that way sold readily as "Silver prunes."

Dr. Kimball exhibited a handsome plum sport which originated in his orchard, and which he calls "Red Coe's Golden Drop." He had a tree of Imperial gage worked on peach; into the Imperial gage he worked the Hungarian prune, and as that did not pay well he worked it over again by putting Coe's Golden on the Hungarian prune. One branch in the top of the tree began to bear plums like the Coe's Golden but of red color, while the rest of the tree was true Coe's Golden. This branch has maintained this habit, and buds from it have also borne the same variety.

Mr. Coates showed specimens and spoke favorably for the Satsuma Japan plum as a shipping plum. It is of very firm flesh and pleasant flavor. The secretary also showed Satsuma plums sent him by the introducer, Luther Burbank of Santa Rosa, which had lain two weeks on his desk and were still very firm. He showed also the Burbank plum, which was showing very good keeping properties.

Mr. Coates spoke of the disappointment over the Kelsey in that it does not do well in the hot interior valleys, though it is an admirable plum in the bay climate.

Mr. Shinn said the Kelsey ripens too late. It arrives at the East so as to compete with peaches, which is not to its advantage.

Mr. Lelong alluded to the success being attained with *Prunus Simoni*. Samples shipped East June 23 i to Chicago were held two weeks and then sent on to Liverpool, arriving in good order.

Mr. Coates said the Simoni was selling well at the East. A Winters grower obtained $2 45 for 17 plums. The Simoni ripens with Royal Native, which is too sour. The Clyman, a California seedling, introduced by Mr. Coates, has exceeded all expectations as an early market plum and in bearing property, etc.

Fig Culture.

G. P. Rixford announced that one of the Bulletin figs which has hitherto dropped its fruit had matured samples this year on Mr. Shinn's place at Niles. Mr. Shinn stated that a few ripe figs had been secured, but he could not attempt a description of them.

Orchard Cultivation.

One subject for discussion at the September meeting will be the following points on orchard cultivation submitted by A. L. Bancroft. By early publication members can collect their thoughts and experiences and contribute them to the discussion:

Shall the plow, harrow, clod-masher, chisel-tooth cultivator and the diamond-tooth cultivator be abolished from the orchard and some form of disc harrow, subsoil cultivator, and straight-bar weed-cutter substituted?

The plow turns up lumps; it requires the harrow and clod-masher to pulverize them; the disc harrow does not.

The plow brings up the soil from below and exposes it to the action of the sun and air; the disc harrow does not.

How much of an advantage is it to the soil to have this done, especially if it is turned over at the commencement of the season, and a few weeks later a second plowing turns it back again?

When the plow is used there are times and seasons when the weeds get such a start that they are very troublesome. Last season, for instance, the mustard grew ten feet high in places before it could be turned under. The disc harrow could be used when the plow could not be used; the top soil stirred to a depth of two or three inches, and the growth of weeds prevented. How much advantage is it to the soil to have the weeds grow and be turned under?

The subsoil cultivator works easier, goes deeper and keeps the soil in as good or even better condition of tilth and keeps the moisture up as well or better than the implements now generally used. Consequently it does the work cheaper.

The straight-bar weed-cutter is a good tool for morning-glory and late weeds regardless of what other tools are used.

At the September meeting, the subject of fig-growing will also be discussed, with the opening by Dr. Eisen.

The State Fair.

As we go to press, advices are that the State Fair at Sacramento is developing well. The opening was naturally somewhat interfered with by the great celebration in this city, but now the interest has turned strongly toward the Capital city. Next week the fair will be at its best estate from Monday until Saturday night, and it should receive the fullest attention and patronage.

NURSERY STOCK.—F. S. Phoenix of Bloomington, Ill., the well-known nurseryman, has issued his semi-annual trade price-list for the fall of 1890. It includes fruit, nut and shade trees, grapes and berries, ornamental shrubs, hardy climbers, etc.

Notes on the Fairs.

(*Concluded from page 233*)

flowers. J. V. N. Young was there with 24 plates of named apples, 4 varieties of pears, 16 of peaches, 2 of figs, 3 of prunes, with nectarines, strawberries, blackberries, musk and watermelons, 8 varieties of potatoes, 3 of sweet potatoes, 3 of onions, 4 of cabbages, mammoth table beets, carrots, squashes, green corn, cucumbers, beans, sassafras, peppers.

E. Leedhams' "A 1" exhibit, besides a general line of fruits and vegetables, included 67 splendid bouquets of 30 varieties of flowers.

J. S. Brooks placed on his table over 100 varieties of cut flowers, 20 varieties of beans, and many kinds of vegetables grown on a two-acre farm.

W. H. Findley had an excellent display of evaporated fruits, consisting of peaches, pears, prunes, apricots and apples; and notable exhibits were made by Andrew York, E. M. Carr, D. F. Newson, Jas. Gregory, P. H Dallidet and others too numerous to mention.

San Luis Obispo—16th District.

In a note from San Luis Obispo, 5th inst., Hon. J. V. Webster remarks: "The fair is well attended and fairly successful; agricultural and horticultural exhibits large;" and from extended reports in the *Tribune* we glean as follows:

The stock display is excellent so far as it goes, but as usual it remains to be complained that the county at large is slimly represented. A. Bieren has a herd of remarkably fine cattle, and so has E. W. Steele. The stalls at the track were all full, and the races, the first two days, appear to have proved very entertaining to the spectators.

At the pavilion, Mr. Cruickshank, foreman of the State Experimental Station near Paso Robles, had a variety of sheaf grains and grasses and samples of cleaned grains.

J. V. Webster of Creston made a very fine display, embracing oats, both wild and tame, wheat and barley in sheaf, evergreen millet, alfalfa and sugar-cane; pears in variety, wine and table grapes and wine; potatoes, musk and watermelons, squashes and other garden truck; Silver, Petite and other prunes, apples, peaches, etc.

N. W. Palmer of Huasna represented the apiarian interest with a dozen jars of strained honey.

Auburn—20th District.

The second annual fair of the 20th Agricultural District opened on the 2 i inst. at Auburn. The new pavilion, says the *Argus*, was supposed to be ample, but the first day of the fair found the space both on the main floor and galleries pretty much all taken. The fruit exhibits of Geo. D Kellogg and C. T. Adams of Newcastle, Capt. E. L. Hawk of Rocklin; the display of flowers, plants, nursery stock and fruits of A. F. Boardman, and the fine fruit exhibit (infinite in variety) of Mrs. Emily Roberson of Olivina ranch, were among the prominent features of the main floor.

O. D. Storrs had a table laden with choice melons, and with squashes that would weigh anywhere from 50 pounds up to 150. Mrs. Van Lennep, Joseph Bartcher and E. B. Beecher also had excellent fruit exhibits. G W. Threlkel showed a peach weighing 17½ ounces, and had others to match.

A. Keller's geological collection was without competition in that line.

The gallery was given over entirely to fine arts and fancy-work.

Gen. Jo. Hamilton, president of the association, delivered the opening address. He urged the young people to cultivate the purely domestic virtues, and was proud of the fact that he had daughters who were able to hitch up the team if need be and drive him out. The General's address was peculiarly felicitous, and was frequently applauded. The attendance was large and enthusiastic.

On the second evening Hon. Geo. G. Blanchard of Placerville made a carefully prepared and able speech.

Thursday night a large concourse greeted E. W. Maslin, whose annual address was a masterpiece.

The exhibit of fine stock at the park was considerably larger than last year's, embracing horses, cattle and poultry.

The contest of draft horses was decided in favor of C. A. Johnson. In the walking match for stallions the first money was won by Wm. McIntosh's horse, time 5:58; second money by B. Burr's horse, California Prince, time 6:36 The prize for fast walking team was won by Hoffman Bros.' Dan and Prince, time 5:55.

The best exhibit of skill by young men in harnessing a span of horses was made by John Viehmeier of Ophir, the only other contestant being Howard Stone of Auburn. Stone began by harnessing Hoffman Bros.' team, driving around the track and unhitching and unharnessing them. The time occupied in harnessing and hitching, unhitching and unharnessing, was 6:07. The time occupied by Viehmeier with Johnson's team in doing the same thing was 4:59.

The girls' contest in harnessing and hitching up, and unharnessing from a single buggy, presented four applicants. Katie Deetkin was the first, and it took her 2:17 to harness and hitch, and 1:18 to unhitch and unharness; total time, 3:35. Cora Johnson did the first act in 3:15 and the last in 1:11; total time, 4:26.

DR. T. J. FRAZER, Dentist, Room 54, Flood Building, Market and Fourth Streets, San Francisco, Cal.

Choice Oregon Products.

An Extensive Breeder

Mr. G. W. Dimmick, Hubbard, Oregon, reports his numerous herds in fine condition, and about 50 additions have been made this season. "Jewel's Kirklevington" 56541 stands at the head of a fine herd of some 70 Shorthorns, and many good individual cows representing such families as Bellechini, Bourbon Bells, and Lady Helens go to make up a herd of unusual merit. In Aberdeen-Angus, "Gen Weaver," 6818, bred by Maj. Bruce, stands at the head, and some 20 old and young comprise the herd of this popular breed. Mr. Dimmick also breeds the best families of Jerseys.

Fine Poultry.

Those who are interested in pure-bred poultry should note the announcement made by Mr. George O. Sloan, proprietor of the "Square Poultry Yards," Forest Grove, Oregon. A representative of the PRESS recently inspected these yards and reports some fine specimens of the numerous breeds. Mr. Sloan has been very successful with his Indian Games this season, and can show visitors some as fine birds as will be found in any show ring, East or West, this fall. In Houdans, Silver-Spangled Hamburgs, White Leghorns, Brown Leghorns and Plymouth Rocks, there are birds that would suit the fancy of any one. Mr. Sloan assures us that he intends keeping none but the finest stock.

Berkshire Swine.

Mr. T. H. Tongue, Hillsboro, Oregon, has a herd of English Berkshires of unusual merit. Capt. Rider, 2969, heads the herd. Maggie Rider, 8184, tracing to Duke of Gloucester on the sire side, and Lillie II on dam, is one of the representative sows that comprise the herd. Black Duke II, 23849, bred by N. H Gentry, has proven a very valuable breeder, and Mr. Tongue reports a good crop of pigs from his services. Those wanting something choice should correspond with Mr. Tongue.

Shorthorn Cattle

Messrs. McEldowney & Hawthorn of Hillsboro, Oregon, breeders of Shorthorn cattle, report their herd in good condition. Some 50 animals comprise the herd. Glendower, 93537, heads the herd. He is an excellent individual, good color, and he is stamping his good qualities upon his progeny. Such families as Bloomfield, Roses, Jubilees, Venumns and Peri-Constances are represented on the female side.

Nursery Trees.

Messrs. Wirt Bros., proprietors of the Oregon Nursery Co., Salem, Oregon, have a very fine growth of nursery stock to offer their patrons this season. Their stock is all in fine condition, perfectly free from insects or blight. The large variety of apples includes such varieties as Ben Davis, Northern Spy, Yellow Newtown, Gravenstein, Duchess of Oldenburg and others. In pears and peaches, there is an unusually fine growth. Prunes, both Italian and French varieties, are in abundance, as well as all kinds of small fruits.

Forest Grove Poultry Yards.

We wish to call special attention to the advertisement in this issue of the Forest Grove (Oregon) Poultry Yards, of which Mr. J. M. Garrison is proprietor. A representative of this paper, who called at these yards, assures us that Mr. G. has one of the finest establishments of its kind on the Pacific Coast. His stock, comprising the leading varieties, contains many specimens possessing a very high degree of merit.

Steam Plowing.

PUBLISHERS RURAL PRESS:—In an article in your issue of Aug. 23d (which, of course, was an advertisement like mine of the week before), Price, by the use of the "we," endeavors to make it appear that you say editorially:

"We know nothing of the merits of the controversy between these two gentlemen, but it would seem that Mr. Remington could hardly expect Mr. Price to advertise a competitor."

Now, I in no way recognized Price as a competitor. What I did do was to accuse him of barefacedly and designedly, with a view to concealment and a suppression of the truth, ascribing to his machine all the things done by my engine. This he did when his machine had done nothing at all—when it was still standing in the shop at Racine, Wisconsin where it was made. My whole article was simply an arraignment of Price as a trickster—an appropriator of things to himself and his machine which did not belong to them, and I hope you will give me the small space required in your paper to tell the public so.

D. L. REMINGTON.

Woodburn, Or., Aug 28th.

The Stockton Fair.

Readers should bear in mind the date of the San Joaquin Valley District Fair at Stockton on Sept. 23 i to October 4 h. This notable fair always follows the State Fair and is looked upon as one of the best of the circuit. With its recent improvements at track and pavilion and the liberality and enterprise of its management in securing attractive features, it is little wonder that it attracts large concourses and achieves popularity. Exhibitors usually enjoy facilities for displaying their products second only to the State Fair, and this should induce them to apply for space to Secretary La Rue as early as convenient.

DESCRIPTIONS OF NEVADA COUNTY.—We have read with pleasure several articles descriptive of Nevada county and incidentally of the Central Sierra region by Prof. Granville F. Foster of Sunol, Alameda county. The articles appeared in the Leeds (Eng.) *Mercury*, and must do much to extend the fame of California. We hope to find room for some of the excellent paragraphs in future issues of the RURAL.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

JERSEYS.—The Best Herd, all A. J. C. Registered, is owned by Henry Pierce, San Francisco.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

M. D. HOPKINS, Petaluma, importer and dealer in Eastern registered Shorthorns, Red Polled Cattle, Holsteins, Devons and Shropshire Sheep.

GEO. B. POLHEMUS, Coyote, Cal. Holstein-Friesian cattle, comprising males and females on advanced register. First premium in great milking test at State Fair, 1889, was won by a member of this herd.

PETER SAXE & SON, Lick House, San Francisco, Cal Importers and Breeders, for past 18 years, of every variety of Cattle, Horses, Sheep and Hogs.

HENRY HAMILTON, Westley, Cal., breeder of Kentucky Jacks and Jennies, Draft Horses and Holstein Cattle. Jacks, Horses and Mules for sale.

JERSEY BULL No. 468 P. C, J. C. C. for sale cheap. A fine four-year-old animal. Address Dellwood Poultry Yards, Napa, Cal.

IMPORTED REGISTERED CLYDESDALE Horses and Holstein-Friesian Cattle from the most noted families. H. P. Mohr, Mt. Eden, Alameda Co., Cal. Visitors welcome. Correspondence solicited.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

CHARLES E. HUMBERT, Cloverdale, Cal., Importer and Breeder of Recorded Holstein-Friesian Cattle. Catalogues on application.

WILD FLOWER STOCK FARM, Fresno Co. A. Heilbron & Bro., Props., Sac. Breeders of thoroughbred strains and Cruikshank Shorthorns; also Registered Herefords; a fine lot of young bulls in each herd for sale.

PERCHERON HORSES.—Pure bred horses and mares, all ages, and guaranteed breeders, for sale at my ranch near Lakeport, Lake Co., Cal. New catalogue now ready. Wm. B. Collier.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. None better.

REGISTERED HOLSTEIN CATTLE. Also best thoroughbred Poultry and Eggs. Address Hibbard & Ellis, Santa Rosa Breeding Association, Cal.

P. H. MURPHY, Perkins, Sac. Co., Cal., Breeder of Recorded Shorthorn Cattle and Poland China Hogs.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

P. PETERSEN, Sites, Colusa Co., Importer & Breeder of registered Shorthorn Cattle. Young bulls for sale.

JOHN LYNCH, Petaluma, breeder of thoroughbred Shorthorns. Young stock for sale.

POULTRY.

CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

CHAS. R. HARKER, Santa Clara, Calif. White Plymouth Rocks, exclusively. None better anywhere, East or West. If you want the latest and best improvement in poultry, get *genuine* White Plymouth Rocks. Write for prices. Eggs, $3 per 13; packed to go safely any distance.

DELLWOOD POULTRY YARDS, Napa, Cal. Large lot of fine young birds for sale. Eleven Breeds.

JOHN McFARLING, 706 Twelfth St., Oakland, Cal., Importer and Breeder of Choice Poultry. Send for Circular. Thoroughbred Berkshire Pigs.

O. J. ALBEE, Lawrence, Cal. Pure bred poultry.

SHEEP AND GOATS.

A. W. WOOLSEY & SON, Fulton, Cal., importers & breeders Spanish Merino Sheep; ewes & rams for sale.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Cross-bred Merino and Shropshire Sheep. Rams for sale.

C. H. DWINELLE, Fulton, Sonoma County, Cal. Breeder of Shropshire and Cross-bred Shropshire and Merino Sheep. Rams and Ewes for sale.

R. H. CRANE, Petaluma, Cal., breeder and importer, South Down Sheep from Illinois and England for sale.

KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

L. U. SHIPPEE, Stockton, Cal., importer and breeder of Spanish Merino Sheep, Durham Cattle, Jacks and Jennys & Berkshire Swine high graded rams for sale

ANDREW SMITH, Redwood City, Cal.; see adv't.

SWINE.

JOSEPH MELVIN, Davisville, Cal., Breeder of Poland-China Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

TYLER BEACH, San Jose, Cal., breeder of thoroughbred Berkshire and Essex Hogs.

ANDREW SMITH, Redwood City, Cal.; see adv't.

BEES.

APIARIAN SUPPLIES for sale by Mrs. J. D. Enas, Napa City, Cal.

BADEN FARM HERD.

Short Horn Cattle and Draft Horses.

Catalogues and Prices on application to
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Baden Station, - San Mateo Co., Cal.

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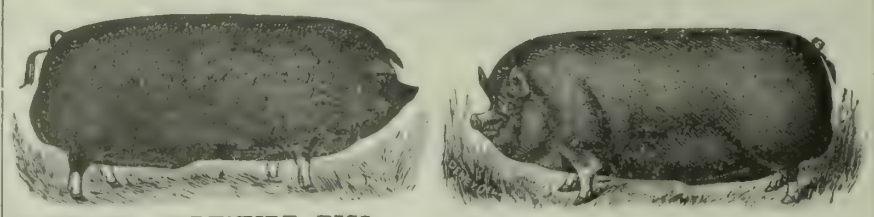
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San Francisco, Cal., Oct. 22, 1888. **PETER SAXE & SON, Lick House, S. F.**

ANDREW SMITH,

IMPORTER AND BREEDER OF THOROUGHBRED

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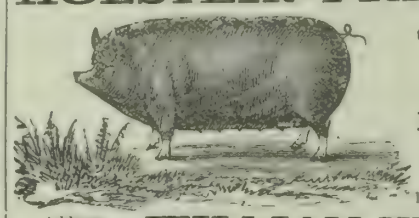


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IMPROVED POLAND-CHINA PIGS,
SHROPSHIRE DOWN SHEEP,

Young Stock for sale at reasonable prices. Every animal guaranteed.

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Registered Herd Book Stock of the Aggie, Netherland, Neptune, Clifden, Artis and other families. None better.

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Of the Coomassie, Alphea and other choice strains.

Poland-China and Berkshire Pigs.

POULTRY—Nearly all Varieties.

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One gallon, mixed with 60 gallons of cold water, will dip thoroughly 180 sheep, at a cost of one cent each. Easily applied; a nourisher of wool; a certain cure for SCAB. Also

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Mixes instantly with water. Prevents the fly from striking. In a two-pound package there is sufficient to dip 20 sheep, and in a seven-pound package there is sufficient to dip 100 sheep.

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One and a half miles northeast of San Leandro, Alameda County, has every facility for Breaking Colts properly. Rates very reasonable. Horses boarded at all times.

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PREMIUM BAND OF THIS STATE.

CHOICE BUCKS AND EWES FOR SALE.

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One black and the other gray. Both seven years old last spring. Can show their colts. Weigh 1750 and 1840 pounds.

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Pure-Bred Shorthorn Cattle.

A sale will be held under the management of the

PACIFIC COAST

Shorthorn Breeders' Association

—AT—

Agricultural Park, Sacramento, Cal.,

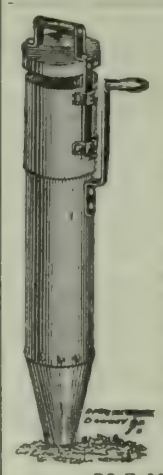
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FRIDAY, SEPTEMBER 19, 1890.

Sale to begin at 1 o'clock P. M.

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Squirrel Exterminator.

This is an apparatus for burning straw and sulphur and also forces the fumes down their holes which never fails to kill. I will give $100 in case the exterminator does not kill (if properly applied) every ground squirrel that its deathly fumes comes in contact with. Thousands are in use. Price $3.00. Send for circulars to

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The Freeman Implement Co., Portland, Or.

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Manufacturers of

Sheet Iron and Steel PIPE!

ALL SIZES.

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Iron cut, punched and formed, for making pipe on ground. All kinds of Tools supplied for making Pipe. Estimates given. Are prepared for coating all sizes of Pipe with a composition of Coal Tar and Asphaltum.

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EIGHTY
SPANISH MERINO BUCKS.

Bred from the first importation of Spanish Merino Sheep to California in 1854. Prices reasonable.

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BLACK MINORCAS..... } $3.00 per Setting of 13.
LIGHT BRAHMAS..... }

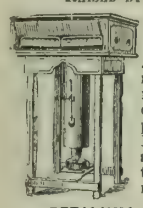
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MY BREEDING PENS ARE UNEXCELLED
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A Personal Inspection of my Yards is Invited.

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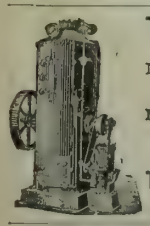
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Best and Strongest Explosives in the World.

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As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing a second-grade, inferior to Judson.

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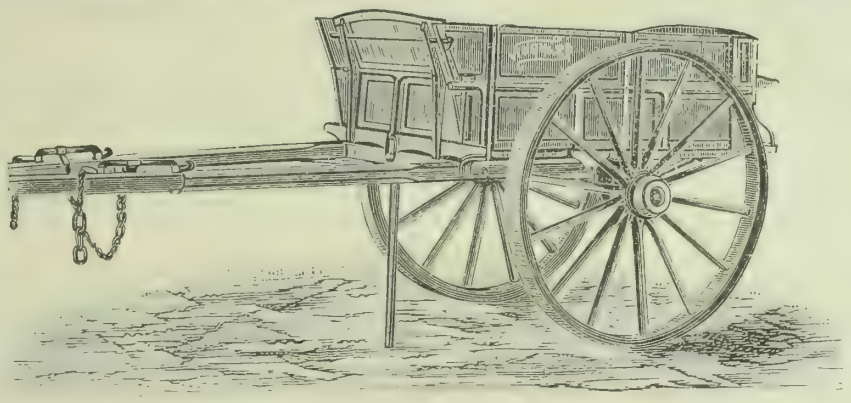
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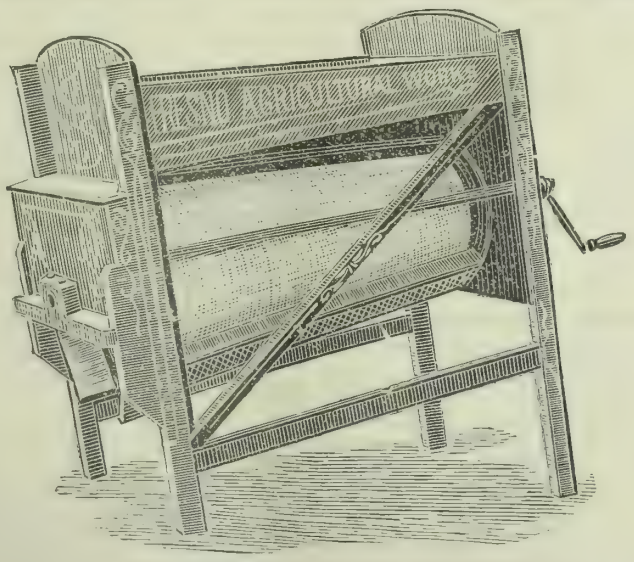


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Side-boards can be taken off. Wheels high. Tires wide. Strong, serviceable and extremely low in price. Tires 3 to 4 inches wide. Hollow iron axles and solid iron axles. Especially adapted to vineyard and farm work, *with wide tires, narrow truck.* Light, strong, and made of the best material. Measures 4 feet 6 inches from point of hub to point of hub, which enables it to be used in any place on a vineyard or farm where an ordinary cart or wagon cannot; and the side-boards being high, it carries a larger load than a cart. Write for prices.

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We now offer our Entire Stock of
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BRIGGS CARRIAGE CO., 220 & 222 Mission St.,
C. CREGO, Agent. SAN FRANCISCO, CAL.

Commission Merchants.

MOORE, FERGUSON & CO.,

WOOL, GRAIN, FLOUR
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Personal attention given to Sales and Liberal Advances made on Consignments at low rates of interest.

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Consignments Solicited.

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OF CALIFORNIA,
SAN FRANCISCO, CAL.
INCORPORATED APRIL, 1874.



Authorized Capital	$1,000,000
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Sept. 10, 1890.

This has been a broken week; we might with safety say that no day has been free from the excitement attending the Admission Day celebration, which has necessarily interfered with trading. At the close business does not show any material change, for the effects of the holidays are still apparent. The Eastern and English wheat markets have shaded off, probably falling in sympathy with silver. The following is to-day's cablegram:

LIVERPOOL, Sept. 10.—Wheat—Inactive. California spot lots, 7s 2d to 7s 4½d; cargoes off coast 37s 6d; just shipped, 37s 6d; nearly due, 37s 6d, cargoes off coast, slow; on passage, inactive; Mark Lane wheat, slow.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Sept.	Oct.	Nov.	Dec.	Jan.
Thursday	7s6d	7s6½d	7s7d	7s7½d	7s7d
Friday	7s4½d	7s5½d	7s5½d	7s5½d	7s5½d
Saturday	7s4½d	7s5½d	7s6½d	7s6½d	7s6½d
Monday	7s4½d	7s5½d	7s6½d	7s6½d	7s6½d
Tuesday	7s4½d	7s5½d	7s6½d	7s6½d	7s6½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	38 9d	38 6d	38s6d	Quiet.
Friday	38 9d	38s6d	38s6d	Quiet.
Saturday	38s9d	38s6d	38s6d	Quiet.
Monday	38s	38s	38s	Easy.
Tuesday	38s6d	37s6d	37s6d	Easy.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York for the past week:

Day.	Sept.	Oct.	Nov.	Dec	May.	June
Thursday	101¼	102½		105¾	109½	..
Friday	101¼	102½	103½	104¼	109¾	..
Saturday	101¼	102½		105½	109¾	..
Monday	100½	101½	102½	103½	108¾	..
Tuesday	100⅝	101¼		103⅝	108¾	..

The closing prices for wheat have been as follows at Chicago for the past week:

Day.	Sept	Dec	May.	June
Thursday	..	102¾	106⅝	..
Friday	..	102¾	106⅝	....
Saturday	100⅛	102¼	106¼	....
Monday	..	101	105	....
Tuesday	..	100⅝	104⅝	....

NEW YORK, Sept. 10.—Wheat—$1.02⅜ for cash, $1.01¼ for October, $1.05⅛ for December and $1.09½ for May.

CHICAGO, Sept. 10.—Wheat—$1.01⅛ for December and $1.05½ for May.

Foreign Grain Review.

LONDON, Sept. 8.—The *Mark Lane Express*, in its review of the British grain trade during the past week, says: The weather has been finer and warmer in Western Europe, and the farmers, being engaged in completing the harvest, neglected the market. New English wheat, fairly fixed, 32@36s for Red and 35@40s for White. Foreign wheat fell off 1s and flour 6d. The European wheat yield is from 154,000,000 to 162,000,000 quarters, making necessary importation from 11,000,000 to 20,000,000. Spring corn is firm and oats steady. Yellow maize is quoted at over 20s; Flat is held at 23s. At to-day's market new English wheat was 1s lower. Wheat was quieter.

Eastern Wool Markets.

BOSTON, Sept. 5.—Wool is in good demand, but the market is somewhat easier. Territory sales amounted to over 1,000,000 lbs., including fine at 58@60c; fine medium, 55@58c, and medium at 52@55c. Texas, California and Oregon wools are steady.

NEW YORK, Sept. 5.—*Bradstreet's* says: Wool is quieter at Boston. The demand for foreign wools, which has been throughout the summer more active than the domestic product, has fallen off considerably; the only classes which are meeting with even fair sales are the fine Territory wools. Ohio and Michigan wools are in poor positions. There are indications of carpet wools tending upward. Texas and all low-grade wools are very dull, and sales have been very few and of small amounts. There have been calls for odd lots of several grades, and these have really been the only transactions brokers have been making.

NEW YORK, Sept. 6.—The trade and sentiment in wool are more encouraging than for many weeks. Manufacturers generally need stock after the prolonged light buying. The aspect of woolens promises to stimulate attendance. The approaching tariff adjustment gives buoyant effect, but more to the point is the wholesome commercial character which prevails in all Eastern dealings. Ten thousand lbs. spring California, 4000 lbs. scoured, 27c; 270,000 lbs. do, 17@23c; 58,000 lbs. scoured Texas, 43@52½c; 25,000 lbs. medium unwashed fleece, 27c; 10,000 lbs. XX and above, 33½c; 17,000 lbs. domestic and 547,000 lbs. foreign at private terms. Boston reports an improved tone in the demand. Sales—298,000 lbs. foreign and 2,239,500 lbs. domestic, including 50,000 lbs. Humboldt county spring, 24c; 50 000 lbs. Southern free, 20c. Though there is a light trade at Philadelphia, fine clothing grades received more inquiry. All prices are named with confidence.

Hops.

NEW YORK, Sept. 8.—In the hop market things have almost come to a standstill for lack of supply. Brewers paid 31@33c for good to prime 1889, and riffraff stuff that was unsalable 60 days ago has been worked off at remarkably full prices in small lots. It was reported that three or four interior dealers have purchased a total of about 1000 bales of the new crop in Waterville, N. Y., at 50c per pound during the last few days, and the latest advices were that the chances were very poor for securing desirable growths in any section at a less price. Brewers are still placing orders for the new crop States and Pacifics at full prices. Speculators are doing practically nothing, in short, the market is now stronger on the home situation alone than it has been at any previous time this season. Cable advices reflected no material change in the situation in Europe. California, crop of 1889, 30c; Washington, crop of 1888, 15c.

Miscellaneous.

NEW YORK, Sept. 6.—The unfortunate suspicion of glucose excites doubt in samples of California white honey. The coast's reputation for purity of products should not be tampered with.

Spot and prospective hops hold a boom. All '89's bring 25@30c; olds, 8@15c, largely absorbed; new fancy sell in a small way, 50@55c. The crop is estimated at 50,000 to 60,000 lbs.; the exports, 1700.

French prunes advanced to 2¼c, four sizes; Pacifics, 12½c. There is a loss of confidence in the latter.

Canned fruits are placed on arrival. Standard peaches, $2.65@2.70; apricots, $2.10@2 26; pecans, $2 50@2 60; plums, $2@2.10.

Dried apricots dull; last prices unheeded. Peaches, sacks, 23½c; small inquiry.

Local Markets.

BARLEY

	Buyer Season. H.	L.	Seller 1890. H.	L.	Buyer 1890. H.	L.
Thursday	141	140½	...	...	136½	135½
Friday	143	142½	...	...	137½	136½
Saturday	144½	14 ¾	...	...	139	137½
Monday	...	...	...	...	...	...
Tuesday	...	...	...	...	...	...

WHEAT.

		S. S.	Nov.	B. '90.	B S.	S. '90.
Thursday	h	138	....	141½	150	....
	l.	138	...	141¾	149¾	....
Friday	h.	....	....	141½	149½	....
	l.	....	....	140¾	148½	....
Saturday	h.	....	....	141½	149½	....
	l.	....	....	141¾	149¾	....
Monday	h.	....	....	....	....	....
	l.	....	....	....	....	....
Tuesday	h.	....	....	....	....	....
	l.	....	....	....	....	....

BAGS—The market is dull, with buyers able to secure hand-sewed standard-size grain bags at 7⅜c to 7⅝c, although the pool asks 8c.

BARLEY—The market has not only held strong but holders were able to establish another advance. Receipts have been quite free, but under an active consumptive demand, stocks have not accumulated. The exports by sea are very light, considerably less than for the like time in 1889. The following are to-day's Call Board sales:

Morning Session: Buyer 1890 — 100 tons, $1.38½; 1100, $1.38¾. Buyer season—400 tons, $1.44; 500, $1.44¼. May—100 tons, $1.39 ₩ ctl. Afternoon Session: Buyer 1890—100 tons, $1.39½. Buyer season—100 tons, $1.44½; 100, $1.44⅝; 100, $1.44¾; 200, $1.45; 100, $1.45¼ ₩ ctl,

BUTTER—The market has made another upward move. At the close there is yet a strong tone, but some dealers are rather suspicious of the situation, believing that higher prices will send in larger supplies. Pickled is coming in quite freely. Holders ask an advance for gilt-edge. It is claimed that the supply of creamery from the Western States will be light, which, if proven correct, ought to favorably influence our market.

CHEESE—The market is steady, with a good demand ruling.

EGGS—The market has ruled strong at a slight advance. It is claimed by dealers that the local consumption will lessen after this week, and as prices are well up, receipts will increase, when prices will quite likely shade off.

FLOUR—The market is firm under a good steady demand.

WHEAT—Buyers have been bidding down, but holders' firmness has prevented business. There is no doubt but the decline in silver has very much to do with the fall in the price of wheat. The present silver law does not work satisfactorily, for speculators can work prices up and down greatly to the prejudice of farm products. Large farmers are more than ever in favor of the free coinage of silver so as to take it out of speculators' hands. In futures, trading has been light. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—1200 tons, $1.40¾; 400, $1.40¾; 300, $1.40⅝. Buyer season—500 tons, $1.48½ ₩ ctl. Afternoon Session: Buyer 1890—100 tons, $1.40¾; 300, $1.40⅜; 200, $1.41. Buyer season—100 tons, $1.48½; 200, $1.48⅝; 100, $1.48¾; 200, $1.49 ₩ ctl.

[COMMUNICATED.]

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Sept. 9th, were as follows:

Flour, qr. sks	28,432	Buckwheat, sks	....
Wheat, ctls	185,435	Middlings, sks	1,816
Barley, "	37,055	Alfalfa, "	....
Rye, "	721	Chicory, bbls	55
Oats, "	13 213	Broomcorn, bdls	....
Corn, "	7 280	Hops, bls	126
*Butter, "	1,104	Wool, "	1,193
do bxs	692	Hay, tons	1,326
do bbls	156	Straw, "	64
do kegs	248	Wine, gals	113,470
do ½ do	140	Brandy, "	1,130
†Cheese, ctls	556	Raisins, bxs	....
do bxs	173	Honey, cs	476
Eggs, doz	21,030	Walnuts, sks	....
do " Eastern.	72,300	Flaxseed, sks	....
Beans, ctls	4988	Mustard, sks	1,879
Potatoes, sks	22,897	Almonds, sks	....
Onions, "	1,268	Peanuts, sks	....
Bran, sks	3 270	Popcorn sks	17

*Overland 245 ctls. †Overland 229 ctls.

Cereals.

The wheat market abroad has sunk to still lower figures. The decline, while largely due to the fall in the price of silver, has also been aided by European farmers freely marketing their grain. At the East, as on this coast, farmers sold quite freely, but at the close the lower prices restrict sales, and as silver shows a stronger tone wheat may soon begin to strengthen. In this State it is quite likely that with free arrivals of ships charters will set off, which ought, without any other influence, favorably effect wheat later on. Harvesting is about over and very soon the selling pressure will be over, for when grain is warehoused there is always stronger holding.

Barley continues to go largely into consumption. With rains and bad roads the demand, it is claimed, will fall off. The crop this year is very light, and even with lighter feeding it is said that the supply will barely carry us into another season. The Washington crop is larger and better than it was in last year.

Oats have held steady, and this too in the face of fair receipts. The home demand is quite free. It is feared by some that shipments from Oregon will increase, which, if proven correct, will cause prices to shade off.

Corn has ruled steady at full figures. Receipts are only fair, as is the demand. Advices from the Central States are still confirmatory of a light yield.

Rye is without any particular change to note.

A prominent Liverpool house writes: "While we are of opinion that the English wheat crop is a better one than generally supposed, and that the production of wheat in Europe is probably greater than that of last season (to which must be added Australian and La Plata supplies), which last year failed us, yet there is now no doubt that the American crop of both winter and spring wheat is a partial failure, and the great rise in silver (silver has declined since and so has wheat.—Commercial Editor RURAL PRESS.) adds to the cost of importing Indian wheat. Thus two very large sources of supply (the United States and India) seem likely to ship sparingly, and a strong situation for holders is created. The general exhaustion of old stocks is also a favorable feature and the offerings of Russia, our third great wheat shipper, are remarkably light at present. The Danubian wheats are the most truly forward, that part of the country having apparently reaped a good crop this year."

Feedstuff.

Bran and middlings are strong at an advance. The demand is fair. Feedmeal is steady. Ground barley exhibits more strength.

Hay is strong at another slight advance for the better grades. The crop this year appears to have been short, and as there is a good demand, prices are in sellers' favor. It is claimed that fully one-quarter more has been fed so far this season than for the like time in 1889. This increase is due to more teaming.

Fruits.

The broken week interfered very greatly with general trade. Besides, many interior visitors brought liberal supplies of fruits which were distributed with a generous hand that interfered to some extent with trade.

To-day's business is light, which is offset by light receipts. Strawberries are dull, very light demand. The receipts of blackberries and raspberries are very light, but the receipts of huckleberries show an increase.

Mexican limes, selected, sell at $6. Bananas are firmer, the inside quotations being $2.

Apples are gradually gaining in strength for the better keepers. The export demand is increasing. The supply of other kind of tree fruits is growing lighter. Choice canning peaches are placed quite readily at 5c to 6c, plums, at 2c to 3c, some fancy at a slight advance. Pears, if good for canning, fetch full prices. The trouble is that canning varieties are generally too ripe.

Heavy receipts of grapes caused prices to shade off under a strong selling pressure; some were placed as low as 15c a box, being too ripe to keep. The only exception to the above was canning grapes, which canners took at from $30 to $45 a ton. Wine grapes continue to meet with a good demand.

For dried fruits there is a good distributive demand. Shipments out of the State are assuming larger proportions so as to meet contract sales. It is claimed that supplies from first hands are better cleaned up than ever before so early in the season, and at good prices too. If proper attention has been given to selecting the fruit, drying, packing, etc., California's dried fruit reputation ought to receive another substantial boom. Quotations in sacks are as follows, with fancy fetching a slight advance: Apples, sliced, 8c to 9c; quartered, 7½c to 8c; pitted plums, 10c to 11c per lb; bleached apricots, 14c to 17c per lb; sun-dried bleached, unpeeled, 17c to 20c; White nectarines, 15c to 17c; Red nectarines; 10c to 11c; California prunes, ungraded, 10c to 10½; from 100 to 40, 9c to 12c; grapes, 3¼c to 4c.

Shipments of raisins are beginning quite early. It is claimed that curers are drying, selecting and packing raisins in the most substantial manner. The demand continues quite active at from $1.75 to $2.25 for London layers, with fancy brands going above the latter figure. Loose Muscatels move off at $1.50 to $2. Inferior packs sell proportionately less. Raisins in the sweat sell at 5c to 6½c according to locality and quality. The pack this year will show a decided increase over last year's, provided early rains do not damage large quantities.

Live-stock.

Bullocks and mutton sheep are steady. The demand and selling offers are about evenly balanced. Some dealers look for better prices soon for the former. Hogs are steady with a firm tone. Fresh milch cows, with an advance in butter, are being inquired for. Horses are slow for medium work animals. Driving, matched teams and general utility horses are in fair request.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4¼@4½c ₩ lb dressed, 7¼@8½c ₩ lb.; heavy, 3½@4c ₩ lb.; dressed. 5¼@6¼c ₩ lb. Stock hogs, 4¼@4½c ₩ lb

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¼@5¼c ₩ lb.; second quality 4½@5c ₩ lb.; third quality, 4c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6@8c ₩ lb.; large, 4@6c.

MUTTON—Wethers, 6½@7½c ₩ lb.; ewes, 6@6½c ₩ lb.; lamb, spring, 8@9c.

Vegetables.

Canners are taking all the tomatoes obtainable at 35c a box, which keeps the market strong Green corn is having a steady sale at firm prices. String beans move off at 2c to 3c a pound. Cucumbers, summer squash, egg plant, okra and red peppers are unchanged, as are cabbage, cauliflower and root vegetables. Marrowfat squash are marked to $15 a ton.

Onions are fairly steady at current quotations.

Potatoes are steady. Receipts are free and so is the demand. The more choice, good keepers are wanted. The crop this year is large, being more generally distributed, but the overland shipping demand keeps prices from going very low. Sweet potatoes closed firmer to-day at 1¾@2¼c.

Miscellaneous.

Poultry has moved off at better prices, under a good demand and moderate receipts. As wild ducks are coming in there will be more selling competition soon.

Honey is moving off at unchanged quotations. Receipts the past week show an increase.

Hops are in quicker demand. Buyers freely bid 35c, which means a slight advance on a firm selling offer. The supply in first hands is light.

Wool is without essential change. The fall clip promises to be a full average both in quantity and quality.

New crop beans are coming in more freely. As the crop in the Central States is said to be light, many look for no materially lower prices here.

Exports by sea the past week aggregate as follows: Wheat ctls, Liverpool, 43,370; Cork, 69,775; Central America, 2091. Flour bbls, China, 16,385; Central America, 6065; Panama, 250; Guayquil, 500; Japan, 861. Beeswax lbs, New York, 1115. Brandy gals, New York, 357. Wine gals, New York, 60,281; Central America, 2082; Panama, 2707; Japan, 560; Beans lbs, Central America, 2321; Panama, 2019; China, 22,316. Corn ctls, Central America, 2240. Raisins, boxes, Central America, 70. Hops lbs, Japan, 1336.

From the *Commercial News* of Sept. 8th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	279,856	232,994
On the way to neighboring ports	21,478	21,136
In port, disengaged	6,159	24,351
In port, engaged for wheat	46,626	68,142
Totals	354,119	346,623

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Sept. 3, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	1,933,005	1,975,395
Flour, bbls	192,384	220,060
Barley	54,840	233,324

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS.			
Bayo, ctl	3 00	@	4 00
Butter	2 00	@	2 25
Pea	2 60	@	3 00
Red	3 00	@	3 50
Pink	2 50	@	3 00
Large White	—	@	—
Small White	2 60	@	3 00
Lima	4 00	@	4 75
Fld Peas, blkeye	—	@	—
do green	—	@	—
do Nlcs	2 00	@	2 25
Split	6	@	—
BROOM CORN.			
Choice to Extra	75 00	@	85 00
Fair to Good	55 00	@	70 00
Poor	45 00	@	60 00
CHICORY.			
California	6	@	6½
German	6½	@	7
DAIRY PRODUCE, ETC.			
BUTTER			
Cal. Poor to fair, lb	15	@	22½
do good to choice	25	@	30
do Gilt-edged	32½	@	35
do pickled	18	@	22½
do in kegs	15	@	18
do Creamery in rolls	33	@	36
Eastern do	27½	@	32½
do do, in tubs	20	@	27½
CHEESE			
Cal. choice mild	10	@	11
do fair to good	8	@	9
Young America	10	@	11
N. York Cream	10	@	12
Western	8	@	10
EGGS.			
Cal. ranch, doz	35	@	—
do do selected	37½	@	—
do. store	27½	@	—
Eastern cold storage	—	@	—
do fresh	20	@	20½
do selected	27½	@	—
do to arrive	20	@	25
FEED			
Bran, ton	17 50	@	19 00
Feedmeal	28 00	@	30 00
Gr'd Barley	25 00	@	30 00
Middlings	26 00	@	27 50
Oil Cake Meal	24 00	@	28 00
Manhattan Food Per 100 lbs	7 50	@	—
HAY			
Compressed	12 00	@	16 00
Wheat, per ton	10 50	@	14 50
do choice	15 00	@	16 00
Wheat and Oats	10 50	@	15 00
Wild Oats	8 00	@	12 00
Tame do	8 00	@	12 00
Clover	8 00	@	11 00
do ch'ce red top		@	—
Barley	9 00	@	11 50
Barley and Oats	8 00	@	11 50
Alfalfa (unpr'sd		@	—
Straw bale	45	@	55
FLOUR			
Extra, City Mills	4 25	@	4 50
do Co'try Mills	4 25	@	4 50
Superfine	3 25	@	4 00
GRAIN, ETC			
Barley, feed, ctl	1 27½	@	1 32½
do Choice	1 35	@	—
do Brewing	1 35	@	1 40
do do Choice	1 42½	@	1 45
do do gilt edg'd	1 47½	@	—
Chevalier once	1 50	@	1 52½
do come to good	1 32½	@	1 45
Buckwheat	1 75	@	—
Corn, White	1 31½	@	1 37½
Yellow	1 25	@	1 32½
Oats, milling	1 70	@	1 75
Surprise	1 67½	@	1 71½
Choice feed	1 67½	@	1 70
do good	1 62½	@	1 65
do fair	1 55	@	—
do Gray	1 45	@	1 55
do Black	1 40	@	1 75
Rye	1 20	@	1 32½
Wheat, milling. Gilt edged	1 45	@	—
do Choice	1 42½	@	—
do fair to good	1 40	@	1 41½
Shipping, choice	1 37½	@	1 40
do good	1 37½	@	—
do fair	1 35	@	1 36½
Sonora	1 32½	@	1 37½
HIDES.			
Dry light to h'vy	10	@	11
Salted	5	@	8
HOPS.			
Oregon, 1890	30	@	35

WEDNESDAY, Sept. 10, 1890.			
Cal 1890 Choice	35	@	
do Fair to G'd	30	@	—
ONIONS			
Silver Skin	2 00	@	2 50
NUTS—JOBBING.			
Walnuts, Cal. lb	9	@	10
do Ch'ce	11	@	12
Almonds, hd shl	5	@	6½
Softshell	14½	@	15½
Paper shell	16	@	—
Brazil	11½	@	13
Pecans	9	@	11
Peanuts	6	@	8
Filberts	11½	@	12½
Hickory	6	@	8
Chestnuts	14	@	—
Pine nuts	7	@	8
POTATOES			
Early Rose, sks	75	@	95
Chile	75	@	95
Peerless	70	@	95
River Reds	—	@	—
Humboldt	—	@	—
Petaluma	—	@	—
Burbanks	75	@	1 15
Sweet	1	@	1½
POULTRY AND GAME.			
Hens, doz	5 50	@	8 00
Roosters, old	5 50	@	7 50
do young	5 00	@	7 00
Broilers, small	2 50	@	3 50
do large	4 00	@	—
Fryers	4 50	@	—
Ducks, tame	3 50	@	4 50
do large	5 50	@	7 00
Geese, pair	1 50	@	2 00
Turkeys, Gobl'r	20	@	22
Turkeys, Hens	17	@	20
Pigeons	1 75	@	2 50
Rabbits, doz	75	@	1 25
Hare	1 00	@	1 50
Venison	9	@	13
Dove	75	@	—
EGG FOOD.			
Manhattan, ₩ lb	12	@	—
PROVISIONS.			
Cal. Bacon. Heavy, lb	10½	@	11
Medium	12	@	—
Light	13	@	13½
Extra Light		@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11	@	12
Hams, Cal	13	@	14
do Eastern	14	@	15
SEEDS.			
Alfalfa	8	@	8½
Canary	3½	@	4
Clover, Red	11½	@	11½
White	17½	@	20
Cotton	20	@	—
Flaxseed	2	@	3
Hemp	4	@	5
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German	5	@	6½
do Common	5	@	6
Mustard, yellow	1½	@	2½
do Brown	2½	@	3½
Rape	1½	@	2
Ky. Blue Grass, 1st quality	14	@	16
2d quality	13	@	14
Sweet V. Grass	75	@	—
Orchard	12	@	14
Hungarian	7½	@	8
Lawn	27½	@	40
Mesquit	6	@	7
Timothy	6	@	7
TALLOW.			
Crude, lb	3	@	5
Refined	6	@	
WOOL, ETC.			
SPRING—1890.			
Humboldt and Mendocino	19	@	24
Sac'to valley	15	@	22
Free Mountain	18	@	24
S Joaquin valley	12½	@	17
do mountain	17	@	22
Cala's & F'th'll	15	@	24
Oregon Eastern	13	@	22
do valley	20	@	25
So'n Coast, def	10	@	14
So'n Coast, free	12½	@	19
FALL—1890.			
North'n, choice	15	@	17
do defective	12	@	14
Mountain Free	11½	@	14
San Jo quin defective	8	@	11
Southern do	8	@	11

Rope.

Baling, Duplex, lb	12
" Manilla, lb	14
Twine, for hops, balls, tarred, lb, Manilla	16
" " grape vine, balls, lb "	16½
" " " coils, lb "	16½
" spring, lb "	18
" binder (650 ft. to lb), lb	15½

Duplex twine 3c per lb less.

Fruits and Vegetables.

Choice selected. In good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Sept. 10, 1890.

Bananas, bunch	2 00 @ 3 00	Green Gages lb	1½@ 2½
Cranberries	— @ —	Watermel'ns 100	5 00 @10 00
Limes, Mex	5 00 @ 6 00	Cantaloupes crt	1 00 @ 1 75
Lemons, Cal., bx.	3 50 @ 4 00	Nutmeg melons	45 @ 60
do Sicily, bx..	9 00 @10 50	Crabapples, box	75 @ 1 10
do Malaga....	9 00 @10 00	Quinces, box...	35 @ 50
do do Seedling	4 50 @ 5 00		
Pineapples, doz.	3 00 @ 5 00	VEGETABLES.	
Strawberries....			
fair, chest...	5 00 @ 6 00	Okra, dry, lb ...	6 @ 10
Bl'kberries, do..	4 00 @ 5 50	do green bx.	40 @ 50
Huckleberries lb	7 @ —	Parsnips, ctl....	1 00 @ 1 25
Figs, box, black.	50 @ 75	Peppers, dry, lb	12 @ —
do white.....	25 @ 50	do green, bx..	30 @ 45
do Smyrna..	— @ —	do Bell.....	40 @ 55
Plums, lb.....	1½@ 2½	Turnips, ctl.....	50 @ —
Pears, bx.....	50 @ 1 50	Beets, sk.....	75 @ 1 00
do Bartlett lb	3½@ 4	Cabbage, 100 lbs	50 @ 75
Peaches box ...	50 @ 1 00	Carrots, sk.....	35 @ 50
do choice....	1 25 @ 1 75	Cucumbers box	20 @ 40
do canning, lb	3 @ 5	Tomatoes, bx...	35 @ 65
Apples com box	50 @ 1 00	Peas, lb.....	2 @ 3
do choice	1 00 @ 1 75	String Beans ...	2 @ 2½
Grapes, box....	15 @ 40	Lima do.....	2½@ 3½
do Muscats..	40 @ 75	Squash, summer, bx.....	25 @ 50
do Rose of Peru	20 @ 40	Marrowfat, ton	15 00 @ —
do Tokay.....	50 @ 75	Garlic, lb.....	8 @ 10
do Blk Hamb'rg	25 @ 50	Green corn ch'ce	12½@ 20
do Isabella.....	70 @ 1 00	do do com sk ..	50 @ 1 00
do wine Zinfandel.....	15 00 @17 00	Egg Plant, bx..	40 @ 50
do Malvoise....	20 @ 40	Cauliflower doz	40 @ 60

California Fruits East.

CHICAGO, Sept. 4.—The Earl Fruit Co. sold California fruit to-day as follows: Bartlett pears, ripe, $2.35@2.90; grapes, half-crates, Tokay, $1.80 @2.10, some poor ones, $1.50@1.60; Muscat, poor order, 65c@$1.15; German prunes, $1.80; peaches, Susquehanna, $1.60@1.65; Orange Cling, $1.55@ 1.60; Muir, $1.60; Yellow Cling, $1.25@1.60. Fifteen to 20 carloads have been sold here daily during the past ten weeks. The weather is very hot and muggy.

CHICAGO, Sept. 4.—Porter Bros. sold seven carloads of California fruit to-day as follows: Bartlett pears, ripe, $2.55@3.20; Susquehanna peaches, $1.50@1.75; Gros prunes, $1.95; Muscat grapes, half-crate, 55c@$1, all in poor order; Beurre Clairgeau pears, $2.75; Egg plums, over-ripe, $1.15@ 1.25; Gros prunes, $1.50@1:60; Duchess, $2.70; White Cling peaches, $1.35; Tokay grapes, half-crate, $1.25@1.30.

NEW YORK, Sept. 4.—Sgobel & Day, agents of the California Fruit Union, sold one car of California fruit as follows: Grapes, Tokay, $2.60@ 2.90; Muscat, $1.20@1.40; Malvoise, $1.45@1.90; Damascus, $1.75; Black Prince, $1.15; Rose de Peru, 75c@$1.30. The fruit was in good order. Tokay grapes are in strong demand. Rose de Peru are not wanted in this market.

NEW YORK, Sept. 5.—Sgobel & Day, agents of the California Fruit Union, auctioned three carloads (two ventilated) of Tokay grapes at $2.90 @2.15; Morocco grapes, $3.10@2.75; Malvoise grapes, $1.60@1.35; Rose Peru grapes, $1.20@85c; Muscat grapes, $1.40@90c; Beurre Clairgeau pears, $2.35; pears, $2.35@2.25; Gros prunes, $2.20@1; Fallenberg plums, $2@1.75; Kelsey plums, $5.60 per double crates, Kelsey plums, $4.05 per single crates; Egg plums, $2.55; assorted peaches, $1 95@ 1. Tokay grapes are in strong demand; Rose Peru and Muscat not wanted. Peaches, green, were undesirable in this sale.

CHICAGO, Sept. 5.—Porter Bros. sold seven carloads of California fruit to-day as follows: Bartlett pears, $3@4.05; Tokay grapes, half-crates, mostly in poor order, $1@1.60; Salway peaches, $1.45; Orange Cling, $1.35@1.90; Susquehanna peaches, $1.35@1.65; Japan plums, $1.85; Fallenberg plums, $1.30@2.60; Hungarian prunes, $2@2.10; Muscat grapes, full crates, $2.25@2.30

CHICAGO, Sept. 6.—The Earl Fruit Co. sold California fruits at auction to-day as follows: Beurre Clairgeau, $2.15@2.40, a few ripe, wormy ones selling for less; Beurre d'Anjou pears, $2.45@ 2.55; Louis Bond pears, $2.55; Onondagas, $2.45; Beurre Hardy, half boxes, $1.25; Hungarian prunes, $1.75@1.85; Tokays, half-crates, $1.20@1.75; Muscats, half-crates, poor order, 65@95c; Orange Cling peaches, $1.55; Susquehannas, $1.50; Honey Clings, $1.35. Twenty carloads sold here daily, mostly ventilated.

NEW YORK, Sept. 6.—Fresh fruit met the trying weather as well as any of the season. The prices are somewhat irregular, but prime stock sold readily. All good peaches to come are wanted, as the Bartletts and plums have run out. Tokay grapes have an early and an active start at remarkably fair prices. The others, except Morocco, are slow. The crop of Almoya grapes is expected to be 100,000 lbs. and Bartletts more than last year. The receipts of Pacific cars for the week amounted to 50. Eighteen sold on Tuesday, which indicates New York's ability to handle free supplies. The year, of course, is an exceptional one on account of the Eastern scarcity, but undoubtedly a large outlet is assured for the coast fruit, which anticipates other growths, and has obtained the widened introduction afforded by the situation. One firm sold 40 cars of Bartletts, $1.93@3.40 a box; $1.25@ 1.70 half box. Peaches, 95c@$3.25. These suffered. Nectarines, $2.10@3.10; figs, $1.30@1.65; prunes, $1.25@2.50; plums, 80c@$2.10; Tokay grapes, double, $4.45@5.90, prime; common and others, 80c@$3. The California Fruit Union sold eight cars of Bartletts, $2.80@3.35 per box; Beurre Clairgeau, $2.35@2.45; Duchess, $2.35@2.55; Beurre Hardy. $2.30@2.35; Egg plums, $2.55; Japan, $4.05@5 60; prunes, $1.20@2.20; Tokay grapes, $2.15@2.90, half box; Morocco, $2.10@ 2.75; others, 70c@1.55. Two private cars brought full prices.

NEW YORK, Sept. 8.—Sgobel & Day, agents of the California Fruit Union, sold two carloads of California fruit to-day at the following prices: Fellenberg plums, $1.80@2; Japan, $2.70; German prunes, $1.65; Gros, $1.70; Silver, $1.30; Bartlett pears, $2.85@3; Beurre Hardy, $2.25@2.70; assorted peaches, $1.15@1.75; Tokay grapes, $2.30@3.15; Malvoise, $1.15@1.60; Muscat, $1.05@1.25; Chasselas, $1.35; Rose of Peru, $1.25@1.80. Sgobel & Day report that Rose of Peru and Muscats are not wanted, but Tokays are in good demand. Bartlett pears are ripe, but peaches are too green and small.

CHICAGO, Sept. 8.—The Earl Fruit Co. sold California fruit to-day as follows: Beurre Hardy pears, $3.20@3.40; Bartlett. $2.60@2.85; Gros prunes, $2.10@2.35; peaches, $1.40@1.60; grapes, very soft, hf crates, Tokay, $1.25@1.55; Muscat, 85c@$1.25.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE. September 3-9.	Olympia. Rain	Temp.	Wind	Weather.	Portland. Rain	Temp.	Wind	Weather.	Eureka. Rain	Temp.	Wind	Weather.	Red Bluff. Rain	Temp.	Wind	Weather.	Sacramento. Rain	Temp	Wind	Weather	S. Francisco. Rain	Temp	Wind	Weather.	Fresno. Rain	Temp	Wind	Weather.	Keeler. Rain.	Temp.	Wind	Weather	Los Angeles. Rain	Temp	Wind	Weather	San Diego. Rain	Temp	Wi. d	Weather
W.	.00	72	N E	Cl.	00	76	Nw	Cl.	.00	60	Nw	Cl.	.00	92	S	Cy.	.00	78	Nw	Cy	00	74	W	Cy.	00	100	Nw	Cl	.00	93	W	Cl.	.00	76	Nw	Cl.	.00	76	Nw	Cl
T...	.00	74	N	Cl.	.00	82	Nw	Cl.	.00	60	Nw	Cl.	.00	94	S	Cl	.00	82	Nw	Cy	.00	58	W	Cl.	00	100	Nw	Cl	.00	88	Nw	Cl.	00	78	W	Cl	.00	74	Nw	Cl.
F...	.00	72	N E	Cl.	.00	74	Nw	Cl.	.00	58	W	Cl.	.00	93	S	Cl	00	88	S	Cl.	00	56	W	Cy.	00	96	Nw	Cl.	.00	90	0	Cl.	00	76	W	Cl	00	70	SW	Cl.
S...	.00	72	N E	Cl.	.00	78	E	Cl	.00	60	SW	Cl.	.00	90	Nw	Cl.	.00	84	Nw	Cl	00	56	W	Cl.	00	95	SW	Cl	.00	82	SW	Cl.	60	74	W	Cl	00	68	SW	Cl.
S...	.00	76	N	Cl.	.00	80	Nw	Cl.	....	....	....	....	.00	94	SW	Cl	.00	88	N	Cl	00	58	W	Cl.	.00	98	Nw	Cl.	.00	84	N	Cl	00	66	W	Cl.	.00	70	W	Cl.
M..	.00	74	N	Cl.	.00	76	Nw	Cl.	....	....	....	....	.00	94	S	Cl.	.00	84	SW	Cl.	.00	58	S	Cl	.00	98	SW	Cl	.00	86	W	Cy	00	58	W	Cl.	.00	70	W	Cl.
T..	.00	74	0	Cl.	.00	74	N	Cl.	....	....	....	....	.00	90	SE	Cl.	.00	80	SW	Cl	00	58	W	Cy.	.00	96	W	Cy	.00	84	SW	Cy	.00	66	W	Cl.	.00	70	Nw	Cl.
	.00	....	....	....	.00	....	....	....	.00	....	....	....	.00	....	....	....	.00	..	....	...	.00	....	....	....	.60	....	....	....	.00	....	....	....	.00	....	....	....	.00	..	....	....

EXPLANATION. Cl. for clear; Cy. cloudy; Fr., fair; Clm., calm; — indicates too small to measure. Temperature, wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

CHICAGO, Sept. 10.—Arrivals of California green fruits continue heavy, and prices in consequence have ruled easy, though still in very brisk demand with prices as below: Peaches, Crawford, boxes, 20 lbs, $1.75; Orange Clings, $1.50@1.75; Salway Freestones, $1.10@1.65. Pears, Bartlett, green, $4 @4.25; do, ripe, $2.75@3.25; Duchess, $2.50; Beurre Clairgeau, $2.65@3; Beurre Hardy, $2.65@3; Howell, $3@3.25; Beurre Bosc, $2.40@3; Gros prunes, 20 lb boxes, $2.25@2.50; Egg plums, $1.50@1.60; Yerworth plums, 90c@$1; German prunes, $1.65@ 1.75; grapes, half cases, 4 baskets, Muscat, 75c@$1; Tokay, $1.10@1.80; Damascus, $1.25@1.50; black Morocco, $1.25@1.50.

A little better feeling has come over the dried fruit market. The demand for evaporated apples has been somewhat renewed. Arrivals are light, with some nice lots of new goods received which are held firmly. Holders are disposed to sell, for they realize that prices are high, and yet consignments are firmly held. Buyers, while desiring to purchase, cannot always reach up to top figures asked, so that it requires a little persuasion on both sides to bring about trading. Apple-cores and skins and chopped goods have again come into favor, and during the last few days several good-sized lots have been sold. New lots of old peaches which remain are steadily held.

CHICAGO, Sept. 10.—Porter Bros. sold 10 carloads of California fruit to-day as follows: Bartlett pears, $3 60@4.20; Beurre Hardy, $3@3.05; Beurre Clairgeau, $2.99; Tokays, full crates, $2.25@ 4.25; do, Muscat, $1.60@2.40; half-crates, Muscat, 85c@$1.30; do, Tokay, $1.20@2.15; half-crates, Rose de Peru, 90c@$1.25; Cling peaches, $1.40@ 1.75; Cornichon. $1.40; Silver prunes, $1.30; Fellenberg, $1.35; Gros prunes, $2.55.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING SEPT. 2, 1890.

435,785.—GATE—Jos. Albers, Corvallis, Or.

435,553 —KNIFE-SHARPENER — J. S. Blood, Napa, Cal.

435,622.—ORE-CRUSHER—John M. Bryan, S. F.

435 556.—SAW-BIT HOLDER—S. H. Chase, San Jose, Cal.

435,557.—CHIMNEY—L. E. Clawson, S. F.

435,561.—CLOTHES-DRIER—F. Frank, Suisun, Cal.

435,562.—CONCENTRATOR — Geo. Gates, Drytown, Cal.

435,563.—PLATE-LIFTER—D. B. James, S. F.

435,840.—SOLDERING-CAN BODIES—M. Jensen, Astoria, Or.

435,651.—FRUIT-STONER—P. Maisonneuve, Oakland, Cal.

435,509.—INSECTICIDE—W. Mann, Fresno, Cal.

435,567.—GANG-PLOW FRAME—A. F. McMillan, Benicia, Cal.

435,854.—DECORTICATING MACHINE — J. L. Notley, Santa Cruz, Cal.

435,462.—YARN-WINDER—J. A. Shepard, Fossil, Or.

435,592.—JOURNAL-BEARING — F. H. Smiley, San Jose, Cal.

The following brief list by telegraph for Sept. 9 will appear more complete on receipt of mail advices:

California—Thomas B. Craycraft, Ponoche, waterway and gate for reservoirs; Ferdinand Frank, Suisun, sash-holder; John Ginty, San Diego, pipe coupling and expanding metallic sleeve; R. B. Sinclair, Alameda, assignor to the Sinclair Manufacturing Company of California, windmill; William Stephens, Santa Rosa, electrical traction apparatus; George H. Tucker, San Francisco, die for making lathing; Stefano di Vicchio, San Jose, and J. Mignola, San Francisco, refrigerator.

Oregon—Lewis J. Bergendahl, assignor of two-thirds to Mr. Taylor, Pendleton, Or., and J. Gagen, Port Townsend, Wash., snow-plow; Thomas P. Madill, Albany, fence making machine; Charles W. Fremain, Portland, steam ore stamp.

Washington—Jane Ford, Ross Station, steam cooker; Peter E. Frost and L. A. Connor, gaff point for vessels.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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THE KEROSENE LAMP AND ITS DEFECTS.—The frequent accidents that occur in the explosions of kerosene lamps furnish strong evidence that there is something wrong in their construction. A gentleman who is engaged in the business of selling kerosene lamps and oil stoves writes to the *Scientific American* as follows: "The present system of burning oil, both in lamps and oil stoves, seems like a satire upon this progressive age. A flame oxygenated by air currents to the fiercest heat is placed directly in contact with a brass tube through which all the oil consumed has to pass. Of course this tube, being always made of brass, is one of the most rapid conductors of heat, and soon becomes excessively hot. A better device for generating explosive gas could hardly be conceived. The worst of it is that the gas thus rapidly generated falls into the oil font and is all ready for an explosion the moment that the smallest part of it comes in contact with fire. A slight current of air will often convey some of this gas to the flame, when the conflagration or explosion is almost sure to follow. If some of our inventors would substitute some device for the present mechanical and scientific outrage, something not too complicated and expensive, I risk nothing in asserting that such a device, if brought before the public in a business way, would become universal. The horrors referred to have now become so frequent that they receive only a brief and passing notice in the daily papers."

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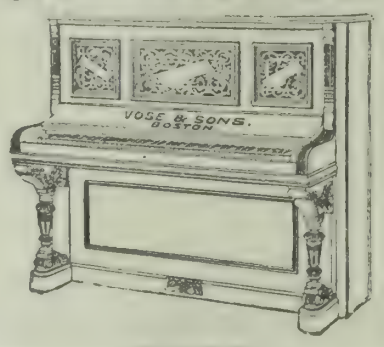
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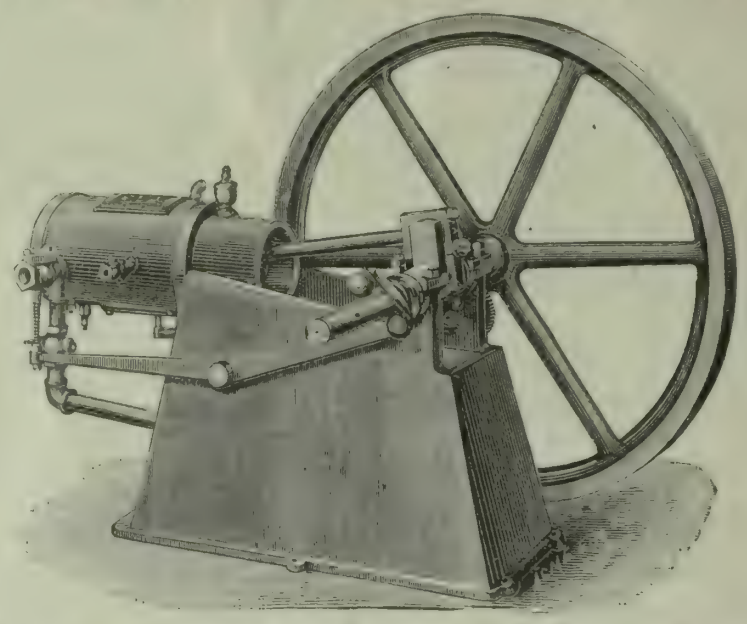


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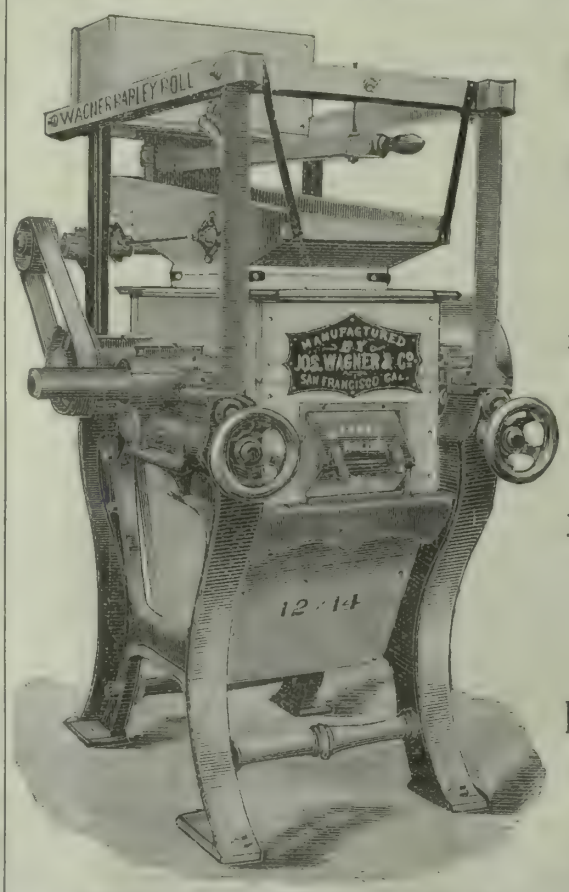
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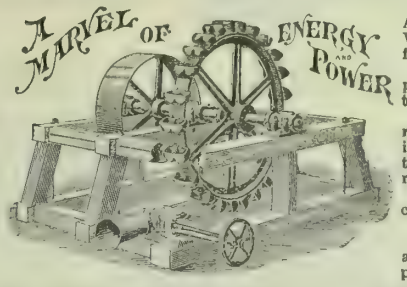
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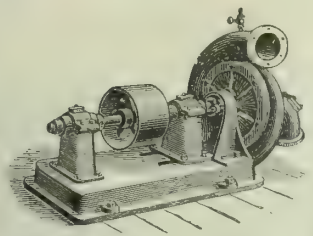
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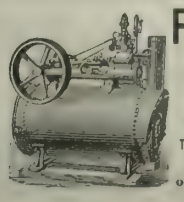
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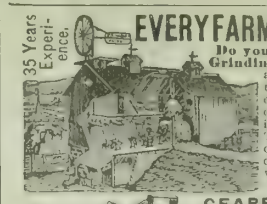
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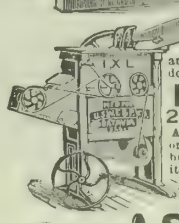


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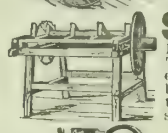


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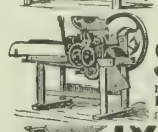
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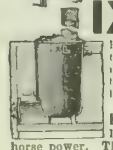
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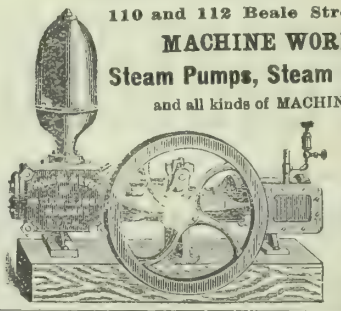
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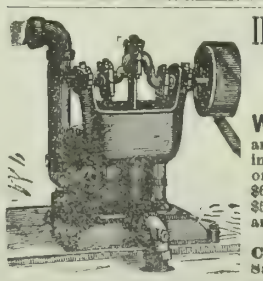
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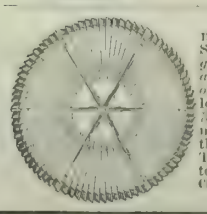


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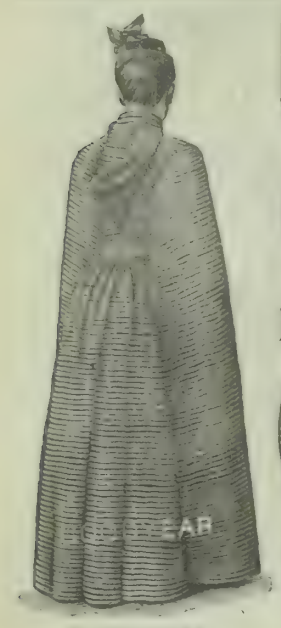
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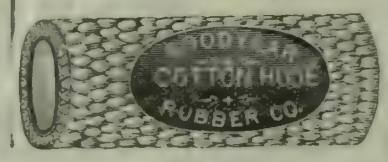


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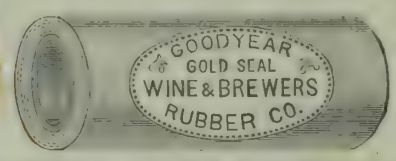


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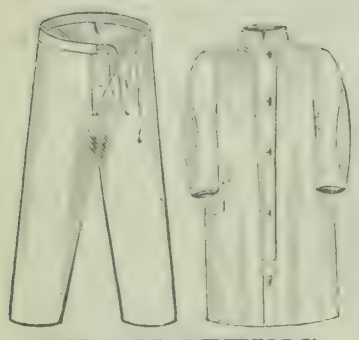


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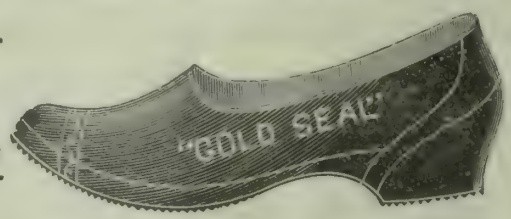
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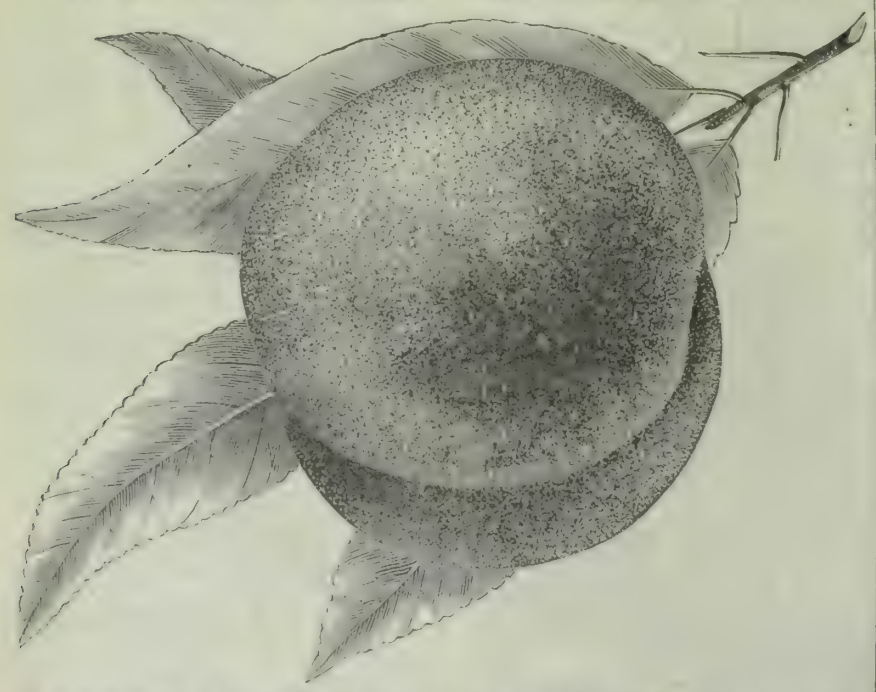


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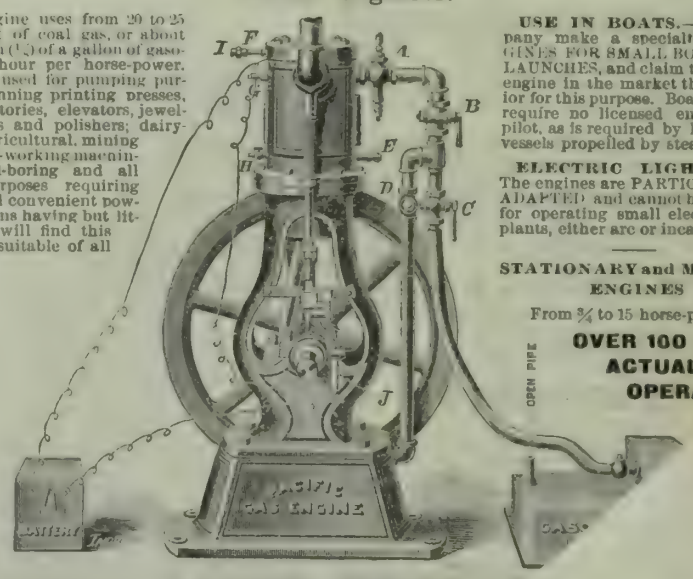
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The engine uses from 20 to 25 cubic feet of coal gas, or about one-eighth (1/8) of a gallon of gasoline per hour per horse-power. It can be used for pumping purposes, running printing presses, small factories, elevators, jewelers' lathes and polishers; dairymen's, agricultural, mining and wood-working machinery; well-boring and all other purposes requiring cheap and convenient power. Persons having but little space will find this the most suitable of all motors.



USE IN BOATS.—The Company make a specialty of ENGINES FOR SMALL BOATS AND LAUNCHES, and claim there is no engine in the market their superior for this purpose. Boats so fitted require no licensed engineer or pilot, as is required by law for all vessels propelled by steam power.

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STATIONARY and MARINE ENGINES
From 3/4 to 15 horse-power.
OVER 100 IN ACTUAL OPERATIO'

READ THESE TESTIMO

PACIFIC GAS ENGINE CO. GENTLEMEN: Permit me to add my te ..1890.
indorsing y ur engine As you are aware, in me was a Regan engine whic' ..ave received
remove the head and raise the tappet valve ev ry time I wanted to start the ..uble I had to
all the Regan appliance except the cylinder and stand. You put in yo ..ne; you removed
and, in fact, changed it to the Pacific Gas Engine, which now works ..device, inlet valve,
any cause since you made the change (over two months). It gives me no ..o remove the head for
The change from the Regan to the Pacific is a decid d improvem ..o'd, attends to it.
change, and I cheerfully recommend your engine as being simple, effective, ..oird more power sin e the
B S. HILL, ..ectful y yours,
..nal Ave. and Morton St.

MAYFIELD, March 26, 1890.
PACIFIC GAS ENGINE CO.—We have given your little 1-H. P. engine a splend'd advertisement. A fire broke out at 2.30 o'clock this morning, in a tenement house on my premises. I started the e gine, connected the hose, and by its use saved at least $3000 worth of my property. I saved my blacksmith shop, lying 12 feet from the burning building, my barn and my dwelling. Three times the fire started in these buildings, and I extinguished it every time. The engine never faltered, and threw water between 50 and 60 feet high. The whole town was astonished, and they acknowledged that I saved at least $20,000 worth of property.
A fire department is being organized here, and I think they will have one of the engines on a truck for fire purposes. *They cannot be beaten.*
Hoping that all of your customers will be as well pleased with the engine as I am, I remain, Yours truly,
JOS P. PONCE.

PACIFIC GAS ENGINE CO.,

Send for Circular and Price List. 230 FREMONT STREET, SAN FRANCISCO.

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PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XL.—No. 12. SAN FRANCISCO, SATURDAY, SEPTEMBER 20, 1890. { DEWEY & CO., Publishers, Office, 220 Market St.



STANDARD TROTTING STALLION DAWN 6407, OWNED BY HARRY J. AGNEW, HILLSDALE, SANTA CLARA COUNTY, CAL.

A Noted Trotting Sire.

The engraving on this page gives a portrait of the noted trotting stallion Dawn, son of the famous Nutwood, with a record of 2 18¾, and Countess, daughter of Whipple's Hambletonian. Besides Dawn, Countess is dam of Strathway, with a three-year-old record of 2:26 and trial record of 2:21; also dam of Placida and Morna, who made 2:26 as a double-team trial. The dam of Countess was Fly, whose get are said to have brought Mr. Whipple more money than the offspring of any other of his mares. Through Nutwood his sire, Dawn inherits the blood of Belmont, with his long string in the 2:30 list, and of Miss Russell, dam of the wonderful Maud S., with a record of 2:08¼. The descent from such sires gives Dawn a brilliant advantage, and he has proved himself fully worthy of his ancestry.

Dawn is now a nine-year-old; is a light chestnut, a horse of handsome style, of good size, of great bone and substance. He was formerly owned by A. L. Whitney of Petaluma, and is now the property of Harry J. Agnew of Hillsdale, Santa Clara county, proprietor of the "Agnew Stock Farm."

Though Dawn is comparatively a young horse, his progeny is showing unmistakably his quality as a trotting sire. Oaknut, at five years old, has a trial record of 2:24½; Silkey, also five years old, has a trial record as a green pacer of 2:30 and half a mile in 1:11; Daybreak, three-year old, has made 2:27½; Anne Bell, as a two-year old, 2:37; Nonpareil, a yearling, half-mile heats, 1:27; Dawness, a mile in 2:51. All these are trial records. These promising figures indicate what may be fairly expected of Dawn in perpetuating his inherited excellence and his own sterling individuality. Mr. Agnew has a fine band of brood mares, and his breeding enterprise for quality and skillful management is one of our leading establishments.

The Coming World's Fair.

Although there is still trouble about settling down upon a site for the World's Fair in Chicago, the people are assured that this local quarrel does not retard other arrangements which are going forward. However this may be, the Pacific Coast people are proceeding with preliminaries. The general convention in this city last week was quite fully attended, and after a day's discussion intrusted the subject to an Executive Committee, which has organized and begun work. The State has been divided into 13 districts outside of San Francisco. There will be eight members from San Francisco and one from each of the outside districts to form an Executive Committee of 21. This committee will have charge of the work of preparing the California exhibits for the World's Fair. It is the intention to ask an appropriation of $1,000,000 from the next Legislature of the State to enable the work to be carried on properly. There is a proposition on foot to make a combined exhibit of all the Pacific Coast States, instead of having the products of California separate. This proposition will be discussed, but the opponents of the measure are apparently largely in the majority.

New Mexico's Territorial Exposition opened at Albuquerque on the 15th, with 2000 visitors attending. All the space is taken in Exposition hall, and the display of fruits, such as peaches, apples, pears, grapes and melons, is very remarkable. The mineral exhibit from Socorro county alone will amount to thousands of dollars, and was prepared to be sent to Chicago for exhibition at the World's Fair.

Our Pork Wanted in France.—A dispatch from Bordeaux says: The Gironde Council-General has sent a resolution to the Government demanding an early repeal of the law prohibiting the importation of American salted pork.

CORRESPONDENCE

Correspondents are alone responsible for their opinions.

Early Notes from the State Fair.

EDITORS PRESS: Entries have been slow this year, probably owing to fairs at other points and Admission-Day celebration in S. F., etc. I send you a few early notes from the park.

Cattle.

As you turn to the right from the main entrance, you find the exhibit of P. S. Chiles of Davisville, consisting of seven Shorthorns. There are an aged bull, a two-year-old and a yearling, and four very fat cows. Then come vacant stalls understood to be reserved for Mr. Burke's famous herd of Holsteins soon to arrive.

G. B. Polhemus of Santa Clara comes next with 16 head of Holsteins showing remarkable milk development. They are milking seven cows in the herd and milking them three times each day.

The array of milk-cans is quite formidable, and as they are feeding beets, bran, crushed oats and oilmeal, we judge them to be experts at exhibiting cattle for milk. It is as much of a trade as to train and drive fast horses. A pedigree that shows something is that of King Aaggie Clothilde, which gives the milk and butter records of his female ancestors. The six nearest averaged 22 pounds 5¼ ounces butter per week, and the eight nearest averaged 16,617⅜ pounds of milk per year. The longer a pedigree the better if good animals are named, and the reverse if animals are bad. Tell what they have done and we can judge what they are.

T. B. Hall of Marysville shows 20 head of very fine Holsteins fit to compete anywhere. He is located in the elegant new barn a little farther down the avenue from Mr. Polhemus' herd.

Away over beyond the sheep and swine pens is the Holstein exhibit of the Bonnie Brae Cattle Co. of Hollister, J. A. Scholefield manager. The herd consists of seven cattle, with Lady Fay's Artis at head of herd. Lady Fay has a record of 97 pounds 5 ounces milk in one day and 24 pounds butter in 7 days, without having been fed grain. The sire and dam of Artis are both in the "Advanced Register." For entry in this a cow must have produced 65 pounds of milk per day for ten consecutive days when in her five-year-old form. For a bull to be recorded in this registry, his daughters must have been entered.

A Suggestion.

There are several herds each of Durham, Holstein, Jersey and Black Polled cattle, and they are scattered as though on purpose to get them as far apart as possible. Those interested are generally fanciers of some one of these breeds to the exclusion of others, and it would add greatly to the convenience of visitors and advantage of exhibitors to have each breed by itself.

Coming down the main alley, after passing the Polhemus herd of Holsteins, a large number of stalls are reserved for the Younger Shorthorns, expected to arrive to-night. Then come 20 head of very fine Shorthorns from Peter Peterson of Sites, Colusa county. The herd has been well known as prize-winners for several years. The famous bull Counsellor is followed by 13 of his get, ranging from four months to four years of age. He will show a beef herd, young herd, and compete for prizes offered for milking Shorthorns. His cattle excel in uniformity of color, and combine size, quality and milking capacity in a remarkable degree.

Across the alley from him, A. Heilbron & Bro. of Sacramento make an exhibit, from their Tulare ranch, of 26 Shorthorns and 19 Herefords. Some of these were illustrated in last week's RURAL, and the animals themselves give a better impression than the cut. He breeds both red and roan Durhams, but aims to keep them separate. He shows 7 roans and 19 reds. One three-year-old Cruickshank bull is a remarkable animal, and several cows would attract attention anywhere. Mr. Heilbron butchers on a very large scale, besides his breeding interests.

Herefords.—He also shows 19 animals of this famous breed and thinks they are, as a rule, more easily kept, more uniform, and more given to turning grass into beef than any other breed.

Angus—American River Herd.—J. C. Camp of Perkins shows 13 head, among which are the famous cows Lady of Lakeview and Lady Guind. Besides these 13 he has at home a few thoroughbreds and 70 grades. His herd is at the farther end of the main alley on the left.

On the right of the main alley, just as you pass to the racetrack, are 11 cattle from the Jersey herd of W. C. Smith of Florin. These are all registered in American Jersey Cattle Club, and have been large prize-winners.

Black Polled cattle are represented by the Argonaut herd of Aberdeen Angus cattle, 10 head of remarkably fine cattle shown by Dr. Dixon of Sacramento.

W. B. Gibson of Woodland enters the contest with 11 head of Galloways, headed by Little Wonder—just little enough to weigh a ton. These are to be found back of the sheep-pens near the Bonnie Brae headquarters. Very near them is a fine herd of Jerseys shown by P. Stanton of Brighton. As he is milking five head and Mr. Smith several, we hope the representatives of dairy fixtures will come out here and make some milk and butter tests. Neither of these Jersey exhibitors say anything about tests. Tests are the life of their breed.

Andrew Smith of San Mateo makes a remarkably fine display of Berkshire and Poland China swine and of Shropshire sheep. Otherwise, these and the poultry departments are as yet practically empty.

H. W. Jeans of Blocksburg, Humboldt county, shows a very fine pair of mules and two jacks.

J. D. Rosenberger of Sites shows four jacks, and has a whole pasture full at home to draw upon.

Draft horses are well represented, but we cannot go into details. More and better next week. F. S. C.

Grapeland, San Bernardino County.

EDITORS PRESS:—It has been but a short time since your paper (to my mind the most valuable in the State) found its way into our little settlement, but I must tell you that it finds itself a very welcome visitor.

I called this place a settlement because that is all I can call it. There is nothing here but a few neighbors and a postoffice. However, we hope to be of more importance some day, as we now have an irrigation district formed and the new places, as well as many of the old ones, are being improved and set to vines and fruit trees.

This seems to be one of the finest locations for fruit trees, especially peaches and raisin-grapes. Our peach trees are so laden with fruit that we have to use props for most of them, and some of the limbs are already broken.

I wish to speak of something that the readers of the PRESS who are in the fruit business may not have noticed. There are some varieties of peach that will not bleach; that is, it ruins the fruit both in color and flavor to expose it to the fumes of sulphur. We have a large, white freestone peach that has a delicious flavor, is perfectly formed, and is of a bright red color around the seed. After bleaching, it is of a very dark brown all the way through, and has a disagreeable sour taste. We have tried it two years and it was the same both seasons.

We dried about 1000 pounds of Green Gage plums, and they are excellent, the more so because we took the stones out of them; so the lady who is fortunate enough to get some of our plums when she buys, will not have to stone them for her Christmas pudding.

I should be pleased to have some kind reader who has had experience, give me a recipe or a few hints on prune-drying, for which I will gladly return the favor if it is in my power.

MINNIE D. PERDEW.

Grapeland, Cal.

THE VINEYARD

Resistant Vines.

EDITORS PRESS:—I have been reading very carefully Mr. West's and Judge Stanly's letters on the subject of grafting vines on the so-called resistant roots, but I have not found anything on one, to me, important point, and that is the *quality* of the grapes, and also if any characteristic appearances of varieties are in any way changed. I would be pleased to hear of some close observations on these subjects through the columns of the PRESS.

Assuming that all our improved varieties have been bred up and developed from the original wild vine, I have always been suspicious that it might be a step backward on the road of progress to graft on the original wild vine. It is well known that many tree stocks sometimes materially affect the fruit of grafts and buds. I have just had my attention called to this subject by finding that a clingstone plum I had grafted on a peach tree had become a perfect free-stone. This certainly opens a wide field for experiment and investigation for some horticultural Darwin to study the laws of hereditary descent in plants.

As yet, not to my knowledge, have we had any phylloxera up here in Lake county. But to those planting the wild vine I would say: "Be not too sure of lasting success." It is undoubtedly true that insects and animals may under changed conditions become changed in habits, instincts and forms, and also that new forms are evolved. I am inclined to the opinion that the resistance is the result of a slightly increased vigor through the wild vine roots, and not from any inherent quality. This suggests the use of some stimulating fertilizer. [This idea has been widely applied to practice. Fertilizing prolongs the life of the vine, but does not save it.—EDS. PRESS]

I wish to ask if the sulphate of iron (copperas) can be made and sold as cheap as sulphate of copper (bluestone). I read of the wonderful fertilizing effects of the former above the latter. It would seem it should be cheaper, as iron is a cheaper metal. It is not probable that it would have so good effect on the red land, as it is mostly iron ore.

Lower Lake, Sept. 5. C. P. SCRANTON.

[Copperas can be bought in this city at 1½ cents and bluestone at 6½ cents per pound in barrels. Our correspondent is right in the surmise that the use of copperas as a fertilizer would be of little or no account in a soil already loaded with iron oxide.—EDS. PRESS.]

FORESTRY.

Open Letter on Timber-Cutting, Etc.

EDITORS PRESS:—The letter below is of public interest and is fairly typical of many similar inquiries received by this board. We publish it as explanatory of our rejoinder.—WM. S. LYON, for the Board.

SHASTA CO., CAL., Sept. 20, 1890.

To State Board of Forestry—GENTLEMEN: I have read that it is against the law to cut any timber on Government land. Now I would like to have some shakes and have got no timber for the purpose nor money. Can I go up the mountain and cut a sugar pine down and split it up into shakes for my own use? If you please, kindly answer this question for me. Inclosed you will find a two-cent stamp. Respectfully yours, A SETTLER.

Reply.

A SETTLER, ESQ.: Yes, dear sir, your interpretation or reading of the law is entirely correct, and the cutting of that sugar pine upon which you have cast covetous eyes will surely consign you to limbo and the reproaches of all God-fearing citizens. You should know that the deadly machinery of the law is oiled and full-cocked for just such premeditators of evil as yourself. Further, to side-track temporarily the moral features of the case, you must not overlook the fact that the tree in question, according to the price the Government sells its timber lands for, represents a national asset of from 15 to 50 cents, this value varying in accordance with its size and remoteness from or accessibility to a market; and that it will only cost the nation from $500 to $1000 to follow, drag you up to the bar of justice and vindicate upon your person or pocket, or both, the majesty of the offended law. The more remote and less valuable the tree, the more certainty there is of your speedy attainder.

Remoteness hath a charm for the Deputy U. S. Marshal; it stimulates the sleuth-like proclivities; it means increased per diems, increased mileage and increased traveling expenses. It gratifies his love for solitary communion with Nature as he finds her in a mountain resort and enables him to shake dice all day under the heading of "incidentals," while gleaning from your dearest enemy the damning chain of evidence that stamps you as a malefactor and felon.

Again there are the very shakes themselves to confront you with; they "split" on you so to speak, and if these be made from a good cut, leave you no knot-hole of escape from the myrmidon who seeks only evidence that convicts, for thereby hangs all of his glory and much of his plunder.

If in the face of this warning you still incline to shelter your head from Shasta's summer solstice or winter's snowy storms, we suggest that you go a step further and add the trifle of arson to your contemplated misdeeds and cover up your tracks with fire.

If a likely, active fellow, and you select the dry season and a windy day, you can start a fire that will quickly wipe out the evidence against you and perhaps a quarter million dollars of public property; the shakes will haunt you, follow you up like an avenging and remorseless Nemesis—the fire, never. They must catch you *in flagrante delictu*, which means that the Government agents must be afield and alert at all times, which would cruelly handicap their social diversions in the mountain saloons, and if you are any way discreet the chances of obtaining direct evidence against you are so slim that you need hardly fear close investigation; the result of impeaching you could only be in the interest of the public good—not the financial gain of the zealous conservator of the public timber who only moves on "dead things."

If you rive out more shakes than you require, by all means try to sell some to your neighbor; incidentally this will clinch the evidence against you but furnish the wherewithal to secure such cold comfort and relief as an occasional stamp invested in the direction of the General Land Office (the proper authorities) may afford.

A correspondent whose moral perceptions are so blunted that he is capable of confessing to both poverty and the attributes of good breeding indicated by the inclosed stamp, is such an anomaly in this generation that we are prompted to look upon your request with some suspicion, and if you would earn aught but the contempt of the public, you must at any rate promptly redeem yourself from the stigma of impecuniousness; buy a flock of sheep and steal pasture for them from the public domain.

If industrious, your flocks can trample out and destroy the forest prospects of Shasta county for generations to come; and if the work of annihilation proceeds not quickly enough, a touch of the torch will accelerate matters and assure you of a grass crop the next season.

Meantime your prestige and standing in the community as a wholesale plundering robber of the public timber lands will entitle you to a consideration at the hands of the General Government that they will never accord to the petit larcenist of a few shakes.

The efforts of this Board to whom your appeal is made have been for some years directed to convincing the Congressmen from your State and district, and who are directly responsible for the present condition of affairs, that a little surveillance of you after you have bloomed out a fire-fiend, pasture brigand and all-around outlaw is a more important matter than a too close scrutiny into how you came by your woodpile or bunch of shakes. So far, they have seen fit to differ from us, and continue to strain at gnats and swallow camels, and the chances are that if you cut that sugar pine, they will strain you so fine through the meshes of the U. S. District Court for the Northern District of California that you will be indistinguishable from a Shasta county gnat. Our advice is that you don't.

STATE BOARD OF FORESTRY,
By W. S. LYON, Forester.
Los Angeles, Cal.

THE APIARY.

Foul Brood.

EDITORS PRESS:—I should think, judging from what is said on page 194 of the PRESS, that it was not generally known that California had a State law seven years ago, which is still in force, against keeping foul brood. I inclose a good description of foul brood, taken from the Michigan State Agricultural College Bulletin, No. 61, by A. J. Cook, and attach the California State law for a remedy. I can vouch for the effectiveness of the remedy, for I was one of the first inspectors appointed under that law, and applied the remedy to about 300 colonies in Ventura county, with the best results. I also inclose a description and cure of the nameless bee disease which has destroyed quite a number of colonies in California. I have tried superseding the queen with a healthy one, and in every case the cure was complete. J. F. MCINTYRE.

Fillmore, Ventura Co., Cal., Sept. 9, 1890.

Foul Brood.

This is the result of the growth and development in the brood of bees of a bacillus, which has been named by Mr. Cheshire bacillus alvei. These bacilli look like short rods, and when magnified 1000 times appear about one-fourth of an inch long. Thus we see they are exceedingly minute—only 1 4000 of an inch long. And yet the spores are even smaller—from one-third to one-half as long. I have stained specimens taken directly from diseased brood, and from cultures in tubes, where a little of the decayed brood was placed in a preparation of beef decoction. In this last case the media in the tube was soon swarming with the bacilli. All look just alike, and just like those from the decaying brood. If we take a section of a rather small black pin one-fourth inch long, we will have just about the appearance of these stained foul-brood bacilli. From what we have already learned of these organisms in general, it is easy to study this special foul-brood bacillus. The minute ovoid spores are brought to the hive probably in honey fed to or brought in by the bees. It is easy to see how honey in a diseased colony of bees would receive these spores. It is difficult to see how it could be free from them. The spores might also be introduced by giving combs containing the diseased brood or which had previously contained it to the bees, and so now would have the dormant bacilli or spores. Undoubtedly foul brood is usually first introduced through the honey, while it is often spread rapidly by an exchange of combs in an apiary where only a few of the colonies are affected. While the bacillus cannot develop in the honey, very likely the honey serves admirably to hold and preserve the spores.

Appearance of the Brood.

When the larval bee is once affected, it is disturbed, lies differently in the cell from the healthy larva, soon turns yellow or straw color, then to brown, while the skin seems loose and flabby. Later the mass becomes thick and viscid and turns dark-brown, the color of coffee before any cream is added to it. It now dries up, and at last forms a thin layer over the bottom of the cell. While in the putrid coffee-colored state, if drawn out from the cell by inserting into it a pin-head, it is stringy, and if it fails to hold to the pin it will fly back. This brown, stringy, elastic mass, with no resemblance to a larva or pupa, is, I think, a sure proof of the presence of the dread malady. The larva may never be capped over, but if attacked late in its development it usually will be. This cap, however, will appear sunken or concave instead of being convex or rounding out as the cappings of brood always do when the brood is healthy. These sunken caps are always suspicious, and should always lead to close investigation. Little irregular holes in the cappings are often seen, which also should awaken suspicion. Another indication not always marked in the early stages is a rank smell, which has been compared to the odor of old glue.

California Law Against Foul Brood

California Statutes 1883: Chap. 58

The People of the State of California represented in Senate and Assembly do enact as follows:

SECTION 1. The Board of Supervisors of any county wherein bees are kept are hereby authorized to appoint one or more persons as inspectors of apiaries, to hold office during the pleasure of said board.

SEC. 2. The Board of Supervisors shall fix and determine the compensation of inspectors of apiaries, to be paid out of the funds of the county not otherwise appropriated.

SEC. 3. Upon complaint being made to the in-

spector, to the effect that in complainant's opinion the disease known as "foul brood" exists in any apiary in that county, it shall be the duty of such inspector to inspect such apiary as soon as practicable and direct the person in charge thereof to destroy all hives ascertained to be so affected, together with the combs and bees therein, by burning or burying the same in the ground the following night.

SEC. 4. If the owner or person in charge of an apiary, by his own inspection or through any other source, discovers foul brood in any hive in said apiary, it shall be his duty to destroy such hives and contents in the manner provided in Section 3 of this Act.

SEC. 5. Any person failing to comply with the provisions of the last section shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than five dollars nor more than twenty-five dollars for the first offense, and by a fine of not more than fifty dollars for each subsequent offense.

SEC. 6. This Act shall take effect from and after its passage.

The Nameless Bee Disease.

Within the past two years much complaint has been made by bee-keepers of a disease among bees, which not only depleted the colony but was made manifest by the appearance of the diseased bees. They look black because of loss of hair, much as do robber bees, or old bees in spring, and frequently make strange motions in front of the hives, as though dancing or in convulsions. They are frequently dragged out of the hives by the other bees. This, like foul brood, is supposed to be due to fungoid attack. In this, only the mature bees seem to become victims, though the inoculation appears to come through the queen. Thus it is found that superseding the queen with a healthy one cures the malady. It is also reported that abundance of salt water placed close by the hives, where the bees can gain ready access to it, will cure this "Nameless Bee Disease." It would seem that this malady is the same that has received attention in Europe, and which Mr. Cheshire has said was due to the attack of bacillus gaytoni.

Bee Notes.

EDITORS PRESS:—Beginners in bee culture should content themselves by following the rules of prominent apiarists. Work up slow and sure is the best way. To commence with too many colonies at once, the beginner is almost sure to make a failure.

A few shrubs or bushes around the apiary are useful as settling places in swarming-time; but these should not be too near the hives so as to prevent the free flight of the bees to and from their work. Some low plants of some kind near the hives will provide acceptable resting-places for tired workers returning from distant fields. Grapevines make a very desirable shade for bees in summer. If I were starting a new apiary I should plant a grapevine at the corner of each hive.

As regards the quarter of the compass toward which the hive should face, there is comparatively little difference. When picking out a location for an apiary the position of trees, buildings, etc., must be taken into consideration. An apiary should not be located too near a dwelling-house or near a public highway. If you have a small place and are forced to keep your apiary near a highway, plant out a hedge of osage orange trees or something of that sort; and as soon as they are high enough (about 10 feet) your bees will not bother travelers along the roads; because when they are coming and going they necessarily fly high in order to get over the hedge. A row of poplar trees planted close together will soon form a good wall to keep the bees from the road and will also form abundant shade in summer.

The position of hives should not be shifted without very strong reasons. Even if moved a few feet it confuses the returning bees so that sometimes they never find their hive. If you have occasion to move a hive a short distance, it is a good idea after getting it moved to place a few sticks of wood before the entrance, in order to make the bees take notice and mark their new location. If you move bees two or three miles there is not much danger of their returning to their old home. Occasionally it becomes advisable to make new changes, as in dividing bees, uniting, etc., but then no bad results will ensue because at the old location part of their old home is left. If bees are united right there is not much danger of their returning, but if they do, place a hive containing a frame of unsealed brood where their old location was, and at evening remove the frame of brood and place it where you want it.

There is a vast profusion of asters, golden-rod, etc., in bloom at the present time; and bees in this section of California are slowly storing honey from this source. The neighboring gardens and clover-fields also furnished considerable honey this season.

Do not allow a colony to starve to death the coming winter; it does not cost much to feed a few needy ones, and they will repay you fully the coming season. Feed with a good feeder in the upper story at night; remove the feeder in the daytime, as the smell of the feed may attract robbers, and if it is a small colony you are feeding, the robbers may possibly gain admittance.

Do not be on the lookout for bee moths all the time; get rid of all your black bees and stock up with Italians, Carniolans, etc. All these men with patent moth-traps for sale should invest in a few queens of the races mentioned.

When you make your first examination of your apiary in the spring, be sure and remove all drone comb from undesirable colonies and replace with worker combs and comb foundation. An extensive Eastern apiarist makes the assertion that every square foot of drone comb removed is equal to a dollar saved, and from what experience I have had in the matter, I think so myself.

Honey should not be extracted when first gathered, as it is unripe, and if not ripened artificially it will scur. In this matter of ripening honey you should judge for yourself, as honey from some varieties of plants requires a greater length of time than others. Give the bees plenty of room and plenty of time to ripen it. S. L WATKINS.

Grizzly Flats, Cal.

FRUIT MARKETING.

Fruit Sales in New York.

EDITORS PRESS:—My sales on Tuesday, September 2d, of 15 carloads of California green fruit are worthy of note and comment for several reasons. This number of cars was the largest that had ever been sold by any one receiver, in any one market in the United States in one day, so far as California products are concerned.

This is very significant because the Chicago market has been one that was supposed to be able to take more California fruit in one day than any other in the United States.

Inasmuch as there was a total of 18 cars sold in New York on Tuesday, with results as below given, which certainly indicate good prices for everything that was good, as against and in comparison with Chicago's sales of about ten day's ago, of a similar quantity of cars, when results were very disastrous, would seem to indicate that the New York market is certainly one of tremendous extent.

These 15 cars that I sold comprised about 3500 boxes of Bartlett pears, which averaged about $3 per box; about 4000 boxes of peaches, which ranged in prices from $1.50 for anything of fair quality to $3.25 for the best fruit; 1600 boxes of plums and prunes in every variety, which ranged in price from $1.25 to $2.35; about 2500 packages of Tokay, Muscat and other varieties of grapes, which sold at from $1.25 up to $3 for packages containing 18 lbs., and for crates of 40 lbs., the range being from $2.85 to $5 75.

These results prove conclusively the fact of our market being able to take anything good, and paying good profitable prices, no matter the quantity.

It will be interesting to note further in connection with this, how these 11,600 packages were handled and disposed of by me. To prepare the sale of this enormous quantity of fruit it required about 40 men to unload the cars, properly put each and every one of the 400 different lots of fruit into shape for the sale, some of these men being engaged from 12 A. M. Tuesday morning till 1:30 A. M. Wednesday morning, thus being on continuous duty for over 25 hours without rest or sleep.

To dispose of the 400 lots of fruit consumed 4½ hours of continuous selling at auction on my part. To deliver the fruit required the service of over 50 trucks, that commenced to load at 11:30 A. M. and finished delivering at about 12:30 at night. The buyers who purchased this fruit were composed of the regular fruit-jobbing trade of this city, and of representatives of about 40 firms doing business within the territory bounded by Providence, R. I., and Philadelphia, Pa., and numbered about 200. This sale illustrates two patent facts: first, that the ability of N. Y. to take an immense quantity of goods and pay good prices is fully demonstrated; and second, the auction system for disposing of perishable fruit is the only one that could possibly be used to market such a vast quantity of any products, that included so great variety, condition, quality and kind, as comprised the 15 carloads of fruit I sold. Illustrating still further another feature of the auction method, I would say that of the 100 shippers that made up this total of 15 cars, every one was in possession of the results of his sales within 24 hours after the same took place. E L GOODSELL

New York, Sept. 4th.

POULTRY YARD.

Disaster in a Flock of Poultry.

EDITORS PRESS:—First, I now want to say something to you and to your readers; then, after that, I want to know something; and I am willing to get what I want to know from any one who knows it and who will have it printed in the RURAL PRESS.

I reside in about the center of Pajaro valley, Santa Cruz county, about one mile easterly from Watsonville, and have resided there for over 15 years, on land which is partly rich sediment and partly black strong loam (not adobe). In all those years I have raised from 50 to 200 chickens yearly. They were not thoroughbreds but were well graded; mostly compounded of Plymouth Rocks and Brown Leghorns, very evenly crossed. And let me here say that such a cross is a good chicken for either abundant eggs or good meat. The appearance of the Rocks predominates, but the speckling is tinged with a browning which I think rather improves the appearance.

What I wanted to say was that last May I had between sixty and a hundred chickens, none of them old and some of them quite young. They all tumbled over in the yard or off the roosts, one after the other, until in a week there was not a live fowl on the place. They were regularly well fed on wheat, had plenty of range, roosted in leafy trees surrounded with barns, fruit-houses, etc., though there is a fairly good hen-house in the yard. They showed no external signs of disease—none whatever—were not verminous, had no swell-head, but they would look a little droopy for about one day and then either fall dead off the roost at night or else drop down while walking on the ground—dead—with their feet drawn up under them and the head turned under the neck.

Now what disease was that? That is what I want to know; also, how to avoid it or how to cure it.

I had some of them cut open, autopsied. The meat looked healthy; in the laying hens the eggs were forming in different stages of growth. There was nothing wrong with the swallowing machine, but the craws were about empty of everything but the usual gravel.

I have not now a chicken on the farm. If old St. Peter was on my farm now he would wait a long time to hear the thrice crowing of that rooster or any of his posterity.

It is curious. Persons residing across the county road about the distance of a stone-throw have not suffered, but a Mr. Smith, some four miles distant, near the south side of the valley, saved 12 chickens out of 200. I never had anything like that chicken holocaust happen before. J. W. GALLY.

Aug. 23, 1890.

[We hope some of our readers will explain the disaster in Dr. Gally's poultry department. —EDS. PRESS.]

THE STABLE.

A Profitable Stallion.

Sable Wilkes, says the Redwood *Gazette*, has now been permanently retired from the turf to the stud, and considerable interest is being manifested among breeders of trotting horses as to his future as a sire. He is located on the ranch of his owner, Mr. William Corbitt, at the San Mateo Stock Farm. Sable Wilkes held until last year the world's three-year-old stallion record, and is now the second greatest male performer of that age, Axtell alone surpassing him.

His greatest value, however, is in his ability as a sire, and the high estimation in which he is held by his owner is attested by the fact that $65,000 has been refused for him. He is now five years old, and his oldest colts are yearlings, but a number of these now being trained by John Goldsmith show such marvelous bursts of speed that his future as a great sire may be safely said to be established.

"I have eight yearlings by Sable Wilkes," says Mr. Corbitt, "and they show such wonderful trotting action and marvelous speed that I have arrived at the conclusion that as a sire Sable Wilkes will prove more valuable than his sire. Out of the eight youngsters of his get, six have been broken, and two of them, out of Arthurton mares, have, with very little handling, gone quarters in 37 seconds, or a 2:28 gait.

"Guy Wilkes has, during the past season, been bred to about 50 mares, 23 of which were sent to San Mateo, from Kentucky, Louisiana and other Eastern States, the fee being $500 each. I have been offered $40,000 for the use of the horse to 40 mares if I would send him to Kentucky for a season. His book for 1891 is already filled, and I have been compelled to refuse many applications.

"It is my intention to have a sale in New York next March, and I propose to send on about 50 colts, the get of Guy and Sable Wilkes."

KEEP HIM TURNING.—"When a horse stops and proposes to turn around," said a liveryman the other day, "don't resist the turn, but give him a quiet, horizontal pull in the direction he wants to turn, so as to carry him farther around than he intended to go, and if possible, keep him going around half a dozen times. In most cases this will upset his calculations, and he will go quietly on without much ado. If six turns will not do, give him 20. In fact, if he will keep on turning to your rein, you are sure to conquer, as enough turning will certainly confuse him and leave him at your command. If he will not turn and will back to the rein, keep him going backward in the direction you want to go. He will soon get tired of that and prefer to go with the right end forward, but before you let him go, give him decidedly more backing than he likes."—*N. Y. Sun.*

THE custom of burning the straw before the approach of rain each year, thus impoverishing the land, has been going on in this valley since cereal farming began.—*Salinas Journal.*

THE DAIRY.

Co-operative Dairying.

EDITORS PRESS:—From time to time there have appeared in the RURAL PRESS statements to the effect that the stock of a dairy was sold on account of the business having ceased to be profitable. In last week's RURAL I noticed that the dairymen of Santa Maria had organized to overcome the "systematic steal of the commission-men."

In the sixties I lived in the dairy section that furnished Philadelphia with the greater portion of its milk. For years the dairymen were systematically fleeced and impoverished, while the owners of city milk-routes grew wealthy. The milk was not only stolen by reported shortage and damaged condition, but a well-developed plan of robbing was perpetually carried out. The dairyman was assured that Mr. Watermilk could sell all of his product and at a very satisfactory figure. The milk was promptly furnished, and for a time the returns were prompt, and neighboring dairymen were persuaded to ship their product to the same dealer. Soon the returns were short, and continued to grow less and less. The shipper endeavored to collect but found it difficult work; finally, in despair, he would stop shipments, and on investigation find that the bill could not be collected from the Oily Gammon Watermilk. Mr. Watermilk would in the meantime arrange with other dairymen for the milk of their dairies, and thus keep himself in constant supply of free milk.

To overcome this, the farmers organized. They placed a No. 1 man in charge as president at a big salary, as they claimed the business needed a good man, and the best way to secure him was to pay him sufficient to make it an object to him to give the business his entire attention. In a month's time the plans of the company were in operation and the following system carried out:

The farmers own their milk-cans, which bear their names. These are brought to the railroad stations by the dairymen in time for the "milk-train." The cans are placed on the station platform and the dairyman gathers up the cans brought up on the "milk-train" as it passed up the evening before, and then drives home to his work.

On the milk-train travels the association's agent, who counts the cans at each station, credits the shipper on his account and places the milk-cans back in the cars. Arriving at Philadelphia, the milk is taken to the company's store, where it is placed in the association's milk-wagons and sent out by their own drivers. The empty cans are back in time for the evening train up. At the close of each month every shipper in the association receives a statement of his account showing his credit after the expenses are deducted. At the end of the year the members meet and divide their surplus and elect officers and directors for the coming year.

By this simple, business-like method of co-operation the dairymen get all the profit there is in the business and the consumer is satisfied that the milk he buys is pure, as the company has nothing to make by adulterating, and by their system of testing, any attempt by too zealous dairymen to "water the stock" other than by the cow's mouth is checked.

This same system could be applied to milk, butter, eggs and honey, jointly or separately. The farmers *must* organize and exert brain as well as muscle, and if not blessed with sufficient capital themselves, organize a trust for their special benefit. I look for great things from the Alliance. E H. SCHAEFFLE

Murphys, Cal.

A Butter Monument.

The advantage of the sea breeze to the dairymen along the immediate coast in the upper part of California and northward into Oregon and Washington is seen in an observation which a traveling writer for the Washington *Farmer* made during his visit to Whidby island, as follows:

At the head of Dugualla bay is a large drained peat marsh. Of four ranchers on this marsh, three of them were engaging principally in dairying. Owing to the cool ocean breezes blowing across this part of the island, the summers were remarkably cool, making it one of the best dairying regions in Washington.

Visiting Capt. Mariatt's place, we were shown a column of butter some three feet square and four feet in hight, which was standing in a low-roofed shed near the house. This mass of butter had been built up during the spring, summer and fall months, and where sampled, seemed to be comparatively sweet. What condition the whole column was in, otherwise than being hard, I am unable to state. It is sufficient to say, for the purpose of showing how well adapted that section is for dairying, that that butter remained hard enough to retain its shape all summer. It had no covering other than a thin muslin cloth.

IRRIGATION VOTED.—Murrietta, San Diego county, voted, on the 4th inst., to organize an irrigation district. Considerable interest was displayed, and a heavy vote was polled. The result was unanimous in favor of forming a district.

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

Come to the State Grange.

A Persuasive Call from Watsonvi le.

We are very glad to receive and publish the following noble invitation by the Worthy Overseer of the State Grange, to his native home of Watsonville. Every fourth-degree member is entitled to attendance with the privilege of speaking and offering motions, and otherwise participating on the floor of the State Grange.

It is always a great privilege to true Patrons to attend the State Grange, and this year's session seems bound to be an extraordinary occasion. Bro. Roache, we are sure, is cordially backed by many noble brothers and sisters whom it will be a pleasure to meet also.

There are great numbers of Patrons in this State who have never attended a session of the State Grange and hence do not know what a real treat they have missed. They often talk of such a "pilgrimage to Mecca," but it seems so far off, so much like taking a trip to Europe, or even to the moon, that after thinking it all over they conclude with a regretful sigh: "Well, we can't afford to go this year, anyway. We can't spare the time nor money."

Well now, Patrons! let s sit right down here and settle this question in the light of existing facts. You work early and late, winter and summer, rain or shine; you don't even take time to half read your last RURAL PRESS, and you just glance over the names of the political nominees, and five minutes after you couldn't tell who's who because you have to rush off to attend to this or that, and have no time to think of anything but your own business.

Ay! there's the rub—you have not time to think, only of your own business. That is the fatal shoal on which millions of happy farm homes have been so cruelly wrecked. What matters it that your soil is the richest, your efforts the most systematic, your labor the most unceasing, your crops the most bounteous that Nature can yield, when transportation companies, insurance companies, Chambers of Commerce, twine rings, sack rings, grain rings, money rings and universal rings of trusts and combines unite in setting a limit to your capabilities and accumulations by setting the price on all you sell or buy, and, meanwhile, make you dance to the tune of "Poor Old Slave"? While you are dancing in a whirl of mental agony, they pass around the hat and give the lie to the old adage that "those who dance must pay the fiddler." While you are planning how to raise a crop, 20 are planning how to rob you of it.

Do you really desire a panacea for these ills? There is one—sure, pure and powerful. Do you wish it? Then go to the State Grange and add your name and influence to the marching column of the grand men and women already there, who have solemnly sworn to rid our fair land of the soulless parasites who grow and flourish on the misfortunes and necessities of the toilers.

Then for real pleasure see what is offered. It is not often that a State Grange is held within the hearing of the thunder-tones of "Old Pacific," or where crested waves of snowy white and azure blue ripple soothing lullabys on shining sands and ocean shells, while a plunge in the surf is a better cure for liver complaint or a weak back than all the plasters and pills you can use in a year.

Then look at the program outside of the Grange:

A citizens' address of welcome.
An open-air concert by the band.
Complimentary rides all over the valley.
Clam-bake at the beach.
Free excursion to the greatest beet farm in the world.
A grand old-time barbecue, and several other things which we won't tell you about till you get here—all without any extra cost to you.

Now take out your book and pencil and see if you can't afford to come! The railroads have reduced their regular fare, so *that* will not be expensive. Then it won't cost much more while you stay here than at home—as observe the following accommodation rates:

Mansion House, first-class, $1 50 per day.
Lewis House, first-class, $1.50 per day.
Watsonville House, good cheap house, $1 25 per day.
Washington House, second-class, $1 50 per day.
Morning Star Hotel, $5 per week, $1 per day.
Germania Hotel, $4 per week, $1 per day.

A number of restaurants, 25 cents per meal.

Large numbers of private residences of our best people will receive Patrons at from $1 to $1 50 per day.

Camp Goodall, at the beach, $1.50 per day, and free rides from the camp to town and back, four miles each way. Ample room for all who come.

The Pajaro Valley Fair Association will hold the main part of the exhibits over for the inspection of visiting Patrons. The cost will bear no proportion to the pleasure, and remember the session itself will be of far greater profit and pleasure than anything here mentioned. No Patron can afford to *miss* this session, as the "world continues to move," and has rolled up a number of grave questions to the tillers of the soil, which must be faced and conquered.

Awake then, Patrons, awake! Arouse, and come to Watsonville to the session of the State Grange, whither duty loudly calls, where you will receive as honest a Patron's welcome as you ever have had in your lives. Do not expect to stay only a day or two, but through the whole session to the love-feast Saturday night—the best part of the session, which so many miss because of their hurry to get off. Come and stay long enough for us to get acquainted with you, that we may know and remember you, and that the bonds of sympathy and love may be made nearer and dearer, that we may all work in greater harmony, with broader charity, with a better understanding of our weaknesses and defects in order to their speedy extirpation, and that the hearts of Husbandmen and Matrons, laborers and maids, be made glad by this one grand farmers' holiday of the year.

A. P. R.

Meeting of the Legislative Committee.

In accordance with the advice of Brothers Ohleyer and Flint of the Legislative Committee of the State Grange, the committee will be convened at Watsonville on the morning of Oct. 6th to consider the bills proposed for enactment by the coming Legislature.

We look upon the work of this committee at the coming sessions of the State Grange and Legislature as likely to prove of the utmost importance, not only to Patrons and farmers of this State, but to all industrial people.

Among the legislative enactments deemed requisite are bills for the reassessment of railroad property and collection of delinquent taxes; Enabling Act for the organization of mutual fire insurance companies by farmers and others; a bill for collecting taxes semi annually and the Australian Reform Ballot law. There will also be considered an enactment for electing U. S. Senators by direct vote.

We would recommend that these bills be discussed separately, during different days of the session. There are other improvements in the laws of the State and nation which should occupy the attention of the State Grange. Will not each Past Master of the State Grange write us a communication for publication previous to the meeting of the State Grange on improvements desired in our statutes, both State and national? It is hoped that every member of the Legislative Committee will be promptly on hand. Let others send in suggestions or proposed bills.

To Tulare and Fresno Farmers.

We would call the special attention of Patrons, Alliances and farmers generally to the open conference meeting to be held at Tulare, Saturday, Sept. 20th, and Selma, the following Saturday, Sept. 27th, opening at 10 o'clock A. M. All farmers are invited.

C. J. Cressey, Treasurer of the State Grange of California (the leading founder of the Grangers' Bank) will be present and discuss subjects of interest and importance to all farmers. He is one of the most popular and attractive of Grange speakers, and it is safe to say that all will feel well paid for attending and listening to his remarks. Other able speakers will also participate. Perhaps similar meetings will be announced in the local papers and held at Visalia and Hanford, between the dates above mentioned.

A Fruit Festival will be given at Tulare and a Grange meeting held in the afternoon at both places, at each of which members should be present. Patrons are invited to make these announcements widely known and to be present.

GOING TO WATSONVILLE.—It has already been mentioned among the delegates and visitors to State Grange next month there will probably be eight or ten from Yuba City, six or more from Santa Rosa, 15 from Stockton, 10 from Merced, and an indefinite "many" from other Granges. And now comes a note from W. Sec. Hedger of North Butte, that there will probably be four or five from that Grange, and another from W. Sec. Sharal of Elen Grange, saying: "Nine members have signified their intention of attending; several others are uncertain, and may conclude to attend when the time comes." The more the merrier!

MEMBERS of Watsonville Grange desire that an open meeting of the State Grange shall occur on Tuesday evening. Why not? By all means let us have a hearty meeting with the enterprising citizens and friends of Watsonville.

DISINCORPORATED.—Sept. 10th, Judge Levy granted the petition for disincorporating the Patron Publishing Company, in accordance with the vote of the stockholders at its last annual meeting.

THE W. M.'s Desk in the RURAL—always loaded with good, beautiful and useful thoughts—is even better than usual this week, it seems to us.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

There is a whole lot of politics in this State just now. How much of it is honest politics? There is no disgrace in taking some interest in the welfare of your country, but there *is* disgrace, and there *ought* to be more disgrace than there is, in being *dishonest* in politics. It is high time *honest* men were loaning their name, their time, their influence to politics. Quit this sentimental business and go to work for the good of the common country. Be men; be American citizens in the fullest sense of that word! Be a politician to the extent of getting and giving the greatest good to the greatest number.

Brother Cressey takes the stump again in the interests of the grand old Grange.

Do you know that of the living Past Masters of the California State Grange all but one are actively at work for the good of the Order? What higher testimonial of fidelity and love could be shown? Those venerable seers must think the Grange is worth something.

Officers of the State Grange, attention! Have you filed your annual report with the Worthy Secretary? If not, why not? Look at the law and you will see it is time. "Act, act in the living present."

Short speeches are always the best. *Multum in parvo*—much in little—is what is wanted nowadays in all parliamentary bodies. At the coming session of the State Grange we want "to see who can best work and best agree."

Upward, onward, but hew to the Grange line.

Don't waste your time, fellow-farmers, with idle talk on the pot-house politician. The medicine he most needs is for you to vote for the "other fellow." Remember political parties only so far as they are represented on voting-day by pure, competent, honest candidates. "The chain and the link" illustration applies right here and now. Vote as you ought to vote—for the best men. No man is too good to be a public officer, but many are too bad. Select, and select with care!

Admission Day; State Grange; State and County election—three important events coming close together in 1890! And each one cuts an important figure in the welfare of our great State. Look well to your interests, fellow-Patrons! No one else will do it for you.

Are you preparing *thoughts* for the State Grange? Ideas are what we want. Never mind so much about the words. Set to studying, for the State Grange is near at hand.

Study to say a bright thought in the shortest possible way. You know a straight line is always the shortest distance between any two given points.

It is not a bad thing to burn the "midnight oil" now and then if you are seeking the true, the good and the beautiful. Many of you may say that is so even if "the true, the good and the beautiful" applies to some fair daughter of the Golden West. On this subject we will never disagree, so long as the object sought can be shown to be true, good and beautiful.

State Grange, Watsonville, October 7, 1890 Attend, and be there "on time," all the time!

If Patrons made half the campaign that politicians do, how the Order would increase in power and in numbers!

Join an Order that helps the helpless, educates the young, loves America and insists on law, order and equal rights. Such is Grange doctrine.

Who has not, now and then in life, found a pretty flower away out in the desert, or on the high, dry hillside, or in the mountain fastness, and this just when least expected? And who has not, at such time, thought more of that flower than of any one ever before found, even though the home-garden might be richly studded with Nature's choicest blossoms? So with the Grange. When we find a Grange-home away out from our richer and more densely populated agricultural sections, why not think of the "lone flower"? for such it is. This Grange breathes its perfume, lends its beauty and spends its force among those who fully appreciate the charms of the Patrons of Husbandry. And as the modest, pretty flower brings and consecrates its life to the development of a seed, which may be wafted hundreds of miles to produce plant, flower and seed for another year, so may each one of our Granges bring forth a flower and scatter seed that will brighten the plain and the mountain regions, and aid and lighten labor in all sections of our great country.

BRO. D. FLINT, it is expected, will assist at the dedication of Two Rock Grange hall on Thursday of this week, and deliver an address at the Sierra Valley Grangers' Fair, which comes off at Beckwith, October 1st to 3d.

OF Merced Grange, some 10 members expect to go to State Grange in October.

The Great Interstate Meeting.

Of the Grangers' Interstate Picnic Exhibition (held at Williams' Grove, Penn., Aug. 25th–30th, as mentioned last week) the *Farmers' Friend* says editorially:

A true description of the great meeting would seem to our readers who know nothing of its proportions like wild exaggeration. As to attendance alone, the figures must stagger belief. But there is no reason to exaggerate when 40,000 or 50,000 people gather in a single day with no other object than wholesome recreation. * * *

So much for numbers. But there is something more to consider—character. This was a peaceful assemblage, that would give no countenance to disorder. There was noise enough, to be sure, for everybody was hilarious, and every laugh was the outflow of happiness gushing in its fullness; that was all—no boisterous nor indecorous rudeness to mar the peace of summer days fashioned to suit keenest sense of enjoyment. Such was the great meeting with an environment in full adaptation to all its purposes, the trees fresh in foliage that gave reminder of June, outlying fields, with verdure or harvest, to please the eye, every influence benign.

As to the order of proceedings, is it not enough to say that every visitor was left free to seek every pleasure compatible with the good of all? Of course there was speaking, sometimes prosy, perhaps, but nobody was asked, much less pressed, to hear it. People gathered by thousands in the vast auditorium to see and hear, and as they had enough they left while other thousands filled their places. There was a surfeit of tariff and tariff reform, for both were in the air, floating with the undulations of sound from lungs that never tired. That was the fare dispensed from a platform from which went no word of command.

The Grangers' Interstate Picnic Exhibition at Williams' Grove is a permanent institution. Every true member of the Order of P. of H in the United States will stand up in its defense and see that no injury is done to this meeting, which is held for the purpose of advancing the cause of the Grange.

Bro. Whitehead, also, in the course of two columns of notes about the meeting, remarks:

You can whittle the *form* of a man out of wood, you can chisel one out of marble, you can make one out of cast iron; but you can't make a man out of it, you can't breathe the breath of life into it, you can't put a *soul* into it. Just so with any side-shows or imitations of Williams' Grove. You can't take it away, you can't put its life into the wooden image. The spirit, the life, the soul of Williams' Grove is *the Grange*. Like our Order, *Esto Perpetua*, "Let it be perpetual," and so said the tens of thousands of good Patrons and their friends who rallied this year as never before.

One of the best improvements was the inclosing of the great auditorium at the ends and sides with glass, so as not to interfere with the light, and with plenty of doors for getting in and out.

The new cottages, in their bright paint, together with all the many other improvements, added new beauties and attractions to the grove. It is now an ideal camping-ground.

The evening meetings in the auditorium were much enjoyed. Music, singing, recitations, etc., filled up the flying hours, and were a change and rest from the more heavy and solid food furnished from the platform in the day-time.

Four hundred and seven carloads of people brought to the grounds in one day by the railroads, besides those who came by teams and the 5000 to 7000 who occupied the tents and cottages for the week, are some of the figures that will tell the stay-at-homes of the immense throngs present day after day.

It was never so completely National before. The National Grange was represented by its Master, Lecturer, Secretary and Executive Committee; also by its Legislative Committee. Many State Grange officers were there.

The joint "Good of the Order" meetings of the Executive Committees of the National and several State Granges set in motion a number of good schemes for the welfare and progress of our great work.

The founders of the Order were represented by Bro. John Trimble, the Worthy Secretary of the National Grange and a member of the Legislative Committee. Thousands of Patrons were glad to meet and to greet him.

Sorry that *all* who wanted to be there could not be present. They would have enjoyed it as we all did, so just thought I would write out a few items to tell how good and how great it was. Long live Williams' Grove! Long live Bro. Thomas! Long live the Grange! *In hoc signo vinces.*

A HISTORY OF FARMERS' ORGANIZATIONS.—The St Louis *Journal of Agriculture*, which is the official organ of the Farmers' and Laborers' Union of Missouri, has lately published a volume of nearly 400 pages, embracing histories of the Farmers' Alliance, the Agricultural Wheel, the F. & L U. of Mo. and the Farmers' Mutual Benefit Association, with numerous portraits and biographical notices of their officers and organizers. The introductory chapters treat of the present condition of the

agricultural interest, of finance, transportation, monopolies and combines, and there are appended short sketches of farmers' organizations in various States, and an address on Co-operation by Phil Chew, editor of the *Journal*. The volume costs 75 cents in paper and $1.25 in cloth binding.

Co-operation in Texas.

The Texas Co-operative Association, P. of H., is a corporation chartered in July, 1878, under the laws of the State of Texas, "for the purpose of establishing and maintaining a general commission business and wholesale and retail co-operative store or stores, of buying and selling real estate and other property, as may be necessary to promote the object of its creation, and of transacting any and all kinds of business incident or appertaining hereto, for the mutual profit and benefit of its stockholders and customers, who are members of the Order of Patrons of Husbandry."

Its authorized capital stock is $100,000, divided into $5 shares.

Any co-operative association, P. of H., or subordinate Grange, as well as individual members in good standing, may become a member of this association by taking stock therein, and thus becomes entitled to *one* vote in its meetings.

The management is vested in a Board of Directors, chosen annually by the stockholders, and one of this Board's duties is to elect the General Business Manager, who must be a Patron of Husbandry in good standing. The by-laws provide that the profits of all the business transacted by the association, after paying all expenses of the management, shall be disposed of in the following manner at the annual meeting of the Board of Directors: First, shareholders shall be allowed ten per cent interest per annum on paid-up stock; secondly, a portion may be set apart, at the discretion of the Board of Directors and by consent of the association, to increase the capital. After making provisions as above, the remaining net profits shall be divided pro rata among the stockholders and Patrons, based upon the profits derived from the business furnished, shareholders receiving full dividends; Patrons, not shareholders, half-dividends. The profits arising from the business furnished by non-Patrons, and one-half of the profits on that of Patrons of Husbandry who are not shareholders, shall constitute and be known as the accumulative fund, and shall be divided annually pro rata among the stockholders, based upon the number of paid-up shares, and stock shall be issued for the same.

At the 12th annual session of the T. C. A., in Galveston, July 30–31, the Secretary, A. J. Rose, of Salado, submitted his report for the year ending June 30, 1890, showing 662 stockholders at date, and a net profit for the year of $14,797.68. He remarks: "In the 12 years' business we have increased our capital stock from $265 to $80,945, and have paid 10 per cent interest per annum on stock. The accumulative profit has averaged 6 per cent; trade profit has ranged from 1½ to 4½ per cent. In addition to these immediate financial benefits, many a 75-cent boy has received a good practical business education that enables him to get $1000 or $1500 salary, and thousands of our Order have learned business methods and business habits that they would not part with."

Bro. Whitehead's Praise of Secretary Rusk.

The Secretary of Agriculture, finding it impossible to attend the Williams' Grove meeting, August 28th, sent Manager Thomas a telegram expressing his regrets and greeting the assembly. "It is glorious," he said, "to read of such an immense concourse of agriculturists gathered together for the interchange of experiences and views and for the discussion of those problems which promote their industrial, social and political progress."

After the dispatch had been read, Bro. Mortimer Whitehead observed that the farmers of this country have no truer friend than Secretary Rusk; that in every advance move made he has proven this clearly. A farmer himself, he knows the true condition of affairs, and being a member of one of the first Granges ever organized in Wisconsin, he was fully aware of, and in full sympathy with, the conservative course of the Grange in its efforts to advance the interests of agriculture. Secretary Rusk has rendered valuable aid in securing the protection to American agriculture given in the Grange part of the Tariff bill, and in getting the new appropriation for agricultural colleges and restricting the same for education only in agriculture and the mechanic arts in accordance with the amendment proposed and secured by the Grange. Patrons and farmers may rest assured that they have a true "friend at court"—one who in his seat at the Council Board of the President will carefully look to the interests of agriculture.

TULARE GRANGE expects to confer the third and fourth degrees Sept. 20th. They will have a Fruit Festival and a jolly time. Bro. Cressey is to be with them, and that is a guarantee of fun, sense and success. While in that portion of the State, Bro. Cressey will probably also visit Selma, and perhaps several other towns and Granges. We bespeak for him big crowds and promise his hearers good thoughts.

Selma on the Alert.

A. T. Dewey—DEAR SIR AND BROTHER: At a special meeting of the Grange Saturday, Bros. H. B. Jolly, Paris, Allen and W. P. Graham were appointed a committee to wait on Bro. Cressey at this place on the 27th. There is also a committee from the Alliance to act as escort. It was also decided to have some handbills printed and a notice in our daily and weekly papers here, so I think there will be a large meeting.

The Alliance here balloted on 19 new members Saturday, and the Alliance at New Chicago, 12 miles west of here, was to initiate 20 last Saturday night. The farmers are falling into line just as fast as they can in these parts. It puts me in mind of the good old days of 1873, when we fell into line to kill Friedlander's oppression.

Our Grange here is holding its own, and we propose to stand firm. We are out of debt and have some good material in it, so we know we can hold out. I hope Bro. Cressey will give us a good shaking up, so we can start up in good shape this winter. Fraternally,

J. J. ROADHOUSE, Sec'y.

Selma, Sept. 15, '90.

MORAL CONVALESCENCE IN LOUISIANA.—The N. O. *New Delta* for Sept. 21 says: The steady growth of the anti-lottery sentiment all through the State, and particularly in the city of New Orleans, has been something wonderful. The most ardent opponents of a recharter could not ask for more evident signs that the lottery amendment will be overwhelmingly defeated, if it ever comes to a vote, than are daily being exhibited. From all sections of the State come assurances that the anti-sentiment is on the increase. At no point has the lottery gained any strength since the adjournment of the Legislature. This fact has already been recognized by the lottery leaders, and they are now engaging in a desperate attempt to stem the tide that is running so strongly against them. They are now aware of the fact that they have no easy task before them in their efforts to fasten upon Louisiana for 25 years more their iniquitous gambling concern. * * Every day evidence accumulates that Louisiana is fully able to run her own Government without the aid of the lottery company, and long before April, 1892, it will be demonstrated beyond the peradventure of a doubt that no necessity exists for the aid of money derived from gambling to run our Government. * * The eyes of the people are already opened and the lottery is doomed to defeat. The lottery's "league" was started too late.

In Memoriam.

Bennett Valley Grange buried BROTHER B. LACQUE with all the honors of the Order, on Sunday, Sept. 13th. Brother Lacque was a charter member of Bennett Valley Grange, No. 16, P. of H. An honest man, a devoted husband, a loving father, a generous neighbor, a considerate, conscientious citizen, a pure and patriotic Patron is gone. Mother Earth, that he has tilled for threescore years and more, has, after these many days, furnished a resting-place where, we hope, the grass will ever grow green, where flowers will bloom perpetually, and where children and children's children may drop the silent tear of veneration, love and devotion. Farewell, dear neighbor, friend, brother; fare thee well! E. W. D.

OUR NEW GRANGES IN THE NORTH.—We have evidences of progress in Gridley, Grimes and Orland Granges, and hope to hear of some good meetings between now and the State Grange in each place. Brother Frisbie stands ready to visit any of these and other Granges in his district at any time he may be called, if dates are so arranged that he can take them in a circuit, as it were.

TIDINGS FROM JAPAN.—A long and friendly letter from our honored brother, A. A. Brigham, formerly W. M. of Massachusetts State Grange, but for the last two years Professor of Agriculture in the imperial college at Sapporo, Japan, is just at hand and welcome. It will soon appear in the RURAL. He closes with the hearty wish—"Long life to you and the P. of H. in California."

CELERY FARMS.—Among a number of special investigations being made in the Division of Agriculture of the Census Office is that of "Truck Farming," which is distinct from market gardening in that the truck farmer raises one or more special crops in large quantities in sections where the soil and climate are particularly favorable, and the product is shipped to distant markets; whereas the market gardener, even though his operations are carried on upon a large scale, produces crops for his near-by city market. Celery is one of the specialties on a number of truck farms, and the figures already brought out are interesting. In the vicinity of Akron and Canton, Ohio, over 500 acres are devoted to celery. The Kalamazoo, Michigan, celery district comprises over 1500 acres, being cultivated by some 300 families. The celery farms as a rule run in size from one-fourth to ten acres each, but there is one of 60 acres. The crop is boxed and shipped by rail to all portions of the United States.

THE Census Office announces the population of the State of Maine to be 660,260, an increase in ten years of 11,325.

ENTOMOLOGICAL.

The Brown Apricot Scale.

Principal L. A. Jordan of the Centerville, Alameda county, public school, has set an excellent example for the emulation of other school-teachers, in aiding the people of the districts in which they work in the warfare against injurious insects. We find the following in the Irvington *Express:*

Microscopical investigation, in connection with the study of practical entomology, as provided by law, has been, this year, an interesting occupation at the Centerville public school. Thanks to the policy of the trustees, past and present, of providing the best of materials for use of teachers and pupils, the instrument used in this work is a powerful one and proportionately useful. The subject at issue this term has been the brown apricot scale. The importance of this pest may well be illustrated in the case of the resident Horticultural Commissioner, Mr. Wm. Barry, himself. The insects beset his peach trees so numerously last year that the destruction was threatened not only of this year's fruit, but of the very lives of the trees themselves. Neighbors and, in fact, orchardists far and near, had generally had poor success with remedies, either destroying trees by severity of treatment or failing to injure the insects, owing to mild applications. But Mr. Barry holds that no fruit-tree pest has yet appeared that cannot, by judicious treatment, be eradicated without injury to trees, and the brown apricot scale, even in its most resistant state, is less impervious to destroying washes than other scales now being successfully treated by skillful orchardists. Observing that the pest was about to ruin the orchard, Mr. Barry wrote, in October, 1889, to State Inspector Klee, stationed at the University of California at Berkeley, in this county, and in November received the following recipe with appropriate advice: ¾ lb. caustic soda, ¼ lb. caustic potash, 4 gals. water.

The proof that this pest can be easily eradicated is shown in the results of the application of the above wash and its variations. The further proof that many failures are due to unskillfulness has also been shown in this case, and, furthermore, that the application is comparatively inexpensive.

There are a few details, the attention to or neglect of which bring good or evil results. The recipes and cautions in this case are invaluable. Successfully followed, thousands of dollars will be saved, not only by orchardists of this county, but of other communities, thanks to a widespread press. Through the enterprise and public spirit of Mr. Barry and the *Express*, supplemented by the progressive work in the public school, we are able, herewith, to give to the public the essential features of a successful effort in the case discussed, fully three-fourths of the scale having been destroyed without injury to trees, and with the prospect for complete eradication this year.

Recipes.—No. 1 (from State Expert Klee), ¾ lb. caustic soda, ¼ lb. caustic potash, 4 gals. water. No. 2 (variation by Mr. Barry), ½ lb. caustic soda, ½ lb. caustic potash, 4 gals. water. No. 3, and the best (also variation by Mr. Barry), ⅔ lb. caustic soda, ⅓ lb. caustic potash, 4 gals. water.

The main ingredient, according to Mr. Barry, is the caustic soda, the working agent. Like the sting of a bee, it is immediate, penetrating, sharp. When properly applied, no scale has yet appeared that can resist it. The caustic potash is added to keep the soda liquidescent and to prolong its efficacy, the proportion to be regulated by the weather. On dry days—days of hot sun—a deficiency of potash causes the wash to change to a white powder quickly after application, thereby losing its strength. This being observed, the change of proportions can be at once made. If the effect be fatal to the insect, it will be shown in 24 hours by a shriveling of the scale and darkening of the color.

Caution 1.—Neither wash nor labor should be spared. The greatest mistake made by those who have failed is in having attempted to do too much within a given time.

Caution 2.—Visit, first, that part of the orchard least affected, so as to give the experimenters practice before reaching the worst.

Caution 3.—As the scale is deposited in October, commence spraying in November, as soon as the leaves drop, or even just before, as many live insects may be caught before encasing themselves; and again the scales already formed will be the easier penetrated.

Caution 4.—Spray once during fair days of winter and again in March and April, just before the buds start. After April, spring growth will prevent. Now prune all the limbs not bearing fruit-buds, destroying many newly hatched insects and securing a new growth exempt from the enemy.

Caution 5.—Be sure of the strength of the caustic soda. Use the green-bank brand from St. Helen's, England, 98 per cent strong, recommended by Prof. E. W. Hilgard of the University of California, obtainable through Jackson & Co., San Francisco.

Caution 6. — Spray adjoining orchards, whether apparently unaffected or not, as prevention is easier than cure. Although the pest is termed the apricot scale, Mr. Barry's apricot orchard seemed to be exempt, the peaches alone suffering. However, the former was just as carefully sprayed. Buyers and neighbors have remarked the superior cleanliness and brightness of the fruit of these orchards this year over that of the past.

The remedies given above are for all scales on all deciduous trees—too caustic, however, for evergreens, destroying the leaves. Whale-oil remedies should be applied to the latter.

The damage to deciduous trees by some washes has been due to too great strength of the liquids. But in the case we have cited (trees three to ten years old), but three fruit-buds were found injured, and the trees not at all.

Cost.—Four thousand gallons were used by Mr. Barry on eight acres, at a cost of $80 for chemicals. The best kinds and cost of spraying apparatus will be presented at another time, together with a plan by which very small orchardists may have the benefit of same economically.

It is to be hoped that the school management will be able to keep up communication with the progressive fruit-growers of the district and the State expert and authorities. At least 85 per cent of the pupils of this particular school came from Portuguese families, where English is neither read nor spoken. Most of the parents, however, have fruit-trees, and might unwittingly baffle all attempts to clear the district of pests through non-communication; might maintain veritable breeding-places for pests. But the pupils are bright; many of them in the higher grades. All the pupils are invited by the principal to bring specimens of diseased parts, or of pests of any kind, to be identified by microscope, and to take information like the above to be translated to eager inquirers, no doubt, at home.

A Day at Oakland Fair.

The Golden Gate Fair for 1890 was held at the Oakland track, near Shell Mound station, Sept. 1st to 9th.

On the morning of the 5th one of the RURAL staff made his way to the fair grounds, was courteously received by Secretary Dimond and Director Latham, and spent some time in viewing the live stock and watching the flyers.

Between 10 and 11 o'clock the Marshal donned his three-hued sash and began assigning the horses and cattle their places in the stock parade. The display of blooded horses was said by those who should know, to outshine previous years. There were lithe, satiny runners and clean-limbed trotters in great number, strong and speedy roadsters, handsome and spirited carriage teams, elegant, many-paced saddle-horses and powerful, majestic Percherons.

Then the herds—a grand procession—Younger's Durhams at the head, followed by Geo. Bament's Ayrshires, F. H. Burke's Holsteins and Thos. Ward's Jerseys, with a single Polled Angus heifer bringing up the rear. Some fine Jerseys were also exhibited by P. C. Anderson and E. C. Sessions of East Oakland, two Herefords by Geo. Bement, and an Alderney bull by S. A. Haxby of Alameda.

At the stables our attention was drawn particularly to six beautiful Percherons of various ages and colors, imported from France last year by J. C. Smith of Oakland. There were two three-year old stallions, one black, the other iron gray; two gray mares of seven and four years, and two fine colts.

At the pig-pens we found some Essex swine exhibited by Bement & Son, and a goodly delegation of Andrew Smith's Poland-Chinas and Berkshires, including his famous champion boar "Model Duke," well known by portrait and description to many of our readers. Mr. Smith also showed 15 or 20 of his fine Shropshire sheep.

The coops sheltered a large assortment of poultry, by P. L. Earhart, including Bronze turkeys, Toulouse geese, Pekin, Rouen and Aylesbury ducks, and fowls of eight or ten popular varieties; while Leslie McKillican made a good showing of carrier and fancy pigeons, besides Game, Seabright, Plymouth Rock and other chickens.

After lunch, the grand stand filled up with spectators, and the inclosure opposite the judges' stand was packed with vehicles in view of the expected running events. The writer took a position near the wire, and, albeit he "don't go much" on races, found the excitement catching as (in the six-furlong gallop) Mystery came flying down the home-stretch so far in advance of her competitors that Murphy, looking backward, saw *he* need not whip to win; and again (in the 1 1-16 mile dash) when, after the half-dozen contestants had swept halfway round the course, all in a bunch, the "dark horse," Hotspur, leaped ahead of all his rivals and shot past the goal victorious, with the capless, tow-headed little jockey all but flying himself.

It was an interesting and instructive day; but we long for the time when the pool-selling and the "wheel of fortune" shall be banished forever and forever from the fair fields they still disgrace.

CANS GONE UP.—Eastern canners are concerned because of a rise in the price of tin cans. The price has been advanced 18 cents per dozen, in three-pound sizes, since the season opened. The cost of canning has been increased thereby. Packers who have not secured their stock of cans are at a decided disadvantage.



Baby's Picture.

[Written for the RURAL PRESS by J. E. TOTHEROH.]

So you've looked all though the album and can't find his pictur' there?
Well, of course not—in that partic'lar I didn't treat the babe quite fair,
For I kep' puttin' it off, an' puttin' it off, and waitin' day arter day,
A-watchin' his curls grow longer, and studyin' the cutest way
To have his pictur' taken—some new an' orig'nal kind—
For a little angel's pictur' seemed most like him, in *my* mind.

But our kind and all-wise Shepherd takes wonderful care of His flock,
An' sometimes when the sheep are all sleepin' He comes an' undoes the lock
Of the sheepfold, takes one of the lambs in His bosom and gently goes His way,
For He knows that the sheep will all follow and will never go far astray.
So one day the Lord sent His angels and took back the child He gave.
For He seemed to know my salvation would be found by my little boy's grave.

So I haven't got his pictur'—that is, not the album kind—
But I've got a more lastin' likeness a-written on my mind;
Every evenin' when all is quiet I sit in my old arm-chair,
An' then I can see my baby's eyes and his curly, golden hair;
I can see his innocent, smiling lips and the dimple in his cheek,
An' (what's more than's in any pictur') I can hear the darlin' speak.

I s'pose you think I'm imaginin' a great deal more than I see—
But there's one thing sure, and that is, my boy is a-beck'nin' to me;
An' no matter how wild the night is, nor how loud the winds may roar,
I can hear my darlin' callin' as he stands on the other shore:
"Come over to me, dear papa, the winds do not blow on this side!"
An' that is the talkin' pictur' I have of my boy that died.

Konocti.

[Written for the RURAL PRESS by LEPA.]

Probably no county in the State of California is more remarkable for the number of its mountains, the loveliness of its valleys, the richness of its mines, the extent of its timber and persistent presence of shrubby growth—redbud, greasewood, dwarf oak and manzanita—for the number and variety of its springs, from pure and clear in quality through many grades of mineral combinations to sulphurous, and the beauty and proportionately great expanse of its lakes, than Lake county, the resort of the lumberman, the miner, the tourist and the gambler, all associating peaceably and safely with the farmer and the Digger Indian; though, in the case of the Indian, this peaceable safety was not secured without compulsion. There, as in other less or more beautiful places, submission came because one said and acted to the other,

* * * "You must fall,
For I am great and you are small.

This was the Indian's country. Borax lake spread its soft waters for him. Clear lake nursed the baby fishes to supply his hunger, and the Blue lakes sparkled and dimpled at sight of only his dark face by their shores, while the pine-nut gathered its resinous spiciness and the acorn its bitter strength as gifts to him.

But the white man came as he goes everywhere. He brought his family and spaded, plowed and planted. Sometimes he had no family and took a companion from among the red women, to send her into the wilderness years afterward, as Hagar was sent, when a white mate could be obtained.

Ill feeling grew between them and a settler, the father was killed and his sons defied; military help was called for and soldiers sent under command of Gen. Vallejo. They arrived at the base of the highest mountain to be found in that vicinity, the one that sits always with its robe dabbling in the waters of Clear lake, and slowly, wearily they crept up its bushy, rocky side, dragging a cannon or two with them.

They reached the summit, fired a few shots, frightening the natives, who had never before heard such guns, and then, like the other famous men who marched up the hill, "they marched down again," because they could not stay. Even this huge pile of earth and rock seemed silently to resent their presence and sent forth no clear stream to sing a welcome, no cataract to proclaim its refreshing presence, not even a passive, sleeping spring to flash back the gleam of sword and gun. They disarmed the Indians and went away, and in honor of this soldierly achievement the mountain has since been called Uncle Sam. But the Diggers had long before given it a different name, Konocti, which still clings to the boat-landing near by on the reedy shore where the red people lived in scattered villages in order to be near the source of their fish supply. In the hay or harvest field they attract little attention, seeming to be neither one race nor the other, but among the hops one gets a glimpse of the still, unsmiling brown babies watching the older children and the mothers pulling the fragrant hop blossoms from the vines and tossing them into the odd-looking baskets to be taken to the machine, where they will be crowded, crowded till they lose their free grace of form and become simply a pressed mass. Do they think, these silent men, or do they only remember?

When "the waters covered the face of the earth," ridges that now seem to have lifted themselves from their oozy bed and woven a covering suited to the upper world must have been beneath the surface; then Borax, Clear and the Blue lakes must have been one, with Big valley still the fishes' swimming-pond, and the whole claimed and possessed by the red man.

If you can gain the confidence of this same red man, he may tell you that once, "moons and moons ago, all the Indians in the world were bad—heap bad. Great Spirit, same you call God, say 'Indian no good any more—kill 'em.'"

Then the Great Spirit shook Himself and the mountains shivered and crept together. He raised His head, and the eagle feathers filled half the sky; the war paint on His face was so bright all the air turned red; He threw His blanket over the earth, and all was darkness except where His arrows shot themselves when He commanded them. Then the Indians died and died till nearly all were gone.

"By and by," this strange man says, "Great Spirit heap sorry. He find one, one, one, one" (holding up his fingers and counting them) "good Indian. He take good Indian in big net, big blanket, and hold it up, then He cry—cry like squaw, water run, no can catch it, up, up, all over, no can see dead Indian. By-and-by He set good Indian down on mountain, kill deer, make fire, say 'Live now;' then no cry any more—all good, long time all good. By-and-by pappoose, more pappoose, heap Indian again; more Indian come, shoot deer, catch pine-nut, catch acorn."

So these divisions of the same race had treated each other as another people were to treat them. Must this always seem to be according to the law of Nature?

They were crowded and complained, called on the Great Spirit for relief, and the most mighty among the spiritual messengers was sent to quiet their murmurings. This angel was like the one we hear of as Lucifer, fallen, but still powerful. He listened, turned toward the mountain and vanished, but the rocky doorway through which he entered is yet there. As he disappeared, a sound

Louder than a thousand thunders
Echoed over hill and valley,
And in foamy waves, the waters,
Swirling, rushing, withdrew backward
Till but half their bed was covered;
Where the hills were rent asunder
Flowed a dancing, singing river,
And the Indian prayed no longer;
Thus was formed the Cache Creek canyon,
Thus was drained the fertile valley.

And thenceforth that silent mountain was "Konocti," "Devils' Dwelling."

Between Two Fires.

[Written for the RURAL PRESS by ASENATH C. COOLIDGE.]

"Oh! how I hate these horrid old women's rights women," thundered Tax-collector Dufferin Jones, throwing his hat on the dining-room sideboard instead of hanging it up on the hall rack. "They're always scolding about paying their miserable little taxes and about not being represented. I never saw such a stingy, chattering old lot."

His wife seemed to be in a brownstudy all during dinner-time.

"What is she thinking about?" inquired Jones pleasantly, after he had allayed his irritation with a good dinner. "The ways and means of getting a new fall bonnet?"

"No, Daffy," replied Mrs. Jones; "I was trying to think what it was Edmund Burke said about John Hampden."

"It's too deep for her. Isn't it?" said Jones.

"Oh! I remember the gist of it, Daffy. Old Burke stood up for old Hampden because old Hampden bolted on paying a 'miserable little tax' of twenty shillings and chattered about not being represented; but then old Burke was a horrid men's rights man, you know, dear old Daffy, and old Hampden was another."

Dufferin Jones plunged into the hall and then into the sitting-room and then into the hall again, and then he clapped his hands to his head.

"Is it his new fall hat he's looking for, dear Daffy?" inquired Mrs. Jones sweetly. "Here it is right side up in this plate of salad oil and mustard."

VISITOR (in court-room): What crime was committed by the prisoner who was just convicted? "He stole a ride on a railroad." "And the man who got free?" "He stole the railroad."—*Life.*

Golden Gate Park.

[Written for the RURAL PRESS by M. M. S. P.]

One of the most charming of pleasure resorts in San Francisco is Golden Gate Park. Foot by foot this beautiful park has been reclaimed from the shifting sands. Not many years ago it was a barren waste, and it is no wonder that the project of turning it into a pleasure resort met with so much opposition.

I have been informed that the Park Commissioners sent to Germany for the seeds of the German yellow lupine and scattered it broadcast in order to secure among its abundant and tenacious roots a safe resting-place for the new roots and seeds they wished to place in the soil.

These wide-spreading roots have bound together the once shifting sands into a firm, abiding soil. Its duty done, the humble little flower, at first productive of so much good, has spread all over the suburbs of San Francisco—forgotten or despised as a troublesome weed.

Everywhere in the park, up and down the different avenues, winding through the narrow foot-paths, everywhere grow rare and beautiful flowers and trees.

A great deal of fine ribbon or carpet gardening is done, and one is often greeted by the familiar faces of some sweet old-fashioned flower (such as grew in our grandmothers' gardens. I had not seen the Canterbury Bell for years till I found it there.

Trees from all countries grow here, and in some places the thick shrubbery makes it truly hard to believe that everything here has been planted. It seems almost impossible.

The roads are well kept and the grass is soft, green Kentucky bluegrass. It is a wonder how they keep it alive, for there is only the injunction, "Please keep off the *margin* of the grass," to check pedestrians.

It is said to be the only park in the United States where children are allowed to play on the grass. It would do the heart good to see the little housed-up, city-starved babies roll about on it. Still it must be very hard to keep it always in its immaculate condition with such treatment.

It would take one many days to exhaust the beauties of this immense park covering 1000 acres, and more than *one* day to *see* it all.

There are the conservatories and the aviaries for the lovers of flowers and birds. Near the aviary stands erect a section of the mammoth tree from the famous grove. The deer park or inclosure contains several large bucks and does and a pair of immense elks with a fawn. One queer animal within the inclosure greatly resembles the South American llama of our geographies.

An old lady told me one day in a street-car that she saw a splendid mirage out there. As she pronounced the word just as it is spelt, it took me too long to collect my wits to find out in what part of the park she saw this interesting sight. By the time I fairly realized what the good old soul meant, the car stopped for her to get off. I did not find the place myself even after inquiring on the grounds.

The old music-stand is now only used for an open arbor, and the new one, built in the shape of an immense shell, is situated nearer the children's quarters. The shell is most artistically painted to represent the beautiful tintings of a sea-shell, and is an excellent conductor of sound.

On Saturdays and Sundays a band of 36 trained musicians in uniform give an exceptionally fine open-air concert of popular and classical airs. The cable-car companies defray all the expense of this because it brings such an increase of patronage to their lines. Seats are provided for hundreds of people, and hundreds more drive in and sit in their carriages during the concert.

Great crowds throng the place, especially on the before-mentioned days. Every one goes to the Park, and a student of human nature will find the time pass all too quickly.

Facing the music-stand is a fine monument with life-size statue of Francis Scot Key sitting in an attitude of attention. Occasionally, the band plays the music to his inspiring verses—"The Star-Spangled Banner"—and there in letters of gold are inscribed the words.

Passing on to the right, the crowd moves toward the children's quarters. Erected within the last few years by the generous donation of one who had the real good of children at heart, there seems nothing wanting for the outdoor sport of little ones.

The building, of substantial stone, comprises parlor, waiting-room and restaurant, where wholesome lunches are served by courteous waiters, who, however, have no time to bestow on those unattended by children. The building is surrounded by broad balconies well provided with seats where one may watch the sports going on below.

There are dozens of swings and good strong "teeters," or spring-boards, with boxes of clean white sand for the little ones to get into if they choose.

To the left the ground is laid off into a sort of track, and here are kept small burros and strong goats to drive or ride around the track. The little goat-carts are dear little things, and crowds of children surround the place eager to ride. One ride around is five cents, and very few children are satisfied with that one ride.

Careful, steady boys are in attendance to run beside the small rider and see that he comes to no harm. Ten goat carriages are provided, seven burros with both kinds of saddles, and one little wagonette capable of holding six small children.

For the benefit of those who come out on the street-cars with little babies, there are baby carriages to rent at ten cents an hour, or two bits a day.

Various kinds of gymnastic apparatus are put up about the grounds for the benefit of the little folks.

Oh! the children are well provided with pleasure here!

Just facing the children's pavilion is a merry-go-round which has a circumference of 190 feet. It has 36 horses and a dozen boats, which have a rocking motion apart from the circular motion of the platform. The motive-power is in an engine a few feet from the platform. It was patented by a Mr. Walker, who still superintends it. It cost this gentleman $5000, but paid for itself at five cents a ride inside of a year. Since then he has given a bill of sale for one-half to the Park Commissioners, who pay half the expenses and get half the profits.

In the center of the merry-go-round is a cylinder piano four feet high run by the smallest Corliss engine in the world. This piano plays while the platform whirls around carrying the rocking boats and horses laden with happy, laughing children.

The parents or nurses sit about watching and enjoying the fun, too. Who could fail to appreciate the advantages for pleasure offered here? The poor may have a great deal of sport, even if they have not the nickels to spend. Truly this is a children's paradise.

Drinking a Farm.

My homeless friend with the chromatic nose, while you are stirring up the sugar in the ten-cent glass of gin, let me give you a fact to wash down with it.

You say you have longed for years for the free, independent life of the farmer, but have never been able to get enough money together to buy a farm. But this is just where you are mistaken. For several years you have been drinking a good improved farm at the rate of 100 square feet at a gulp. If you doubt this statement, figure it out yourself.

An acre of land contains 43 560 square feet. Estimating for convenience the land at $43 56 per acre, you will see that it brings the land to just one mill per square foot, one cent for ten square feet. Now pour down the fiery dose and imagine you are swallowing a strawberry patch. Call in five of your friends and have them help you gulp down the 500-foot garden. Get on a prolonged spree some day and see how long a time it requires to swallow a pasture large enough to feed a cow. Put down that glass of gin; there's dirt in it—100 feet of good, rich dirt, worth $43 56 per acre.—*Burdette.*

Chautauqua Time.

Oct. 1st is the time to begin the C. L. S. C. reading. Each day of delay beyond that time is being just so much behind. It is always a pity to be late about anything, especially as good a thing as the Chautauqua work, and the secretary urges upon all Chautauqua students, present or prospective, to take time by the forelock, send promptly for the books and the magazine and begin on time. The *Chautauquan* is now in the front rank of the magazines. Many are taking it who are not Chautauquans because they cannot afford to be without such a fine periodical. Dr. Flood has a way of securing the very finest scholars and writers in the country as contributors to the *Chautauquan*, and year by year its departments have been increased and its general style improved till there is very little criticism to be made on the work of the editor or the publisher. One of the best things for a loyal Chautauquan to do is to show the magazine to friends and neighbors who know what are the requirements for a first-class magazine. It is the very best of campaign documents.

GOT LICKED ONCE.—It was the city editor's room. One of the reporters stammered so that he had to write out an order for a beer—when he wanted one. A stammerer came in, walked over to the man's desk and began talking to him. Stammerer No. 1 said nothing, but nodded, shook his head, shrugged his shoulders and gesticulated until No. 2 turned away and got his information from some one else. When he left, one of the reporters said: "Jim, what in thunder is the matter with you, sitting there like a dummy when a man comes in to ask about something?" "I—I go—got li—li—lil—licked fe—for taw—awking ter—te a—ste—ter—ammering me—me—mun—man once."—*Ex.*

ANCIENT HISTORY VIEWS FROM A CAR WINDOW.—A railroad in Asia Minor runs from Soutari to Ismidt, and will soon be finished 20 miles farther. This road is to be extended into India and will be the grand transdivisional line between Europe and Asia. It passes near the tomb of Hannibal. Nicomedia is a way-station, and from the car windows the ruined walls of Nicea are in view, where the first Christian council settled the creed. It crosses streams on repaired bridges that were built by Justinian, and altogether has a right of way through more ancient history than any other road on earth.

Had Been at Bologna.

A Paris sausage-vender called his cry,
"Here's nice Bologna!" to the passers-by.
At that a joker, shouting loudly, said:
"Don't touch or eat them; if you do, you're dead.
I've seen them stuffed at old Bologne, and know
They're made of donkey-meat from top to toe."

Like things exploded by strong dynamite,
The would-be buyers scatter left and right.
The wild wag laughed, while in a half-hurt tone
The seller asked: "You've been, then, to Bologne?"
"I have." "That's strange, for 'f what you say is true,
You should have been returned as sausage, too!"

—*Frank Leslie's Budget.*

Chaff.

THERE is no such thing as jealousy in nature. Even the cross-roads become pleasant when the beautiful trees put them in the shade.—*Puck.*

WEEPING WIDOW—And so poor John is dead? He went out to New Mexico hoping that the high elevation would do his lungs good. And didn't he get the high elevation he expected? Western Friend—(breaking the news gently)—Well, mum, they hung him sixteen feet high—enough for any one, I guess.—*Lawrence American.*

"IT'S pretty tough luck," complained the big trunk, "to find yourself completely strapped just when you're starting off on a long journey!"—*Boot and Shoe Recorder.*

"I HAVE no grudge against fat people," said the steamboat agent, "but I always give them a wide berth if I can."

THERE are no agnostics among the college graduates. Lack of positive knowledge comes later.—*Boston Transcript.*

IF you succeed, you are a genius; if you do not, you are a fool. This is the long and short of it.—*Atchison Globe.*

AN echo is a kind of holler mockery.—*Binghamton Republican.*

"CONFOUND it! Why, that doctor is a regular pelican!" "Pelican? What do you mean?" "Look at the size of his bill!"

TRAMP (to farmer's wife, standing on the porch and looking up at the sky)—How's the weather this morning, ma'am? F. W. (turning suddenly and catching up a pail of suds)—Clear! And the tramp clears.—*Burlington Free Press.*

ON my way to Freewater the other day I saw a notice posted on a fence-corner, which perhaps expressed the exact sentiments of a majority of the people. It read: "A special meeting for the perpuss of voten a tacks will be hell."—*East Oregonian.*

BOY (to his friend who has fallen in a hole): I say, Tommy, if you shouldn't ever come out of there alive, can I have your bull pup?—*Birmingham Post.*

"THIS is a hard set," as the hen said when she was trying to hatch a porcelain egg.—*Boston Commercial Bulletin.*

"DID your daughters marry well, Mrs. Goodsense?" asked a visitor. "Lucy didn't do so badly, but Clara has disgraced us." "Whom did she marry?" "Lucy's husband is a street-car driver, but Clara married an Italian count."—*Norristown Herald.*

SPONGES have been very naturally put on the free list by tariff tinkers. The dead beats will naturally follow.—*Picayune.*

THE wise employe always laughs promptly when the proprietor makes a joke.—*Somerville Journal.*

MECHANICS WHO READ.—An employer once requested his foreman to go round among the men in the shop and advise them to make up a club to take several mechanical papers. The men did so, and when the papers came and had been read, the dinner talk of the men took a new turn. The articles in the several papers were discussed, and as a consequence a new zest was given to their work. They took more interest in it. They thought and talked about it, and studied it. Those men soon became better mechanics, and it is from such persons that foremen and shop-owners and successful men are graduated. A mechanic must be a constant reader and student if he would become a man of mark in his calling.

MOSQUITOES HATE OIL—"Wherever you find petroleum you won't find mosquitoes," said an old oil-country man. "The insects can't stand the smell of the grease, and wherever oil wells are plenty there is no call for mosquito-bars. Over and over again I've seen mosquitoes cleared out in a new oil-field as soon as a well flows. Whether petroleum, applied to the hands and face, will drive off mosquitoes I don't know, but one of the few compensations of the driller is that he is seldom troubled with mosquitoes."

GO TO BED AT NIGHT TO SLEEP, not to think over the troubles of to-day nor the anticipated trials of to-morrow. One woman said: "I plan my next day's work each night after retiring." Poor, little, nervous thing; she looked it.

THE LATEST ADULTERATION.—Cinnamon is said to be adulterated with old cigar-boxes ground up into dust.

YOUNG FOLKS' COLUMN.

The Indian Grave.

Alice was in the most secluded corner of the north orchard, snuggled down in the grass, with a United States history open in her lap, both her white elbows on it, her face bowed meditatively into her hands, and her forehead drawn together into great lines, thinking deeply, you may be sure!

Walcott found her there long before the lines were ready to smooth themselves out again, and nestled down at her feet, with his head against her lap, quite content with her silence.

Alice was two years older than he, and his oracle. Then he had great patience. Oracles always spoke; only give them time enough—he was sure of that. Trusting little brother! And this one spoke at last.

"The book says: 'When any warrior died, they buried his weapons with his body,'" and she put her finger on the place.

"Yes," he answered, not understanding in the least what she was coming to, but certain that he should before she ended.

"And you know the Indian grave we found off in the woods?"

"Yes."

"It must be full of treasures." And again he assented.

She reached down and took his hand in her own warm one, and said quite earnestly and impressively:

"Last night, when they thought I was asleep, I heard grandfather say that he must have a hundred dollars next week, and he did not know where in the world it was coming from; and his voice sounded tired as he said it. Walcott, if there are weapons in that grave, they must be worth dollars and dollars, and—"

Walcott gave her hand an appreciative hug.

"And O Alice!" he went on breathlessly, "we could dig 'em out, and nobody know, and sell 'em, and keep it a great secret, and give him the hundred dollars just when he was in expair, and be so glad."

He paused. His excess of English quite overpowered him, as it used to Alfred Jingle.

"That is just what I had been thinking of."

"Oh, could we?" And they looked at each other with round, happy eyes.

Then they made their little plans.

"How long ago did the Indians live here?" Alice asked at supper, and then blushed for fear so simple a question might betray all their mighty musings.

"I knew one Indian when I was a boy," answered the old man, "sixty years ago, who lived only a mile from here. He was a real hero among us boys; for he made famous bows and arrows and showed us how to use them."

The two children would not have looked at each other then for every identical penny of the coveted $100; but Walcott pulled her dress slyly under the table and asked for "a little more bread, please," to hide his smile.

The evening seemed never to come. It stayed away with a persistent meanness that was quite unparalleled in the history of nights and days. Alice thought of polar days six months long and wondered if one had strayed down to the temperate zone by mistake. But, loiter as it would, it had to come at last.

The night! The great moon-lighted night that was better than day! It came at last.

And with it quietness came over all the house and sleep to the weary, hard-working grandparents.

Then Alice crept softly out of bed and went to Walcott's room, helped him dress, and they crept down the old stairs hand in hand, holding their breath as they went across the cool, bare floor, where the high clock ticked noisily, and a regular breathing came from the open sleeping-room door.

Dear little feet! God bless them! Many a good deed have they done to help lighten the sorrow of the world and beautify life, but never with a truer, holier wish to minister to others than on that summer night when they tiptoed across the bare, old-fashioned room, shoeless and still, to find the Indian grave. Outside the door, which they had some difficulty in opening quietly enough, they put on their shoes and ran along the pasture-road with some little spades and a huge basket, intent on getting home before morning.

It was almost a mile away, and they had never before been out alone at night. The very silence had something strange in it, and the shadows that shimmered through the trees took on weird shapes; but they clasped each others' hands tightly and kept on. The little helpers determined to let nothing turn them back.

The mound was easily reached, and they set to work with a will, digging with their spades; and Walcott used his hands in his great zeal. At last they paused to survey their work, thought it must be almost morning, and pronounced what they had done "immense."

They really were getting down where it smelled moldy and queer, and began to be uncanny. Alice's spade grated on something hard.

"Here they are!" shouted she. Just then they heard a low, strange sound under Walcott's very hands.

They both turned white and stared at each other tremblingly.

Then it grew still again. "We must work! Think of all the dollars!" whispered Alice, urgingly; and again they commenced digging, yet with unabated fear. The wind stirring the trees above them would send them into a cold perspiration, but love made them heroic.

"There'll be chains, and wampum, too," encouraged Alice, again hitting something hard.

Then there came a great buzz and whirr, a rushing sound that seemed to fill the whole woods, and something living darted angrily past them from the very ground under their feet.

"It's the Indian's ghost!" shrieked Walcott, putting his hands over his ears. They looked into each other's horrified eyes for a minute.

"Let's run," gasped Alice, and, clasping each other's hands, they started for home in absolute terror.

Grandfather was awakened from a dreamless sleep by hasty feet, a slamming door and cries of help.

He got confusedly up in bed, to be grasped about the neck by Alice, who begged him to save them and wept beyond all control, while Walcott clung to her.

"Why should the Indian care, when I wanted them for you?" she urged at last.

Grandfather, in spite of the wisdom of experience and years, could not say anything to the purpose without a great deal of explaining on their part.

Some slow tears rose to his own eyes as he understood all the wish of the helpful little hearts, and he kissed them very tenderly as at last he found them calm enough to lie down.

"Better than gold!" was what he kept saying in his soul, as he watched them while they slept. "Love like this is better than gold!"

And that was what he said to comfort the children next day, when he had investigated a little spot in the woods. He took them in his dear old arms and explained that the grave was only a fallen tree-trunk, well mossed and grassed over and the home of some little ground squirrels. "But," said he, as he saw their disappointed faces, "your love is better to me than gold."—*L. Brown in Christian Register.*

GOOD HEALTH

THE INJURIOUS EFFECTS OF RAILWAY WHISTLES UPON THE HEARING.—An eminent Glasgow aural surgeon, Dr. Thomas Barr, has communicated to the British Medical Association some valuable data concerning the injurious effects of railway whistles upon the hearing. In railway whistles the arrangement for regulating the pressure of steam passing through from the boiler to the whistle is not usually sufficiently delicate. If the boiler should be under high pressure, the whistle is very much louder and shriller than when it is under low pressure; so that when a passenger train is leaving a station for a long run, and having therefore its boiler under high pressure, the whistle is unnecessarily loud and shrill, just when those qualities are least required. Dr. Barr urges upon the attention of the association the adoption of lower pitched whistles, with proper regulators, so as to lessen the present jarring of sensitive ears and nerves. The question of whether a whistle of lower pitch than that usually employed would be as efficient as an acoustic signal is said to have been solved by the introduction on a Scotch railway of a new form of whistle, very much resembling an organ pipe. The steam is forced on the lower edge of a brass tube closed at the upper end, and the sonorous impulses are taken up by the current of air in the tube and immensely reinforced, the pitch depending upon the length of the tube as well as upon the force of the blast. The sound resembles very much a steamboat whistle, being loud and much lower in pitch, and, therefore, less painful to the ear than the ordinary railway whistle.

HEAT AND THE GROWTH OF THE HAIR.—It is generally understood that the hair and nails grow faster in hot weather than in cold, but perhaps few are aware that any temperature can impart so great a stimulus to the growth as Colonel Pejevalsky, the Russian traveler, says the Central Asian heat did during his journey in those regions during the summer of 1889. In June the ground and the air became excessively hot, so great, indeed, as to render travel in the daytime impossible. Within a fortnight after this oppressive weather began it was noticed that the hair and beards of all the party were growing with astonishing rapidity, and, strangest of all, some youthful Cossacks, whose faces were perfectly smooth, developed respectable beards within the short period of 20 days.

A WISE PRECAUTION.—A firm of chemists in Birmingham, Eng., placed upon all poisons sold by them directions as to the antidote which should be applied in case where the poisons are taken accidentally or intentionally by human beings. An English chemical journal gives an instance where this precaution was the means of saving life. A woman poisoned herself and then informed her husband that "she had done it." A medical man was at once sent for, but in all probability the woman would have been dead before he arrived but for the fact that her husband chanced to read on the label which accompanied the poison the instructions: "Give a mixture of chalk and water, milk and magnesia or carbonate of soda and water until medical aid can be procured." The result is that the would-be suicide is alive to-day.

DOMESTIC ECONOMY

A Way Out.

"The difficulty is," said a worried little housekeeper the other day, "that it is really a matter of dishes. I mean that if you plan a lighter meal for a summer day, you can't make it look pretentious enough to satisfy the boys, or, for that matter, their father either. Don't you see what an important part the platter plays? The vegetables are all in subordinate dishes, and there is instant suspicion, when a masculine member of the family sees a vegetable-dish in the place of honor, that he is about to be defrauded. If I only knew how to spread them out—but I don't, and so I have to provide the everlasting steak or roast."

"But why don't you dress one of the vegetables to take the place of meat?"

"How can you? It must be boiled somehow, or mashed, or some of the things that reduce its bulk. Things would be lost on platters."

"Not if you surround them with sauces. You have been abroad. Don't you remember the great platters of macaroni with tomato sauce, a mighty mound that came on as a separate course, and that disappeared before the *pension* appetite faster than it could be served?"

"But that was Italy. We eat things there in a fashion no American dreams of."

"So much the worse for the American, then. Every doctor announces that we eat far too much meat, every new medical book has its word about the diseases induced by too much meat, yet we go on filling our boys and girls with it three times a day, and laying a foundation of over-stimulated nerves for the doctor to patch by-and-by. Meat has its place, but once a day is enough for anybody but a hod-carrier, and with our boundless supply of fruits and vegetables and grains, one need never miss it. It is easier for a poor cook to dump a steak into a pan, and leave it there till it is wanted, than to prepare some substitute, and I dare say your own brain may be called upon to fill the gap, but you may still have your big platter."

"Three hearty boys and a critical father," murmured the little mother.

"The heartier the better. I happen to know that you have taught them to eat everything, with no prejudices. Now I shall tell you of a vegetable cutlet which I ate in a London vegetarian restaurant, and which deserves introduction everywhere. To carry out the illusion, you may save the delicate bones of some French chops, and stick one in each. Serve them with a sauce of any kind you like, from tomato to one made of the remains of gravy with a little chopped pickle. Do as I tell you, exactly, and let me know the result."

A week later the little woman entered triumphant.

"I have conquered," she cried. "The boys howl for more, and even Arthur has not a word to say. Now tell me some more."

That was the beginning of

Vegetable Cutlets

Once a week for the Harrington family, and of a special form of tomato with eggs, a favorite dish in the Swiss *pensions*. Both require care and delicacy of preparation; but they solve the problem of a central dish sufficiently imposing to satisfy eye as well as appetite, and this is how both are manufactured:

First, dismiss all prejudices as to "messes," and the usual objections to the unusual. Then assemble your materials, which should be as follows: Six or eight mealy potatoes, boiled and mashed as for the table, with butter and hot milk, pepper and salt. Mince fine two button onions and fry brown in a little butter. Have ready six of the tiny carrots which mature in July, and which have been boiled tender, and four young turnips. A little cold cauliflower chopped has been known to find place in them with good result. Chop all and mix well with the potato. Now make it in chop or cutlet shape; dip in beaten egg and then in cracker dust or Indian meal, and fry brown in hot lard or dripping. They must be immersed in the boiling fat like a cutlet, and cotton-seed oil answers quite as well as lard. Drain them dry, lay them on a large platter and surround by a good sauce. Serve very hot.

Tomato with Eggs.

If possible, secure for this dish one of the long, boat shaped earthen dishes one sees in German and Swiss kitchens, as it gives character and dignity. Peel the tomatoes and set them close together in this dish, which must first be buttered. Now scoop out a spoonful from the middle of each and chop it fine. Mince a small onion and fry brown in a spoonful of butter, add a cupful of bread-crumbs and a sprig of minced parsley, with salt and pepper to taste. Mix with the tomato and fill the cavities with it. Sprinkle bread-crumbs over the whole, dot with bits of butter, and bake for half an hour in rather a quick oven. When brown, break over the top an egg for each person to be served, and return to the oven till they are done, which will be in about five minutes. You will find it hearty and satisfactory, and a most desirable addition to the list of possibilities for tomatoes.—*H. Campbell in Congregationalist*

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SAN FRANCISCO:

Saturday, September 20, 1890.

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Holstein Cattle—W. T. Eddy, San Jose.
Nursery Stock—Wirt Brothers, Salem, Oregon.
Pekin Ducks—Driswold Poultry Yards, Napa.
Trees—Ellwanger & Barry, Rochester, N. Y.

See Advertising Columns.

The Week.

The attendance at the State Fair this week has vastly improved, but it is hardly thought that receipts will be enough to make up for the loss of patronage through the occurrence of the great celebration in this city last week. Still the display, especially at the Park, is unusually good—the cattle exhibits being notably large and excellent. It is to be hoped that the closing days of this week will roll up as large receipts as possible, because the society needs money for improvements commensurate with the growth and prosperity of the State. Two letters concerning the State Fair may be found in this issue, and others will follow.

The Irrigation Convention at Tulare last week, of which we give an outline on another page, must be counted as the beginning of an important movement in our industrial progress. Its declarations should be carefully considered.

A New Truth.

A new truth dropped in among mankind and made clear, is a precious boon, never to be forgotten, always to bear fruit, and at last to become a household word, rule the State, reform the Church, and compel all mankind to conform to it.

To-day, the relics of the barbarous past rule all mankind; but the ideas, the truths discovered and promulgated, gradually dethrone kings, dissolve armies and give law to the nations. Europe has 5,000,000 soldiers armed to maintain the *statu quo* indefinitely, but she has also a thousand scholars who have written a few truths that will make them all vanish into thin air.

Not two centuries since, Galileo announced that the earth moved round the sun, a round globe. He was persecuted and tortured for his discovery. Now, all the children of Christendom accept the great truth, and no Church is powerful enough to deny.

A century past, our fathers gave out these words: "Government shall rest upon the will of the people and that alone, and the people shall think freely, boldly and fully, that government may be intelligent and secure. No man can or shall be justly punished for his opinions."

These words have shaken all the thrones in the world. They have modified the opinions of all the civilized portion. They have sunk deep into the American mind, and they are modifying our opinions, our laws, our conduct and our religion.

In San Francisco 300,000 people, with a hundred creeds, live in peace under their benign influence; each man feels his perfect right to think as he pleases and accords the same to his neighbor. So we have peace, religious peace, such as no other people under the sun enjoy.

These words did it. They came from the highest authority, those good and great Fathers. They are crystallized into law and heard daily in our courts. They have seized upon the public mind and men guide their conduct by these rules. Within a short time all will conform to these sublime words: "Opinions are not crimes."

Railroads Must Not Discriminate.

A result of much importance to shippers by rail has been attained in the Superior Court of Santa Cruz county by which the South Pacific Coast Railway Company has been inflicted with a verdict to pay $8000 because of discrimination and refusal to furnish cars to S. H. Chase & Co. for shipment of lumber from their mill near Boulder creek. It appeared in the evidence that Mr. Fillmore, then manager of the road, had given orders to refuse Chase & Co. cars, and as a reason stated that Chase & Co. were underselling the San Jose Lumber Association, and that by so reducing the price, freight rates would eventually have to be reduced, and therefore he refused to let Chase & Co. have cars. Mr. Fillmore also said that Mr. Chase refused to join the San Jose lumber combination, and told him that if he would join it he would be furnished all the cars he wanted. This Mr. Chase and his partner refused to do.

The case occupied the attention of the Superior Court for over a week, and during the course of the trial Chase & Co. abandoned some of their minor claims for damages, such as for expenses of keeping oxen when the refusal of cars stopped their work, the loss on sub-contracts to furnish lumber, etc., and confined their claims to actual damages caused by the loss of business and for punitive damages.

Judge McCann delivered a lengthy charge. The jury retired, and in two hours returned with a verdict for $8000 in favor of the plaintiff. The jury stood nine to three. Chase & Co. claimed $9706 actual damages and over $40,000 as punitive damages.

Though the verdict hardly covered the actual loss to Chase & Co., and though the company will probably fight the issue further, it is some satisfaction at least to have a verdict declaring that discrimination and the attempt of a transportation company to rule production and commerce instead of serve them are illegal. The country has suffered considerably by such discrimination and almost conspiracy between favored shippers and the railways against the business of other producers and shippers. The issue should be pushed in the public interest until common carriers are taught that they must treat all shippers fairly and impartially.

Settlement on Arid Lands.

There has been so much published about the effect of recent Congressional legislation on the settlement of arid or desert lands that there may be in the minds of some a doubt as to their present status or availability. For this reason we give prominent place to the following circular issued September 5th by Commissioner Groff of the General Land Office:

I am directed by the honorable Secretary of the Interior, by letter of Sept. 4, 1890, to call your attention to the attached copy of that portion of the Act of Congress approved Aug. 30, 1890, which repeals so much of the Act of October, 1888 (Twenty-fifth Statute, 526), as withdraws lands in the arid region of the United States from entry, occupation and settlement, with the exception that the reservoir sites heretofore located or selected shall remain segregated and reserved from entry or settlement until otherwise provided for by law, and reservoir sites hereafter located or selected on public lands shall in like manner be reserved from the date of location or selection. The circulars of this office of Aug. 5, 1889, and Aug. 9, 1890, are hereby rescinded. Entries validated by this Act will be acted upon in regular order, and all patents issued on entries made subsequent to this Act, and on entries so validated west of the one hundredth meridian, will contain a clause in them reserving right of way for ditches and canals constructed by authority of the United States. Your particular attention is called to that portion of the law which restricts the acquirement of title under the land laws to 320 acres in the aggregate. You will require from all applicants to file or enter under any of the laws of the United States an affidavit showing that since Aug. 30, 1890, they had not filed upon or entered, under said laws, a quantity of land which would make, with the tracts applied for, more than 320 acres; or, provided the party should claim by virtue of the exception as to settlers prior to the Act of Aug. 30, 1890, you will require an affidavit establishing the fact.

The Mohair Situation.

Conditions seem to favor a good price for mohair this fall. McNaughton's Sons of New York issue a circular, in which they say that the latest report from Bradford says: "Mohair good; alpaca advanced." This advance in alpaca will have a tendency to put up the value of mohair.

Importations of Turkey mohair have been very light this summer as compared with 1889, and if the present good market on the other side continues, fall shipments of domestic mohair will find a ready market in spite of the slight curtailed demand.

There is very little raw stock in New York now, so that quotations are merely nominal, being based upon the last sales by McNaughton's Sons, viz.: Fine combing, 45 to 50 cents; fine medium combing, 40 to 45; medium combing, 35 to 40; coarse combing, 28 to 35; carding, 14 to 16; burry, 10 to 15.

McNaughton's Sons mention fall shearing of goats as favored by reports from several of their correspondents, and urge the advisability of occasional fall shearing at least. As prices are good at present, the time is favorable for experiment.

Oregon State Fair.

Dispatches from Salem aver that the opening of the State Fair on Monday was marked by the most abundant entries and largest attendance in its 30 years' history.

The exhibits of the Willamette Valley grains and fruits are very large, as well as the display from Southern Oregon. One local grower has a five-ton exhibit.

Three carloads of Norman and Clyde stallions arrived from Illinois that morning, and the heavy horse show is good throughout. A marked improvement in draft horses is noticeable in Western Oregon over the stock of a few years ago.

The gate receipts for the first two days exceed those of last year. The crowds are increasing daily, each train bringing in many people. Nearly all the camp-grounds have been taken, while every available inch in the pavilion is occupied.

SIXTY-FOUR carloads of raisins, dried grapes and fruit left Fresno last week for Eastern points. This shipment is about three times in excess of shipments at this time last year.

Vegetables for the East.

We recently alluded to the unusual scarcity of staple vegetables as well as of fruits at the East, and mentioned the demand likely to arise for California potatoes, cabbage, etc. There is now a strong Eastern movement of these esculents of which the *Chronicle* recently gave an outline. Although large shipments of potatoes and some other vegetables to the East were made in 1887, there has never been a time in the history of the State when the vegetable product equaled that of the present year. During August the Southern Pacific Co. took East about 425 carloads of potatoes, or about 138,000 bushels. The shipments in pounds from the principal points were as follows: San Francisco, 5,513,930; Sacramento, 2,196,400; Los Angeles, 371,760; Colton, 157,890. In July the shipments were but a fraction of these quantities, and last year almost none were shipped. Aside from potatoes the following shipments of garden vegetables, amounting to about 100 carloads, were made in August last: San Francisco, 1,317,090 pounds; Stockton, 60,000; Los Angeles, 567,280. The shipments of last year amounted to almost nothing.

These figures do not represent the total vegetable shipments of the State, and especially of the southern portion, as they do not include the shipments by the Santa Fe. These figures could not readily be obtained, but they are very large and would greatly increase the totals given above. The explanation of this activity is, of course, the failure of the potato crop and the consequent scarcity in the East. Last winter California was supplied with potatoes from beyond the Rockies. Now the East is largely dependent on the Golden State. The active shipments of August are continuing, and the size of the total draft of the East on California's stores of garden and field products for the season will be surprising in its magnitude, and will represent new glory, advertisement and profit.

Caution to Farmers.

A concern calling itself "The Farmers' and Mechanics' League," has nominal headquarters at Room 61, Flood Building, San Francisco. The *Chronicle* says one X. E. Burns appears to constitute the entire "league," and figures on some cards as its manager. He boldly refers to the Mercantile Bank of this city, but the bank refuses to vouch for him and avers that the use of its name was unauthorized.

The "manager" sends a canvasser out into the country to drive around in a stylish turnout, call upon all the farmers and entice them to join the "league," paying a membership fee of $10 in advance. As members they will have the right for five years to order from the headquarters groceries, clothing, farm machinery and everything else they need, getting the goods at wholesale prices, and thus saving the profit of the country store-keeper. (Of the $10 the agent receives a commission of $4 cash.)

The farmers are not given any security that the contract which they thus enter into will be carried out; in fact, some of the canvassers assert that no provision was made to give those who joined even so much as a receipt for their money.

The alleged "manager" of the "league" has named a bank as reference regarding the reliability of his scheme without the sanction of its officers, and if he has, as he has asserted, millions behind him, he fails to show from whom the money comes.

Representatives of the RURAL, who went up to the place mentioned, found no one there but a little boy, and facts elicited by inquiry at a leading commercial agency leads us to believe that the *Chronicle's* article is reliable. We trust our readers are sufficiently on their guard not to be imposed upon by irresponsible schemers who promise commercial advantages without any genuine backing.

WELL DONE.—In the U. S. Senate on Tuesday of this week, the House Anti Lottery bill was taken from the calendar and passed without a word of discussion.

THE output of wine from Senator Stanford's vineyard of 4000 acres, near Vina, Butte county, this season, will be not less than 1,500,000 gallons.

Corn Palaces.

As we are in the midst of the fairs, and as the mind is naturally attracted by that which is unique in means of industrial display, we lay before our readers new facts concerning the development of the Corn-Palace idea at Sioux City, Iowa. We have shown views of these structures for several years, each year's palace vastly surpassing its predecessor in size of the structure and the elaboration. Upon this page we show in contrast the palaces of 1889 and 1890.

The Corn-Palace idea originated in Sioux City, and at that place all the palaces have been erected. A Corn Palace is covered and embellished, as with tapestry, outside and inside, with products of the field, corn predominating, ingeniously and fancifully arranged. In building the palace a large structure is first erected of lumber, of a shape that will carry and show to advantage the multiform decorations with which it is to be adorned. It is in form lofty, with broken lines, pinnacles, buttresses, bridges, gable, ornamental window, etc. Over every inch of this wooden surface are laid corn and kindred plants in architectural harmony, in a multiplicity of designs. The corn is employed in the stalk, the ear, the kernel, and even the husk has its decorative uses. All the grains and grasses of the field lend themselves to the beautifying of the palace. The walls are covered on the outside with ears of corn, cut lengthwise or crosswise, and nailed on in geometrical figures or other designs. The various colors of the cereal permit of a wide range of shading and coloring, while its artistic possibilities, developed from year to year in building the palace, admit of the production of effects that are as startling as pleasurable.

High over the entrance of the Palace of 1889 was King Corn's crown as the nucleus of the sunburst, while below was the national flag in graceful folds—all wrought in vari-colored corn, as true and as beautiful as if painted by an artist's brush. The roof is overlaid with corn leaves. Pinnacles and columns are capped with the sorghum plant, or with grains and grasses. The iridescent walls, seen from a near distance, seem to be a rich mosaic of polished woods, while with the "Banners, yellow, glorious, golden," that "from its roof-tree float and flow," the palace enraptures the beholder as one who looks upon a cloud-painted mansion that may dissolve before his eyes.

The interior work is finer and more elaborate. Here the kernel of the corn is largely employed, producing amazing and lovely effects. On the walls are wrought pictures illustrating farm scenes, legendary and nursery tales, etc., with a fidelity that is calculated to raise a doubt that the material employed is the homely utilitarian growth of Western farms. Frescoes and flowers, figures of persons and animals, draperies, and thousands of surprising and beautiful things are made of field plants for the delight of the visitors to the palace, whose astonishment is succeeded by admiration of the genius that conceived and developed so much of art and beauty from such homely fabrics as are employed.

The Corn Palace of 1890 is to be 264 feet square, or more than twice as large as last year's Palace, which was 120x240. The central building will run up to the imposing hight of 172 feet, the upper 100 feet being a dome. This main building will be in the form of an octagon 166 feet across. In the center will be an open space 78 feet across, without a post or anything to interfere with a view of the whole interior decorations. This space will run up 66 feet with an artistically painted sky at the top, studded with stars of incandescent electric light. The gallery in the Palace will be clear around the interior of the rotunda, 44 feet high, and will be 25 feet wide. This gallery will give every one an opportunity to see all there is to be seen, and it will be adorned with various exhibits as well as overlooking all the rest of the palace.

East of the main building, opening into it by two gates, will be an auditorium to seat 1000 to 1300 people. The band-stand will be between this and the rotunda, so that the music may be heard by every one in the Palace.

At the north of the main building will be another lower structure running back 100 feet. This building will run around back of the main building to connect with the auditorium, and will be 100 feet deep clear around, roofed and concealed by a battlement. There will be grottoes, beautiful and original ideas worked out in corn and showing the wealth of the great agricultural Northwest as well as the ingenuity and artistic taste of her people. One of the wonders in preparation is a miniature Niagara Falls, located so that it will be the first thing to greet the eye of the spectator as he enters the building. Here he will look down to the farthest part of the great structure, 272 feet from the main entrance, with an uninterrupted view 48 feet wide and 44 feet high. The space of one side of the octagon, 48 feet, which is the entrance to the back part of the palace, will be crossed at the gallery floor by a rustic bridge, from which all parts of the palace may be seen.

The decorations this year, both interior and exterior, will be projected on a scale grander and more elaborate than ever before. The exhibition will open September 25th and continue until October 11th.

FLORIST AND GARDENER.

Cacti and Succulents.

[An essay read by F. A. MILLER at the September meeting of the State Floral Society.]

This class of plants, apparently, does not take as well with our people here as other classes of flowering and ornamental plants. This is partly due to the slow growth of some and the short flowering season of others. Some species of the Cacti family produce most gorgeous flowers, and some of the Succulents are extremely ornamental, and when we add to their good qualities the fact that in our favorable climate we can grow them without protection and almost without any care, it seems strange that their cultivation is so much neglected. Here and there we see a cactus in some out-of-the-way place, and occasionally we see a few Succulents about a rockery, while a very few are used for bedding. The cactus family consists chiefly of Cereus, Echinocactus, Epiphyllum, Echinocereus, Mammillaria Melocactus and Opuntias.



THE CORN PALACE OF 1889, SIOUX CITY, IOWA.



THE CORN PALACE OF 1890.

1. The Cereus family includes the most showy flowering species which are met with most frequently. Among them we find Cereus speciosissimus, the most showy of all; its flowers are large, of a beautiful scarlet with a purple or metallic blue shading inside, the numerous stamens being white; usual time of blooming, June to August; plant, three to four angled, erect; its native country is Mexico. Cereus fulgidus, flowers large, orange scarlet, freely produced, from Tropical America. Cereus grandiflorus, the night-blooming cereus, stems five to six angled, climbing. The calyx of its large flower is yellow inside and brown outside. The petals are pure white; very fragrant. The flowers begin to open about 8 o'clock in the evening, are fully expanded about 11 o'clock and then measure 10 to 12 inches in diameter. About 5 o'clock in the morning they begin to fade; it is one of the grandest and most beautiful flowers ever produced by Nature; a native of the West India islands.

Cereus Macdonaldiæ is another most elegant night-blooming species from Honduras, sepals bright red and orange, petals white. There are many other beautiful species, but I will mention only one more, the Cereus giganteus, a native of New Mexico, which has attracted so much attention in late years. This plant grows from 40 to 60 feet high and about two feet in diameter; some of them are branched, most of them are not, looking like huge telegraph poles. The branches issue at right angles from the stem and then grow upward parallel with the main trunk. The flowers are borne at the summit of the stems, four to six inches long and four inches in diameter of a light cream color. The fruits are about three inches long and oval. The crimson pulp is used by the Indians as an article of food and makes an excellent preserve.

2. The epiphyllum, popularly known as fuchsia cactus, is a genus of free flowering plants, blooming during the winter. There are three species and a number of varieties, all natives of Brazil, where they are usually found growing upon the trunks of trees. The leaf-like branches growing out of one another form a neat and graceful, somewhat bushy plant, and the flowers are hanging from the end of the branches. The flowers are all of bright colors, deep scarlet, bright orange red, white-edged purple, bright rose, reddish salmon and other shades. By grafting the epiphyllum upon pereshia stocks, very fine specimens can be obtained of any desirable hight, and these are mos beautiful ornaments.

3. The echinocacti, popularly known as the hedge-hog cactus, are chiefly cultivated for their grotesque forms; although some of them produce very showy flowers, all are more or less fluted and ribbed. Perhaps the largest species is the echinocactus visnaga of Mexico. Fifty-one thousand spines have been counted on one plant; the spines are used by the Mexicans as toothpicks; plants have been found to weigh one ton, measuring nine feet in hight by three feet in diameter. Some very handsome varieties are found in Southern California, Arizona and New Mexico.

4. Echinocereus is a class of dwarfish-growing cacti, not growing over 12 to 15 inches high. The flowers are quite apart but handsome. One of the prettiest species is echinocereus pectinatus of New Mexico. The spines are of bright coloring, the fruit is purple, resembling a gooseberry, and is very good eating.

5. The mammillaria, or pin-cushion cactus, are very dwarfish growth and cultivated only for their odd shapes and forms.

6. The Opuntias, commonly called prickly pears, are interesting, but not so desirable as ornaments. Some of the tall-growing varieties are used for hedges, some bear good edible fruits, while a few of them produce quite showy flowers. One species is largely cultivated in Mexico for the rearing of cochineal insects, the females of which are placed upon the plants in August, and in four months the first crop of insects is gathered, with several more crops to follow.

7. Phyllocacti are cultivated on account of their large white flowers, which are quite fragrant. It has been classified from time to time as Epiphyllum and again as Cereus. It is distinguished from both, however, by the curious, flat, broad, leaflike branches, and by their flowers being produced from the notches along the edges of the branches. The species cultivated here and shown at our floral exhibition is Phyllocactus Anguliger. The flowers are seven inches across. It is a native of West Mexico. There exists also a scarlet flowering species, called Phyllocactus Ackermanni, and a large wine-colored, flowering variety.

Of Succulents, we have about 18 families, some of which are very little known in California. A well-known genus is that of the Agave. The best-known species is that of Agave Americana, or Century plant. Large plants of this species are often found in our gardens, and it is also known under the name of American Aloe, originally found in South America. Mexico has a similar variety, and the variegated form often seen about here is the handsomest variety. The popular belief that this plant only flowers once in a hundred years is erroneous. A large number of them have flowered here at the age of 12 to 15 years. Whenever the plant has attained its majority, it sends up its flower stalk to a hight of 20 to 40 feet, and after flowering it dies. This Agave was first introduced in Europe in 1561. In 1663 the first plant flowered in Paris. The species is not only ornamental, but also useful. The leaves produce a strong fiber for the manufacture of twine and rope; the juice makes a very good soap, which can be used with fresh as well as salt water. The sap also furnishes a beverage resembling cider, and the fresh leaves are cut up in slices and used as fodder for cattle. There are a great number of species. The smaller-growing kinds are cultivated as pot plants, the larger kinds for ornamenting rockeries, vases, terraces and rustic nooks.

Echeverias, popularly called "Hen and Chickens," grow in the shape of rosettes, and are mostly used for rockwork. Some of them make excellent border and bedding plants, and a few, such as Echeveria metallica, make very handsome pot plants. They thrive well without much moisture or care, and when water is scarce for irrigation purposes, nothing can replace them. There are over 100 species; three species are found in California.

Aloes. These are a very interesting class of plants, having most peculiar forms. They show great diversity of hight; some are very dwarfed; others grow 10 to 12 feet high. The flowers of many kinds are quite brilliant. A most important product from this genus is the drug known as "aloes," which is obtained from the resinous juice of the leaves. There are a great number of species, many of which are cultivated as ornaments. They require scarcely any moisture and are easily taken care of. Some of them are so peculiarly marked that they will necessarily excite your admiration. For rockeries they are most useful.

Mesembryanthemums. These are a very important class of plants for bedding purposes as well as for hanging baskets and vases. About 150 varieties are cultivated in European gardens. The upright-growing kinds produce a great mass of brilliant flowers, and as they can be grown almost without any irrigation, they are most desirable on that account. Banks and terraces can be covered with them at very little expense. I hope that every member of this society will experiment with these plants.

Stapelias, a genus of Succulents very well known here, are natives of the Cape of Good Hope. Over 100 species are known. The branches are generally four-sided and toothed, and have an extremely grotesque appearance. The most singular large flowers grow out from most any part of the stems; a great variety of colors, forming exquisite marbled or dotted patterns, makes it a flower of great beauty. In Europe they are extensively cultivated on account of the peculiar shape of the plants and

for their most beautifully marked flowers. There are a number of less important Succulentæ, such as Rhipsalis, Crassula, Sempervivum, Fouroroya, Bryophyllum, Dasylirion, Dyckia, Euphorbia, Garteria, Rochea and Doryanthes; but time will not permit me at present to go into a detailed description of them.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

A LARGE ORCHARD.—Chico *Enterprise*, Sept. 11: Last week General Bidwell had surveyed 700 acres, which will be added to the orchard business of the Rancho Chico. Five hundred acres will be a portion taken from Chico Vecino and 200 acres adjoining Lindo creek, 100 acres of which will be set out in Bartlett pears. There will be 44,000 trees put out altogether in this new orchard, all of the choicest varieties, including French prunes. This, in addition to the 1500 acres already in orchard, will make 2200 acres of orchard on the Rancho Chico.

Contra Costa.

ALMONDS. — Martinez *Gazette*, Sept. 10: Every succeeding year new orchards and vineyards are coming into bearing, and the productive capabilities of different sections are more fully demonstrated. It is a well-recognized fact that within an area as small as the county of Contra Costa there exists so wide a diversity of climate and soil that fruits which grow to perfection in one section will not thrive at all in another, and it is by closely studying these relative conditions that the greatest and most profitable returns can be obtained. San Ramon has established a reputation for almonds among other fruits, and the east side of the county promises to come to the front with the same product. Mr. Jasper J. Jones left with us a lot from the orchard of Alexander Brown in Deer valley, about four miles from Brentwood. They were bleached and ready for market, very handsome and of fine flavor.

Fresno.

CANAL WORK.—Fresno *Republican*, Sept. 12: What is known as the Bank of California tract, beginning ten miles west of Fresno, is now alive with teams and men cutting ditches from the larger canals of the Fresno Canal & Irrigation Company, to conduct water for irrigating purposes to each quarter-section of land. The main canals were cut last winter. This immense tract, comprising about 37,000 acres of land, will, it is understood, be subdivided this fall into colony lots and placed on the market. All lands west of Fresno are looking up splendidly this season. Active work on new canals, the early prospect of two different lines of railroad, and the actual planting of hundreds of acres in raisin grapes during the past year has caused investors to regard west-side lands with favor.

FRESNO COUNTY STATISTICS.—Mr. Recarte, special census agent, will report that there are 47,910 head of cattle assessed in Fresno Co., and he places the number on the ranges at 16,800. The assessment shows 303,599 sheep, while the census will show 175,000 on the ranges. The number of horses is placed at 13,568, and of jennies and jacks at 35. Of foreigners in the business, the French, Basque, Italians and Swiss predominate. The Durham and Devon stock is generally preferred by the men on the ranges, being large framed and heavy and better adapted for beef and the general market. Mr. Recarte's report on Fresno county will be a very flattering one. The cattle here were found in prime condition, the feed abundant, and thrift and enterprise everywhere apparent. A band of 3000 cattle would here be divided about as follows: Cows and calves, 1600; dry cows, 100; yearlings, 600; two-year-olds, 600: and three-year-olds, 100.

Kern.

HOGS DYING.—Bakersfield, Sept. 11: Some fatal disease is prevailing among the hogs on the north side of the river. E. M. Roberts has lost 60 head—all he had. O. Brown has lost 70 out of 75 head, and others have lost in proportion. It is not thought to be cholera, but no other name has been given to it yet.

CATTLE RANCHES.—Bakersfield *Echo*, Sept. 11: Kern county still has some pretty large cattle ranches. O. W. Jackson tells us that on Haggin's Jackson or Poso ranch there are now 30,000 head of cattle, 12,000 of which are fat steers three and four years old. The fields on which they range are fenced.

Los Angeles.

A TOMATO TREE.—L. A. *Express*, Sept. 11: There is a tomato tree at Germain's greenhouse that is a curious specimen of tree culture. It is a native of Guatemala, and the fruit grows in clusters, the tomatoes being smooth and perfectly oval in shape. They are now green, but they will turn first yellow and then to a glowing red, when they will be ripe. They taste very much like the ordinary tomato. This tree is but two years old, and last year it bore a dozen or more tomatoes, and this year the branches are full.

FRUIT FREIGHT FACILITIES.—Pasadena *Star*, Sept. 11: The unprecedented fruit shipments of the present season have created the greatest pressure. There are 1316 cars on the Southern Pacific alone, built expressly for fruit transportation, now engaged in carrying California fruits to the Eastern markets, besides other cars pressed into the service. Of these, 284 are refrigerator cars belonging to the California Fruit Transportation Company of Chicago. There are 125 refrigerator cars belonging to other companies. These refrigerator cars are run on fast-freight time. The Southern Pacific Company owns no refrigerator cars, but has 615 ventilated cars in use, with about 300 similar cars belonging to the Union Pacific. Fruit shipped in these cars is sent through on passenger-train time. These 1300 cars fail to meet the demand, and the shipments would be still greater if cars were plenty. In order to keep pace with the great demand, most of the fruit cars are rushed back empty—an unusual thing in railroad operation.

ORANGE SHIPMENTS. — Pomona *Progress*, Sept. 11: There has been so much speculation concerning the quantity of oranges sent away from this part of the State, this year, that we have taken rare pains and done a good deal of vexatious figuring and letter-writing to obtain exact statements of the orange shipments from all points on the railroads in this region, with the following result:

	No. of boxes.
Los Angeles county	368,275
San Bernardino county	341,940
Orange county	133,141
Ventura county	10,867
Grand total	854,223

ORANGE PRICES.—Bids for the orange crop of next winter have already begun to be made, and they are higher than at any time in three years. Porter Bros., the wholesale dealers in California fruits, told a San Francisco reporter the other day that good seedling oranges would be worth not less than $1.60 a box next winter.

RAISIN PROFIT. — At the present market price, the raisin-growers of California can easily net from $200 to $275 an acre; but there are some vineyards bearing such heavy crops that the property will yield crops worth over $350 an acre.

PRICES FOR WINE GRAPES.—L. A. *Herald*, Sept. 7: The San Gabriel Wine Company is contracting to buy grapes at $13 a ton, and dried wine grapes have gone up to $70 a ton in two weeks. The men who bought grapes at $7 and $8 a ton for drying purposes will make about 150 per cent on their investment.

Mendocino.

HOPS.—Ukiah *Republican*, Sept. 13: The hop-picking season is now about over and the laborers have returned home. The crop in this valley was lighter than expected, but the hops are all first-class; so if we have not the quantity of former years, we can content ourselves with the fact that we have the quality. Hops are worth from 30 to 35 cents per pound.

Monterey.

FIRST FRUIT SHIPPED EAST.—Salinas *Democrat*, Sept. 13: The first fruit perhaps ever raised in this valley and shipped East for sale, was a lot of 200 boxes of Bartlett pears, which last week were shipped by Chauncey Dayton to a party at San Jose and there repacked and sent in refrigerator cars to Chicago, where they were sold in 40-pound boxes at $4 per box, or at the rate of 10 cents a pound.

BARLEY YIELD.—Salinas, Sept. 14: A. J. Brahmer owns 70 acres of land near Salinas. He raised on this 70 acres 1452 sacks of barley of 111 pounds each, or 1611 centals, or 3300 bushels, which he sold at $1 10 per cental. William Bardin raised on 68 acres near Salinas, 2159 sacks of barley, of 112½ pounds to the sack, which he sold for $1.07½ per cental. James B. Iverson on ten acres got of Chevalier barley 272 centals, or 545 bushels.

SUGAR BEET PROFIT.—Salinas, Sept. 14: James B. Iverson raised 11 tons of sugar beets to the acre, for which he got $5 75 a ton. Ira Tucker from ten acres of sugar beets got $564.

SUCCESSFUL FARMING.—Salinas, Sept. 14: Mr. Mercer seems to be a successful farmer in a small way, added to his other occupation of wagon-maker and machinist. He grows beets one year, next year barley, wheat or beans. The land is always in fine condition and the yield is big; this in consequence of rotating crops. The Hanson Bros. have raised a large crop of beans this year off 157 acres. The pink beans they sold for $2.75 a cental. Next year this land will be sown to barley or wheat and another 160 acres or more will be used for beans. They have grown wealthy in consequence of successful farming. A rotation of crops will have to be followed to keep the land clean; otherwise all our lands will become valueless for farming.

Orange.

PAMPAS PLUME FARM.—Anaheim *Gazette*, Sept. 11: A couple of miles north of town Max Nebelung has ten acres planted to pampas plumes, the crop of which he is now gathering and curing for market. He has some 3500 plants, and will harvest in the neighborhood of 40,000 plumes. Only one acre is in full bearing at present, the plants being about four years old. The other nine acres are set with plants only a year old, but they are yielding satisfactorily. Max has about 20,000 plumes gathered already, and has the ground about his packing-house covered with drying plumes. The sight reminds one forcibly of a snow scene, the white plumes covering the ground for several hundred yards. Three days and nights are required in the drying, and the plumes are benefited by slight fogs, so that it is unnecessary to shelter them at night. A ready market is found for the plumes, which bring about five cents apiece. When the plants on the entire tract reach an age of four years, Max expects the yield will be 100,000 plumes. The plumes are used purely for ornamental purposes, and great quantities are shipped to the East and Europe, where they are worked into large bouquets.

WALNUT ORCHARD.—Los Angeles, Sept. 13: Several San Diego men of means have purchased about 600 acres of land one mile north of Garden Grove, in Orange county, which is to be set to walnut trees. The price paid was from $40 to $60 per acre. The land is said to be well suited to walnut culture. Work of improvement will commence immediately. The tract is owned in small parcels, but it will be worked as though owned by one man. Substantial buildings are to be erected and other necessary improvements made incident to the culture of the walnut. While the trees are growing, potatoes, Lima beans and peanuts are to be cultivated.

San Benito.

GRAIN YIELD.—Hollister *Free Press*, Sept. 12: W. A. Johnson has brought to this office from his Santa Ana ranch a sample of wheat, one stool, which contains over 100 heads. From 325 acres of land, Mr. Johnson obtained 3902 bags of grain, 500 bags being of clevalier barley, 728 bags common barley, the rest Australian wheat. Mr. Johnson is now breaking a pair of twin colts which are perfect mates, and which he will exhibit at the coming fair.

San Bernardino.

LARGE YIELD OF CORN AND PEANUTS.—Chino, Sept. 6: D. Lawson's corn is making a big crop. He brought a stalk to this office a few days ago which is only a fair sample of much of the whole. It is 10½ feet high, with two large and perfect ears. His two acres of peanuts are in splendid condition, and the yield will be large.

San Diego.

EXPORTING WHEAT.—S. D. *Sun*, Sept. 10: Spreckels Bros.' Commercial Company are making arrangements to send at least two cargoes of wheat from San Diego to Liverpool, and it is quite probable that they may be able to ship three full cargoes. From San Jacinto, Perris and other portions of the county, something over 26,000 sacks of wheat have already been purchased. Yesterday six carloads of wheat arrived from San Luis Obispo, having come by the Southern Pacific as far as Los Angeles, and from there to San Diego by the Santa Fe. This was the first consignment of 19,000 sacks of wheat bought of the Porter Land and Water Company. There yet remains in the neighborhood of 200 cars of wheat to be forwarded via Los Angeles to San Diego. It is reported that Mr. Spreckels has also purchased several other large consignments of wheat from the country around Los Angeles, all of which will come to San Diego to be shipped to Liverpool. In all, 500 or 600 cars of wheat will be shipped into San Diego this year for shipment to Europe.

PINEAPPLES.—San Diego, Sept. 11: Pineapples are now approaching perfection in San Diego. The few which were planted as an experiment demonstrate that they can be grown in Southern California with profit.

POTATO PLANTING.—S. D. *Sun*, Sept. 11: A commission merchant interviewed says: I know of one man in the Cajon valley who is planting 50 acres to potatoes. I know another man in the same valley who is planting 40 acres to potatoes and another ten acres. Those that I have mentioned would make 100 acres, and with a good yield will produce 10,000 sacks of potatoes, or 1,000,000 pounds. There will be other large potato-fields planted in the Cajon valley, in the Sweetwater valley, Otay, Tia Juana, and in all the rich valleys in the county. I think I do not overestimate when I say that there will be from 500 to 1000 carloads of Irish potatoes raised in San Diego county this year.

LARGE WHEAT FARM.—S. D. *Union*, Sept 11: In the Temecula valley the Pauba and Temecula Land and Water Company will put 4000 acres into wheat for the first time, all of which, when harvested, will be shipped through San Diego.

SHIPPING HONEY.—San Diego, Sept. 9: Last year E. Lovett shipped 14 cars of San Diego honey, and this year he expects to send about 30. So far he has sent one car of comb honey and eight of extracted honey to New York and Chicago, respectively. Another car of extracted is being packed to leave in a day or two, and next week a car of comb honey leaves, all of it going to Chicago or New York. The product is unusually fine.

San Joaquin.

PLANTING FRUIT TREES.—Stockton, Sept. 5: Hundreds of acres of land in the San Joaquin valley will be planted with trees and vines next spring, and nurserymen may confidently calculate on doing a bonanza business. The reason for the rush next season is twofold. People are beginning to understand the advantages of the soil they possess, and appreciate the profits to be derived from fruit culture. Last season, owing to the unprecedented wet weather, no planting to speak of could be done, so next spring lost time will be made up.

GRAPES WITHOUT IRRIGATION.—Stockton *Independent*, Sept. 10: If any one doubts the feasibility of raising grapes without irrigation he should have seen the evidences displayed in the *Independent* office by A. Starkweather, whose ranch is near Farmington, of seven or eight different varieties of wine, table and raisin grapes of great size and delicious flavor which he has cultivated as an experiment on a couple of acres of his land. He has 100 vines that are four years old, comprising Black Prince, Black Hamburg, Purple Damascus, Muscat, Muscadine, Sweetwater and Gordo Blanco, the last a raisin grape. They yield prolifically, the bunches are large and the grapes equally so, and he is so fully satisfied with his experiment that he proposes to extend his vineyard.

Sonoma.

PHYLLOXERA.—Santa Rosa *Republican*, Sept. 11: Phylloxera has decimated many of the vineyards in Sonoma valley, yet the vineyard men, as a general thing, have reset the land with resistant vines, which are not yet in bearing. This dread vine disease, against which the vineyardist has so far discovered no remedy or prevention, is slowly creeping up the whole length of the valley, having now reached as far as the vines of Henry Bolle and Wm. Appleton of the Upper Los Guilicos. The loss thus sustained in the grape yield will be made up by a greater yield in the mountain and other valley vineyards, which have yet shown no sign of suffering from the vine pest.

ESTIMATED FRUIT CROP.—Santa Rosa, Sept. 11: Green prunes furnished driers and canneries 4000 tons at an average price of $50 per ton. Not less than 5000 tons of green peaches have been disposed of in this manner, used and dried upon the farm, sold and shipped, the average price being $60 per ton. Bartlett pears, 1500 tons at $45 per ton; plums of all kinds, 1000 tons at $30 per ton; blackberries, 300 tons at $60 per ton. It is thought that the apple crop of the county will amount to at least 5000 tons at an average price of $15 per ton. To them might be added of the smaller fruits and berries, strawberries, raspberries, etc., $5000. The grape crop will approximate something like 50,000 tons.

HOP YIELD.—Santa Rosa, Sept. 11: The hop crop, though not as large as last year, will, on account of the largely increased price, add more to the hop-growers' bank accounts. The estimate of the hop crop in the county this season is about 5500 bales, or 1,100,000 pounds.

DRIVING GEESE TO MARKET.—Petaluma, Sept. 13: A drove of over 200 geese were driven into town to-day. They were raised near Guerneville and driven here, a distance of 25 miles, for a market.

GRAPE DRYING.—Cloverdale *Reveille*, Sept. 13: The drying-fields at Porterfield's and Oat Valley are beautiful sights to behold. The acres of trays with the black and green grapes form a contrast of much beauty. To dry the 1000 tons contracted for, many acres of ground will be covered. The progress of this manner of drying will be watched with much interest.

HOP-PICKING RECORD.—Healdsburg *Democrat*, Sept. 11: The best record in hop-picking in this county was made last Friday by E Hohenstein, who plucked 240 pounds in one day. Dan McCann comes next with 230 pounds in the same time. A young lady of Healdsburg, who is not too proud to work in the hop-fields, has established a record for picking that it will be hard for one of her sex to beat. On the 1st she picked 176 pounds, on the 2d, 203, and on the 3d, 207. At the rate paid for picking in that part of the county, this means an average of nearly $3 a day.

Sutter.

COON HUNTERS.—Yuba City *Independent*, Sept. 13: A. D. Case, Lon Case, Charlie Best, Al. Allen and T. E. Case are the boss coon-hunters of Sutter county. One night last week they went down to the neighborhood of Ashford's warehouse and in a little while secured five large coons, and on a night or two later in the same vicinity they captured four more of the thieving "varmints."

Tulare.

LARGE FRUIT ORCHARD.—W. M. McFadden writes, Sept. 8th, from Tulare to the Anaheim *Gazette*: I drove out west to the famous orchard and vineyard of Paige & Morton, containing about 1300 acres and employing since the fruit season began (June 16th) 380 laborers, composed of white men, women, girls, boys and Chinamen. The employes have been picking and caring for 50 tons of fruit daily—first apricots, then peaches, pears and prunes, and now they are at work on the raisin grapes. I never saw such clusters, nor such a crop. It is estimated that each vine will average 75 pounds; many will go over 100 pounds, particularly the Sultanas. It was rumored while we were there that this immense place had been sold a day or two before in San Francisco for $710,000. A large drier, with a 70-horse power boiler and a 20-horse power engine and 7000 feet of two-inch pipe for drying the second crop of grapes, had just been completed at a cost of $7000.

LARGE WHEAT YIELD.—Visalia, Sept. 11: J. J. Kern of Lindsey, Tulare county, raised 150,000 sacks of wheat containing two bushels each. To harvest this immense crop, he had two steam harvesters and two 24-horse harvesters, that cut and thrashed at the same time, and five 24-foot headers and two steam thrashers.

DRYING GRAPES.—Traver *Advocate*, Sept. 11: The drying of grapes is in full blast in the colonies about Traver. The vineyardists and their families—those that have any, and we are sorry to say there are a few who have none—are busy from early morn till dewy eve. The crop is heavy and prices good, so the growers are happy. There seems to be help in plenty to handle the crop, and some of the growers already have their raisins in sweat-boxes. The weather is not so favorable for drying as it has been for some past seasons, there being more

moisture in the air than usual at this time of the year.

WHEAT SURPLUS.—Visalia, Sept. 11: The West Side country will ship 1200 carloads of wheat this season.

MORE FRUIT LAND.—Visalia *Delta*, Sept. 11: A. F. Thompson of Pleasant Valley was in town last week. Mr. Thompson is going in for orange-growing, and he set out last spring 5000 seedlings, which he says are doing finely. Mr. Thompson states that the great desideratum heretofore has been water, and as the farmers have got plenty of it now, fruit-growing will soon become an important industry in that neck of the woods.

GOOD PRICE FOR LAND.—Visalia, Sept. 11: J. S. Robinson sold a half-section of land, one mile west of Armona, set to vines, to Los Angeles parties for $300 per acre. Several sales of real estate have been made recently in that section of this county.

Yolo.

GRASSHOPPERS AND ARMY WORMS.—Woodland *Democrat*, Sept. 11: For the past few weeks, our farmers have been watching their alfalfa crops very closely. The army worm and the grasshopper are both here, although not in such quantities as in the early days. In some cases the crops in young vineyards have been entirely destroyed by them. C. Eakle lost all his grapes by the grasshopper, and others have shared a like fate. In other cases the alfalfa crops have fared badly from the effects of both the worm and the hopper. Mrs. P. Hannum had saved some alfalfa for seed; the worm attacked it and she was obliged to cut it for hay in order to save any of it. Mr. Dopkins, we understand, was caught in the same predicament, while the pastures of those who have lately irrigated and where the clover is just beginning to grow nice and green, are full of the hoppers, and the worms have also attacked many others.

GOOD RETURNS — Woodland, Sept. 13:—Miss Hattie Odlum has a 12 acre vineyard four miles out of town, which produced a very large crop of Zinfandel grapes. The vines are only five years old. Miss Odlum has sold her crop to San Francisco parties, dried in the sweat-box, for $70 per ton, which is as good to her as $20 per ton on the vine.

BIG YIELD OF RAISINS.—Woodland *Mail*, Sept. 13: Our raisin-makers are generally finding that the raisin crop this year is so largely exceeding that of average years that they are woefully short of trays, and are, therefore, at no small annoyance in handling their crops. They are now rushing their work as rapidly as possible and complain of the lack of hands. Mr. Jeff Clanton finds that 6000 vines on his place load 7000 trays of 30 pounds each. He is employing Japanese pickers and is very well satisfied with their work. Mr. Clanton verifies what the *Mail* said some days ago about the extraordinary fine quality of the Yolo raisins this year. This county will eclipse all precedent this year by untold thousands of boxes in the shipping of raisins.

REMARKABLE APPLE TREE—Woodland, Sept. 13: Dr. L. B. Holmes has a wonderful apple tree. Up to this season the tree has behaved itself very well, showing no strange or unnatural tendencies, but this year, not satisfied with yielding its usual crop of Early Harvest apples, it straightway commenced to grow a second crop. What seems so strange is that this second crop is borne upon short twigs that grow straight and stiff from the trunk and major limbs of the tree. Each twig, which is about four inches long, is limited to one apple, and is often leafless, bearing an uncouth and unnatural appearance. But this is not all. Blossoms presaging a third crop of apples are already appearing on this wonderful tree, which seems to put at defiance the common order of vegetable life.

NEVADA.

CATTLE DYING —Virginia *Chronicle*, Sept. 10: Geo. Bradford from Northern Elko says cattle are dying up that way from some unknown cause. They are generally in good condition and mope around for three or four days before they die. The Dayton *Times* says: A number of cattle in Mason valley have died lately of what is known as bloody murrain. S. B. Hinds has lost a dozen or more cattle from this disease, and other cattle-owners have lost from two to six animals. The disease is sudden and fatal. Mr. Hinds has been riding among the cattle right along and has not yet found any sick; they are always dead.

THE STICK OF WOOD IN THE BARREL.—A correspondent of the *Practical Mechanic* writes that he has tried the experiment which has been written about in the press of late, of inserting a stick of wood in a barrel or hogshead of water to prevent its bursting when frozen, and has found it an effective remedy. He says he had no faith in the success of the experiment, but decided to risk one barrel, so inserted a stick about 4x3 inches and let the barrel freeze up solid, and much to his surprise the barrel was uninjured, the ice bulging up around the stick, but not a stave or section of the head started. This is a valuable thing for all to remember.

DURING the heated spell a few days ago, workmen removed a street-car rail at Reading, Pa., and it expanded so much that it could not not put back in its place.

The Colorado Desert.

[Written for the PRESS by C. R. ORCUTT, San Diego.]

The broad alluvial plains lying west of the Colorado river, in San Diego county, California, are generally known under the name of the Colorado Desert. These plains and the contiguous barren hills and mesas have as yet been scarcely explored by man, and only small portions of this region have yet been in any way carefully examined.

Nearly one-half of this arid section of the West lies within the Mexican Territory of Lower California. Altogether it probably exceeds 12,000,000 acres in extent. In all probability no portion of the arid lands of the United States is as little known, but in reality of as great value, as is this great basin, the larger portion of whose surface is below the present sea level, and whose surface is strangely strewn with millions of both fresh-water and marine-fossil shells.

That portion of the desert in San Diego county is rich in mineral wealth, and not destined to always remain agriculturally a desert, even in name.

The Gila desert, in Arizona, is an eastern extension of this arid tract; while on the north the Mohave desert is only separated from it by a low range of sterile mountains.

The Colorado Desert division of San Diego county lies between the San Jacinto range of mountains on the west and the Colorado river on the east, bounded on the south by the Gulf of California and on the north by the eastern extension of the San Bernardino range, which separates it from the Mohave Desert section of San Bernardino county. The peak of San Jacinto, at the northern line of the county, is the highest land in California south of Mount San Bernardino, and rises precipitously from the plains of the desert to the hight of 9000 feet. Its snow-crowned, pine-clad summit appears in strong contrast to the naked, heated plains at its eastern base.

Between San Bernardino and San Jacinto Peaks

There lies the low San Gorgonio pass through which the Southern Pacific railway wends its unimpeded way; and at the summit of this pass is located the thriving town of Beaumont. A few miles farther east is another lively town—Banning, which, with apparently an abundant supply of water, has changed a portion of the desert slope into smiling vineyards and orchards, interspersed with fields of grain. From Beaumont to Indio, for a distance of nearly 50 miles, there is a gradual descent from the fertile lands of San Bernardino valley to the ash-like bed of the famous "Dry lake." This constitutes the Cahuilla valley, bounded on either hand by an austere mountain range some ten miles in average width and 50 miles in length. The wash or drainage from this valley falls into the Dry lake mentioned, and several perennial mountain streams lose themselves very effectually before traversing its bowlder-strewn plain. The Whitewater river at times forms a broad, turbulent stream, flowing from the San Bernardino range; while Snow cerek and numerous other lesser streams run more or less spasmodically from the treeless northeastern slopes of Peak San Jacinto.

The Southern Pacific R. R., after traversing the full length of this, maintains about the same general direction—southeasterly—across the great cheerless plains of the Colorado desert proper to Yuma, a total distance of nearly 160 miles. The old military post of Fort Yuma was situated on a commanding bluff on the west bank of the Colorado river and therefore in California. The town of Yuma is on the opposite bank in Arizona. Fort Yuma was in the extreme southeastern corner of the State, and enjoyed a truly tropical climate, thanks to the great desert that surrounded it.

The Mineral Belt.

The mountain spurs along the western bank of the Colorado river are rich in the precious metals, and mining operations have been carried on there for many years. Besides extensive mines of gold and silver, lead, copper, iron and other valuable metals are known to exist, some of them in immense deposits, but as yet scarcely "prospected."

This rich mineral belt practically extends westward through the entire range of low desert mountains that divide the Mohave and Colorado deserts, but owing mainly to the diffidence of capital to enter a region bearing the name of desert, but little work of development has as yet been accomplished.

On most maps issued in late years there is given an apparently extensive river terminating in the Dry lake. This sometimes appears without a name, but usually it is designated as New river since it has only been known for a few years, and is supposed to have had its origin in overflows of the Colorado river which have occurred in recent years. Twenty years ago

The Colorado River

Wa in the habit of annually overflowing its banks during the time of summer freshets when the snows in the mountains around its headwaters melted. This overflow has not occurred since 1884 until the present year, I believe. There has thus been formed a channel through a deep and rich alluvial bottom, which received the name of New river from the earlier pioneers who crossed this desert.

Along the course of this New river the Indians planted and raised most magnificent crops on the lands which were overflowed, as they still do on the lands near the gulf where they have been compelled to retreat. Corn, melons, squashes and other vegetables and grain reached the rankest growth attainable, and those early pioneers yet speak with wonder of the success which these Indians met with in their agricultural labors.

Not only were the cultivated crops large but the natural vegetation along the New River section was equally rank. The grasses and weeds formed an almost impenetrable mass of vegetation—sunflowers became "small-sized trees," a grain of mustard-seed truly gave shelter to the birds of the air and the country very generally belied its name.

This overflow gradually receded into Dry lake, situated in the northern part of the great basin into which New river naturally drained, and there the water disappeared into the deep, porous soil and sand or quickly evaporated before the heat of a tropical sun.

The surface of Dry lake is of a fine sedimentary character, combined with an immense quantity of vegetable matter, consumed by dry rot and forming what may be called a "dry bog." The lake forms the lowest portion of the great basin, is 250 to 300 feet lower than sea level, and owing to the character of its surface, as above described, cannot be traversed.

Fossil Shells.

At Salton, a station a few miles farther east on the railway, the fresh-water shells are found in countless numbers on the surface of the plain, which evidently once formed the bottom of a lake. These fossils are all in a semi-fossil or semi-silicified condition, and are often drifted into windrows, where they may be scraped up by the quart. *Aurnicola longinqua physas, planorbis ammon* and *anodonta Californiensis*—the latter the common fresh-water clam of the Pacific Coast—are the principal fresh water shells detected among this shell debris, but the surface is strewn with these far to the southward to below the United States boundary line, along the course of New river. Probably the whole of the vast area outlined is below the present sea level, and portions are over 300 feet below—Salton being 250 feet lower than the Gulf of California.

The Old Beach-Line of this Ancient Lake

Or sea is well defined along the railway at the base of the mountains, and can easily be traced, always at the same level, for miles and miles along the eastern base of the San Jacinto and Chuckawalla mountain chains. The rocks are worn and rounded up to this line, sharp and ragged above. This line is even with the present sea level, which would seem to suggest that instead of having been a fresh-water lake, this was formerly an arm of the sea, and indicates that the Gulf of California once extended fully 200 miles farther to the northward than it does to-day. Further evidence tends to confirm this view.

Along the west shore of this ancient sea, as we shall call it (what is now known as the Colorado desert)—at present a vast alluvial plain so surrounded by mountains as to form a huge inland basin—there exist enormous deposits of fossils belonging (in my judgment) to the Miocene age. These are largely composed of oyster and allied shells, and extend from below the present sea level to an altitude of probably a thousand feet above. Some of these deposits are hundreds of feet in thickness, forming large mounds and low hills.

It is evident that the sea occupied this basin during the Pliocene epoch up to a late date, for fossils unquestionably belonging to this period are found on the desert, such as the marine *Ocinebra poulsonii* and the *Solecurtus Californianus*—both of which are found living to-day at San Diego. Dozens of the odd valves of the latter are found strewn on the surface of the ground at Salton, in an excellent state of preservation, and in the same semi-silicified condition as the fresh-water shells with which they were associated.

The remarkable point in this connection is the fact that these marine shells and the fresh-water snail-shells *were found associated together, in the same condition, and apparently belonging to the same geological age!*

The *Physa*, the *Planorbis*, the *Anodonta*, and probably the *Aurnicolas* also, are all to be found living to-day in the waters of the Colorado river—the same species whose external skeletons are so numerous and so freely strewn over the great basin.

The Desert and the Gulf.

It can be very readily understood that the sea must have occupied this basin within, geologically, very recent times. The cause of the separation of this ancient arm from the gulf is very apparent, and the same agency in the sediment from the Colorado river is constantly increasing the barrier between them. Doubtless this separation took place within the history of man, for the Indians still preserve the memory of catching fish along the base of the San Jacinto mountains in an ancient sea, and will point out to the stranger the traps or artificial walled-up pools where they caught the fish when the tides receded.

As I have already shown, it is evident that only a few years have elapsed since this whole expanse was a portion of the Gulf of California—a branch separated by a narrow strait since closed by the sediment and debris of the Colorado river. This is the only way by which I can at present account for the presence of the recent marine shells strewn along the edge of the Dry lake. The Colorado river, flowing into the isolated, shallow sea thus formed, soon changed it into brackish and ultimately to comparatively fresh water. The salt of the sea was precipitated by the evaporation that went on into valuable salt mines (that are now being worked), as the evaporation exceeded the inflow. Meantime the marine fauna had perished, except a few which were able to stand the brackish water—such as Solecurtus Californiensis being the last to succumb. The main branch of the Colorado hurried past to the gulf, and only the overflow, surcharged with the fine reddish sediment, reached the basin.

But this was sufficient to form a great depth of the finest and richest of alluvial soil along its route through New river to the Dry lake. Evaporation was rapid. Few years were probably sufficient after this basin was shut off from the sea and the main branch of the Colorado river flowed into the gulf before it virtually became what it is to-day, a barren, desert plain, which occasional overflows are able to convert into a garden of tropical luxuriance.

The Colorado's overflowing its banks doubtless resulted in such a condition of affairs as Dr. R. E. C. Stearns suggests—a system of shallow lagoons just adapted to the multiplying of the pond and river snails from the Colorado. These lagoons must have been of sufficient duration to allow of the maturing of the fresh-water mussel, and still they may have been dry a good portion of the year, as is now the case.

An Inhospitable Region.

Leaving the discussion of the geological problems that confront us to some more convenient time, we will return to the present. It is truly something fearful to contemplate these scorching plains as they exist to-day, with the sun beating down upon the drifting sands with an intensity of heat that often raises the temperature to 130° or even 140° F.

Woe to the adventuresome spirit that ventures unadvisedly at such a time as this upon the stony trails leading into this inhospitable region. Many a man has left his bones to bleach in the clean, white drifts of sand, and the skull of one of these unfortunates rests within my museum as I write. And how many others have left their earthly tenements to decay in poisonous springs of alkaloid or other mineral water, after quaffing their last welcome but fatal drink! Only the coyote and the scorching winds can tell.

Still, many more stand ready to take their chances in the insatiable greed for gold—gold, which if found, might only prove more deceitful than the false mirage—only tempting them on to both temporal and everlasting ruin.

Oh! what beautiful visions arise to the weary eyes. What entrancing landscapes lie spread out before the traveler. Lovely streams of water seem dancing over sands of gold, and placid lakes surrounded with trees and palatial residences invite the unwary to their destruction. What hopeless agony must the poor deluded victims suffer, when, with staring eyes and lolling tongue, they realize too late, and sink to their last rest upon the burning sands. Perhaps, however, they are spared the pain of realization. Let us hope so at least. The hundreds of beautiful variations assumed by this natural phenomenon have often been described, and to one in safety are ever a source of pleasurable wonder and speculation.

Wild Flowers.

There is another side, however, to the picture we have drawn—one more pleasing to contemplate, though it may seem to the uninitiated scarcely less visionary than the optical illusions just mentioned. In early springtime—if there has been sufficient rain, as is *sometimes* the case—these plains are transformed into a vast garden of the choicest flowers in innumerable variety. Every color of the rainbow is imprinted on the smiling faces about you, and the traveler may roam at pleasure among the imperial beauties of a fairy queen's throne-room.

The stately day lily nods its head familiarly to the multitude of humbler flowers that have sworn it allegiance. The foot treads over carpets of vari-colored Gilias. The butterfly tulip startles the eye with its brilliancy, blue-eyed Phacelias, beds of the Golden Eschscholtzia, and numberless other flowers in every form and coloring challenge attention.

The wild fruits and native productions of a country furnish to the thoughtful observer a slight index to its capacity for the production of other fruits and flowers. If capable of growing in a favorable season such wealth of floral beauty, is not this so-called desert capable of better things? If flowers that are destined to "bloom and waste their sweetness on the desert air, and blush unseen," find congenial surroundings here, may we not believe that man may transplant others for his use and delectation?

Palm Trees.

The traveler on the Southern Pacific railway may observe something dark and indefinable against the barren and distant hills near Indio. On investigation this will prove to be a forest of thousands of wild palm trees, the fine Washingtonia filifera, which has become so characteristic of Southern California gardens. Here they grow naturally in the greatest luxuriance, some attaining an estimated hight of over 100 feet. Thousands of others exist in the deep and rugged canyons, where they assume proportions as yet unequaled anywhere by this favorite Californian fan palm where it is in cultivation.

The presence of these trees here in their

thriving condition naturally suggests the adaptability of the country for the date palm, which, I believe, is destined to prove an important factor in the future development of this region. The wild palm has provided past generations of Indians with the means of existence in its small, sweet, black fruit; the date may support many future generations of our own race. Its success can scarcely be doubted in the face of experience with the date in Southern California and Arizona.

Irrigating Arid Lands.

No greater problem is before the American people to day than how they shall treat our arid lands. All portions of the arid regions of the West are capable of the highest degree of cultivation. The key of the situation is irrigation. No part of the vast area termed arid in the West will prove more susceptible to kind treatment than the now feverish, parched, dreary waste—exceeding 5,000,000 acres in extent—designated on modern maps as the Colorado Desert.

California, formerly famous for her wealth of gold, and now equally and justly famed for her excellent fruits, has no more important possession than this neglected southeastern corner, which some day will greatly enhance the fame of our beautiful State.

Future generations may see it become one of the most densely populated and wealthiest sections in the State. Here the date, the banana, the mango, and all the luscious fruits of Asia, Australia and tropical America will flourish as nowhere else within the present limits of the United States.

To review, even briefly, the natural resources, the mineral wealth, the questions of geological moment, of climate and the great horticultural possibilities of this region, would consume a good-sized volume, but I hope the rural population of California may gain a better idea of this portion of the nation's arid lands, and not be entirely ignorant of its existence within our boundaries.

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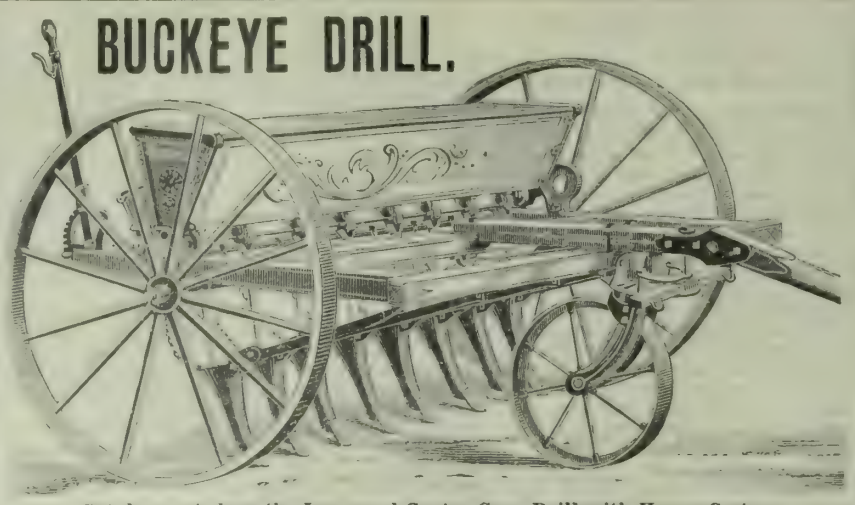
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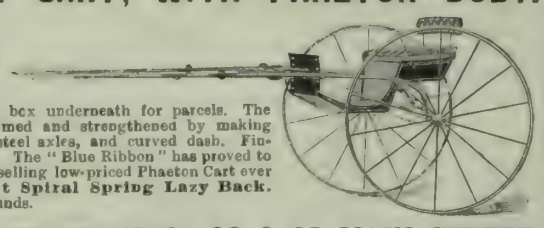
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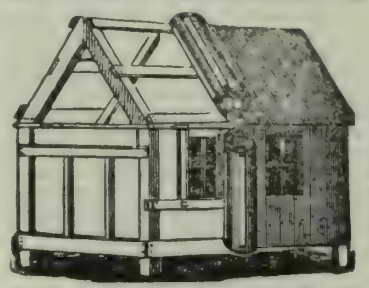
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THE IRRIGATOR.

The Tulare Convention.

The telegraphic reports bring an outline of the proceedings of the Irrigation Convention at Tulare last week, which we give below, reserving the right to give fuller allusion to special branches of the convention's work as fuller reports come in :

TULARE, Sept. 12.—The State Convention of the irrigation districts of California met at Tulare to-day. Delegates were present from 14 districts—about half in the State. Many prominent friends of the district system, not district officers, were also present, and have taken an active part in the proceedings. Among others were O. C. Wright, author of the present law, and I. R. Wilbur of San Francisco.

The association was organized permanently by the election of J. R. McDonald of the west side of the San Joaquin president, and J. E. Anderson of Poso secretary, E. Oakford, Tulare, assistant secretary.

The sentiment prevails that while the law needs amending in several particulars, its principles are right, and it is along that line that the battle is to be fought out.

A Legislative Committee of five was appointed, to be aided by an Advisory Committee of one from each district in the State, as follows :

E. H. Tucker, W. S. Green, C. C. Wright, L. M. Holt and J. W. Nance.

Evening Session.

Upon motion the convention proceeded to the organization of a State Irrigation Association, to be composed of one representative from each district. Following is a list of names submitted : Perris district, J. W. Nance; Central district, H. B. Eakles; Selma district, Wm. A. Caruthers; Anaheim district, Thos. Spencer; Vineland district, I. N. Rhodes; Modesto district, Frank Cressey; Elsinore district, J. C. Chambers; Alta district, P. Y. Baker; Kern and Tulare district, E. D. Morton; Big Rock Creek district, J. S. Wilson; Escondido district, R. R. Beavers; Poso district, B. C. Dorsey; Murietta district, H. S. Mason; Tulare district, E. De Witt; Palmdale district, S. P. Cull.

L. M. Holt introduced the following on irrigation data and statistics :

Irrigation District Data.

The following data regarding the irrigation districts of the State have been carefully prepared from reports from the secretaries of the various districts. Seventeen districts have made reports, of which number 12 have voted bonds, and these 12 are given in the annexed table. Some 10 or 12 districts have made no report.

The following table shows the returns from 12 of the irrigation districts of California, giving number of acres, amount of bonds voted, amount of bonds sold, and the amount of bonds per acre in the districts that have voted bonds.

District and County.	Number of Acres.	Bonds Voted.	Bonds Sold.	Bonded Debt Per Acre
Escondido, San Diego	12 814	$450 000		$35 12
Big Rock Creek, Los Angeles	30 400	500 000	$150 000	13 16
Vineland, Los Angeles	4 500	150 000	50 000	14 21
Anaheim, Orange	32 500	600 000	300 000	23 46
Palmdale, Los Angeles	50 000	175 000		3 50
Modesto, Stanislaus	81 500	800 000	117 000	9 85
Browns Valley, Yuba	43 000	110 000	80 000	2 54
Turlock, Stanislaus and Merced	166 316	600 000	310 000	3 40
Central, Colusa	156 550	750 000	225 000	4 79
Tulare, Tulare	36 707	500 000		13 94
Madera, Fresno	305 000	850 000		2 78
Alta, Fresno and Tulare	129 927	675 000	414 000	5 20
Totals	1 050 244	$5 960 000	$1 672 000	
Average				$6 62

It will be seen by this summary of reports that the 12 districts contain 1 059,244 acres of land. That their bonded indebtedness as voted amounts to a total of $5 960,000, and that of this amount of bonds $1,672,000 have been actually sold. Of this sum, $560,000 in bonds were exchanged for water and water rights at par, and the sum of $1,142,000 in bonds was sold for cash at prices ranging from 90 to 96 cents on the dollar. The average amount of bonded indebtedness to the acre amounts to only $5.62. Four districts out of the 12 have sold no bonds. The bonds voted by these districts amount to $1,975,000. The other eight districts have voted to the extent of $3,985,000, of which $1,672,000 have been sold.

Second Day.

TULARE, Sept. 14.—The convention of irrigation district officers, which convened at Tulare yesterday, concluded its labors last night and the delegates left for home. The session has been extremely interesting throughout and completely successful.

A permanent association of irrigation districts was formed with J. W. Nance of San Diego county as Pres.; E. De Witt of Tulare, Vice-Pres.; A. J. Pillsbury of Tulare, Sec'y; Tulare County Bank, Treas. A board of five trustees, consisting of J. W. Nance of Perris district, E. De Witt of Tulare district, J. S. Wilson of Big Dry Creek district, Los Angeles county, and H. S. Maron of Murietta district, San Diego county, was chosen to transact the association's business when it is not in session.

By-laws were adopted and machinery perfected for concerted action in the work of organizing the districts, having doubtful points passed upon by the courts, securing needed legislation and placing district bonds. The sentiment was general that the formation of the association would be productive of very important results. The following resolutions were adopted:

WHEREAS, The people of California have won a valuable victory in securing the enactment of the Wright Irrigation District law; whereas, the Supreme Court has declared that the said law is in conformity with the organic law of the State; whereas, eight irrigation districts which voted bonds of $3,985,000 have succeeded in finding a market for nearly half of the issue ($1,672,000), selling bonds for cash for 90 to 96 cents on the dollar of their par value; whereas, the enemies of irrigation districts are still using money to defeat that law not only in the courts, but by threatened appeal to the next Legislature; whereas, we firmly believe that the salvation of the State and the best interests of the people demand that the Wright law should be sustained and perfected; whereas, a united and determined action on the part of the friends of irrigation is essential at the present time; therefore, be it

Resolved, That the people have confidence in the Supreme Court, which has stood by the irrigation laws in the face of bitter attacks, declaring them right, just and in conformity to the Constitution of the State.

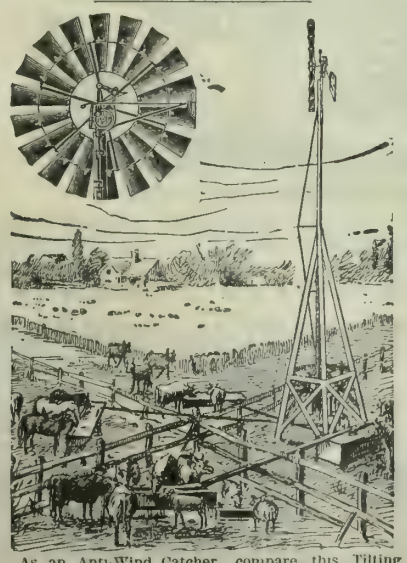
Resolved, That we believe the financial success of irrigation bonds is now assured, and we congratulate the people on the fact that moneyed men are seeking these bonds as safe investments that have their foundation in the homes of the people, and are not jeopardized by strikes, railroad wars or other matters incidental to railroad bonds.

Resolved, That we pledge ourselves to each other that we will, regardless of political affiliations, support no man for office who is not known to be unqualifiedly in favor of the Irrigation Act, and in favor of its perfection in the spirit in which it was enacted.

Resolved, That we heartily approve the organization of a State association of irrigation districts, and that the work of such an association will not be completed until every acre of dry land in the State shall have been successfully irrigated, and every bond issued in such irrigation work shall have been honestly paid, principal and interest.

Fairs to Come.

S. F. Mechanics Institute, Sept. 18–Oct. 25.
Nevada State Fair, Reno, Sept. 22–27.
Stockton (2d Dist.), Sept. 23–Oct. 4.
Rohnerville (9th Dist.), Sept. 22–26.
Quincy (11th Dist.), Sept. 22-27.
Lakeport (12th Dist.), Sept. 23–27.
Nevada City (17th Dist.), Sept. 23–27.
Independence (18th Dist.), Sept. 23–26.
Concord (23d Dist.), Sept. 22-27.
Redding (27th Dist), Sept. 23–26.
Southern Oregon, Central Point, Sept. 22–27.
No. Pac. Industrial, Portland, Sept. 25–Oct. 25.
Salinas (7th Dist.) Sept. 30–Oct. 4.
Fresno (21st Dist.), Sept. 29– Oct. 4.
Escondido (22d Dist.), Sept. 30–Oct. 2.
Yreka (10th Dist.), Oct. 1–5.
Watsonville (24th Dist.), Oct. 1–4.
Spokane Falls (N-W Ind. Exp.), Oct. 1-Nov. 1.
Walla Walla, Oct. 6–11.
Susanville (Lassen Co.), Oct. 6–10.
Visalia (15th Dist.), Oct. 7–11.
Arroyo Grande, Oct. 8–10.
Los Angeles (6th Dist.) Oct. 14–18.
Santa Cruz (14th Dist.) Oct. 15–18.
Santa Barbara (19th Dist.), Oct. 21–25.
San Bernardino (28th Dist.) Oct. 21–25.



As an Anti-Wind Catcher, compare this Tilting Tower and its Aermotor with an ordinary Windmill and you will find that it presents but a tithe of the wind surface to the grasp of the storm that the other does.

NURSERY STOCK WHOLESALE.—Hooper, Bro. & Thomas of the Maple Avenue nurseries, West Chester, Pa., have issued their semi-annual trade-list—a neat 16 paged pamphlet—for nurserymen, florists and dealers only.

THE attention of sheep and cattle-owners is called to the advertisement on page 261 of Chloro-Naptholeum, a non-poisonous sheep dip. Its cheapness and efficiency certainly commend it to all interested in domestic animals of all kinds. It is also a disinfectant of superior merit.

State Fair Notes.

[Written for the RURAL PRESS by F. S. C.]

The Colusa County Exhibit

Although your correspondent has explored every crack and corner of Colusa over and over again in the line of duty, he never before realized its variety and wealth of resources as when viewing the large and tasteful exhibit prepared under supervision of Mr. W. H. Jones.

He began by testing the mineral waters from Cook & Fout's Springs. Then came decorations of olives and palms. Corn was there from the ranch of Senator Boggs, with ears eight feet from the ground. Fancy the owner standing on tiptoe on the back of a horse trying to pluck a roasting ear and you will gain an idea of that corn-field. Mr. C. C. Felts of Maxwell shows samples of wine from his famous vineyard that look well—but further, deponent saith not. Brust Bros. of Brustdale show Bloodgood pears at least twice as large as we have been accustomed to see.

Mr. Newlands shows fine almonds; sheaves of wheat form the background of the decorations.

L. F. Moulton shows a great variety of dried fruits and sample of sorghum of which he is beginning to make something of a business.

The Colusa Canning & Drying Co. shows almost all varieties of dried fruits and a great variety of canned goods. This is an industry organized last year, and now grown to such dimensions as to employ 100 hands. They have started to build up a permanent reputation for their county by selling goods exactly as represented, consulting the consumer's interests in packing, and wherever goods are sold prominently displaying a card inviting correspondence relative to quality of goods and demands of consumers. Last year's goods brought many commendations, and this year's pack is selling in advance.

Mr. Catlett shows blackberries wonderful in size.

Chas. Richter, fine samples of White Smyrna figs.

H. H. Harlan, fine display of Angora rugs dyed in fancy colors. T. H. Harlan and Julius Weyand, both prominent breeders of Angoras, show fine display of mohair.

Gustav Weyand shows white wine in beautiful bottles.

J. Rathbone has proven himself quite a prospector the past summer by the discovery of a very fine quality of petroleum flowing from the surface of the ground in the mountainous section in Southwestern Colusa. He has also established salt works on the ranch of Peter Peterson near Sites, and shows some crystal salt of remarkable strength and purity. The writer has seen it bubbling from springs as clear as crystal, and seen it glistening and sparkling in the sun as tons of it lay near the vats at the works.

"Beats grow beets." This was suggested by the gentlemanly exhibitor when calling attention to a 60-pound beet raised by inmates of county hospital. No doubt the beet was raised where some are beats; but is it too much for our charity to look upon the condition of the majority of those as the beaten in life's race?

G. W. Hicks shows tobacco, and Mr. Hennica of Indian Valley shows the genuine rope hemp.

In a large display of vegetables are some watermelons weighing 90 pounds each.

J. B. DeJarnatt of Colusa shows some Indian Cling peaches, 3½ inches in diameter.

J. D. Rosenberger shows pears of remarkable size, called the Lady Isabella, measuring 14 inches in circumference one way and 16 the other. Mrs. Sam Gilmour of Grimes Landing showed very fine pomegranates. Borden & Burkey show a fine display of vegetables, among them egg plants 36 inches around and peppers to delight a Spaniard's heart.

In the mineral collection appears a sample of gold quartz assaying $200 per ton from the Clyde mine, and some hydraulic cement from Smithville, which attracted our attention. Forty-four different kinds of wood are shown, and it was not much of a day for varieties of wood, either.

G. W. White shows fine samples of honey.

A Fuel Saver is shown by G. W. Farnham of Germantown. It is an invention that he used at home many years before bringing it out. The point is to prevent heat and smoke from going up chimney and still preserve a good draft. Many were sold at Colusa last winter, and buyers generally estimated that it saved from a fourth to a half the fuel. If it saves a tenth in these days of high prices it is of great benefit. Mr. Green of Colusa *Sun* gave it credit for saving from fire the house of a prominent citizen last winter.

Sylvester's weed-cutter is an arrangement for running a strong knife under the surface, not permitting a weed to escape. Then comes a heavy wire rake with an easy dumping apparatus. In cleaning morning-glory, quack grass, or any other that propagates from runners under ground, you gather them all up in winrows and burn them. In raking grapevines or cornstalks you remove the cutter and have just the strong, easy-dumping rake you need. The implement is as strong and easily handled as a good gang plow, and is not only the thing for orchards and vineyards, but the very tool for clearing summer-fallow from weeds.

Colusa's show at the park begins with Peterson's herd of 20 Shorthorns, equal to any on the grounds in beef points, and at the same time showing remarkable milkers. The uniformity of the herd attracts the attention of all, and it is the general verdict that they were never before shown in so good condition. They expect their share of blue ribbons.

Thomas H. Harlan of Colusa shows 25 very fine Angoras. Constitution, luster and fineness, and length of staple are the points Mr. Harlan is breeding for, and the appearance of the goats shows long and careful breeding in these directions. He has a very large band at home and inquiries for young stock are active.

J. D. Rosenberger of Sites shows four fine jacks as a sample of 13 he has at home.

Cooper of Colusa is showing some saddle-horses nicely gaited, and makes a specialty of single-footers. If any have been omitted it was because the writer was hurried with too many demands upon his time, and he hopes to make peace later on. Mr. W. H. Jones received as he deserves general commendation for the extent, excellence and taste of his display.

The Sacramento Display.

This has been superintended by A. A. Krull, who has spent a large part of the summer in making and arranging the display. Among other things, he has collected some 200 specimens of grasses from both sides of the river.

The Natoma Vineyard makes a very fine and large display of table and wine grapes.

W. S. Manlove shows a large variety of fruits, making shipping grapes a specialty.

Mrs. J. T. Olbert makes a very large and fine display of pickles and preserves.

Robert E Greer of Fruit Ridge, near Sacramento, shows a large assortment of fruits of fine quality, all raised without irrigation.

Mrs. Shields of Routier makes a large display of fruits, covering a table 20 feet long.

Mr. Krull collected from the whole county specimens of fine fruit and preserved the same in glass jars. Of these, he made the base of a statue surmounted by a large figure of Pomona. Ceres had a similar representation of the grains of Sacramento, and Flora stood upon a magnificent display of flowers from the Bell Conservatory. It would have made a fine impression if we could have had such a display in the hall where they were received.

The Soap Works show great blocks, like building stones, made from their goods, and two of the columns are surmounted by very lifelike busts of Henry Clay and Daniel Webster.

Senator Johnson shows a fine refrigerator filled with fancy Jersey butter.

Miss Anna McConnell shows a fine display of fancy work.

There are many curiosities in shells.

The ladies show bread, cake and various triumphs of the culinary art enough to feed an army.

Joseph Sims shows a collection of fruits.

Galt's display is being arranged by Mr. McFarland. He has already in place cheese, fruit, grapes, etc., and from space occupied, evidently intends to have a very creditable showing for his section.

Mrs. Muddox makes a great show of pickles and preserves.

Mr. Geo. Muddox shows goods from his store consisting of sewer and water-pipe and a general line of pottery-ware.

The veteran hop-growers, Daniel Flint and Mr. McGregory, show samples of remarkably large and fine hops, both on the vine and in the bale.

J. H. Butler of Florin shows the pomelo or citron.

A pyramid of cotton and corn is mounted by an immense squash with a sunflower overhanging.

Castor beans make a tree for poultry to roost upon, three inches through at the base and 16 feet high. This was raised by Mr. Elder of 21st and J streets.

A large block of building stone shows important natural resources.

Mrs. Krull and Mrs. Flint show a very tasty stand of fruit and flowers.

The merchants of Sacramento make many large exhibits. Among them we noticed the sheet-iron miniature house of Huntington & Hopkins and their show of hardware.

At the Park, Eaton and Smith of Florin each shows a fine herd of Jerseys. P. Stanton of Brighton shows another herd.

Dr. Nixon shows the Argonaut herd of fine Polled-Angus cattle. J. E. Camp of Perkins shows the American River herd of the same breed. Besides the 13 head shown, he has three pure bred and 70 grades at home.

Time fails to notice horse and poultry departments of the Sacramento display. Before this she has refrained from competing for the premiums for county displays, and this year shows them what she can do.

California's Stallions.

I beg to announce that, with a view of perpetuating the forms and characteristics of the leading stallions of California, I am issuing a series of lithographic likenesses. Each portrait issued will be an acknowledged likeness, the result of a close study of the horse and an artistic treatment of the subject. In order to secure for the series an immense advertising value, from a breeder's point of view, 4000 copies, at least, of each portrait will be issued.

Terms, $100 for first issue of 100 copies. In quantity, for advertising purposes, copies will be furnished at low rates.

H. BOYD, Artist.
268 Golden Gate Ave., San Francisco.

Breeders' Directory.

Six lines or less in this Directory at $4 per line per month.

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JERSEYS—The Best Herd, all A. J. C. Registered, is owned by Henry Pierce, San Francisco.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

M. D. HOPKINS, Petaluma, importer and dealer in Eastern registered Shorthorns, Red Polled Cattle, Holsteins, Devons and Shropshire Sheep.

GEO. B. POLHEMUS, Coyote, Cal. Holstein-Friesian cattle, comprising males and females on advanced register. First premium at great milking test at State Fair, 1889, was won by a member of this herd.

PETER SAXE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 18 years, of every variety of Cattle, Horses, Sheep and Hogs.

HENRY HAMILTON, Westley, Cal., breeder of Kentucky Jacks and Jennies, Draft Horses and Holstein Cattle. Jacks, Horses and Mules for sale.

JERSEY BULL No. 408 P. C. J. C. C. for sale cheap. A fine four-year-old animal. Address Dellwood Poultry Yards, Napa, Cal.

IMPORTED REGISTERED CLYDESDALE Horses and Holstein Friesian Cattle from the most noted families. H. P. Mohr, Mt. Eden, Alameda Co., Cal. Visitors welcome. Correspondence solicited.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

CHARLES E. HUMBERT, Cloverdale, Cal., Importer and Breeder of Recorded Holstein-Friesian Cattle. Catalogues on application.

WILD FLOWER STOCK FARM, Fresno Co. A. Heilbron & Bro., Props., Sac. Breeders of thoroughbred strains and Cruikshank Shorthorns; also Registered Herefords; a fine lot of young bulls in each herd for sale.

PERCHERON HORSES.—Pure bred horses and mares, all ages, and guaranteed breeders, for sale at my ranch near Lakeport, Lake Co., Cal. New catalogue now ready. Wm. B. Collier.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. None better.

REGISTERED HOLSTEIN CATTLE. Also best thoroughbred Poultry and Eggs. Address Hibbard & Ellis, Santa Rosa Breeding Association, Cal.

P. H. MURPHY, Perkins, Sac. Co., Cal., Breeder of Recorded Shorthorn Cattle and Poland China Hogs.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

P. PETERSEN, Sites, Colusa Co., Importer & Breeder of registered Shorthorn Cattle. Young bulls for sale.

POULTRY.

IF YOU KEEP ANY KIND OF FOWLS, Pet Stock, Dogs, &c., it will pay you to send your address at once to C. R. Harker, Santa Clara, Cal. You cannot afford not to do it. It will cost you but one cent and you will receive something worth ten times that.

PURE PEKIN DUCKS for sale cheap at Dellwood Poultry Yards, Napa, California.

CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

DELLWOOD POULTRY YARDS, Napa, Cal. Large lot of fine young birds for sale. Eleven Breeds.

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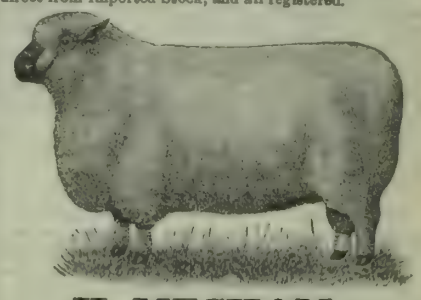
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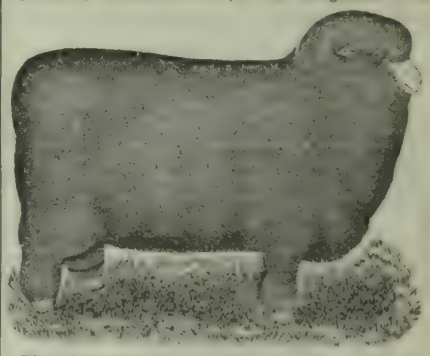
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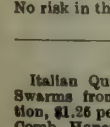
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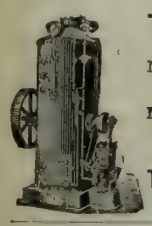
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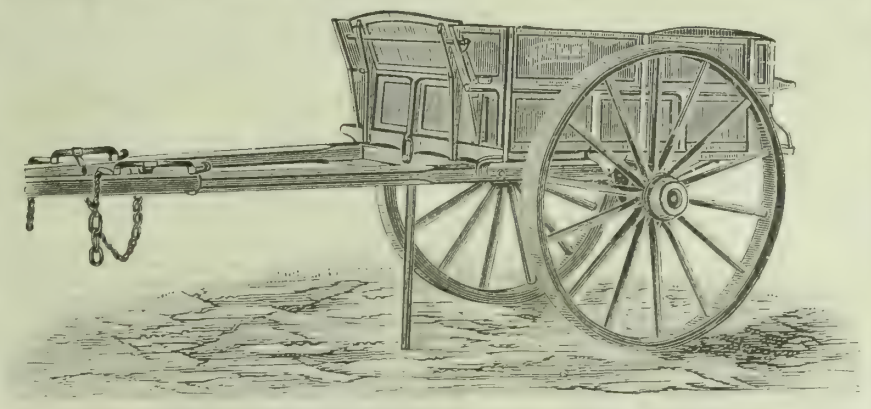
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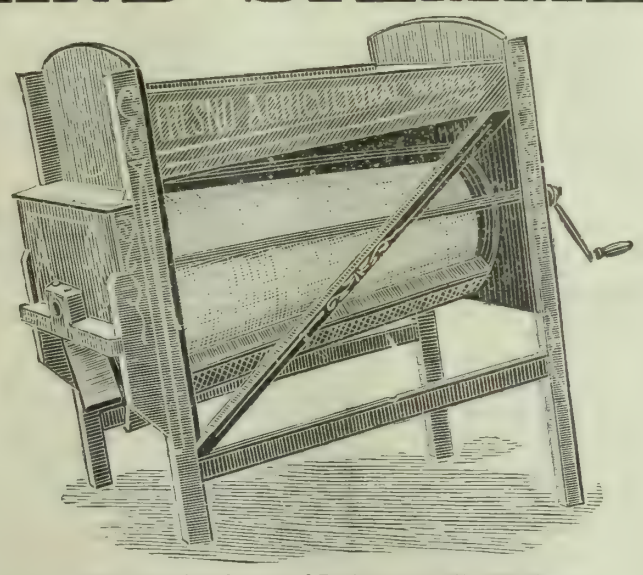


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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Sept. 17, 1890.

Trading the past week in farm products was quiet at generally steady figures. Cereals exhibited continued strength in barley and corn, but oats and wheat were easier. At the East, and also abroad, wheat shaded off under a decline in silver and a money stringency bordering on a panic brought about by a scare regarding the new tariff bill becoming a law and going into effect on October 1st; more time being required by importers and business men in general to adjust their affairs to the new order of things. The following is to-day's London cable:

LIVERPOOL, Sept. 17.—Wheat—Quiet. California spot lots, 7s 2d to 7s 4d; cargoes off coast, 37s 3d to 37s 6d; just shipped, 37s 6d; nearly due, 37s 6d; cargoes off coast, steady; on passage, quiet but steady; Mark Lane wheat, quiet.

Foreign Grain Review.

LONDON, Sept. 15.—The London *Mark Lane Express* says: Glorious weather prevails. The farmers have secured their wheat and much of their oats. Barley is in excellent condition. All the cereals are frequently rather over the average in yield per acre. The quality and condition is probably average. Old English wheat during the week was scarce. New ranged at 32s to 38s. The foreign trade was against the holders in the first half of the week, but the United States official report caused a reaction. Oats and maize are weaker. At to-day's market of English wheat, buyers were less eager, confident of an easing. Foreign wheat is irregular. Flour is firm. Oats are stronger under prospect of a diminution of winter supplies. Maize—Russian advanced 3d and was hardening. Round Maize is quoted at 22s 6d; flat, 23s; yellow, 20s. Rye is dearer.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Sept.	Oct.	Nov.	Dec.	May.	Jan.
Thursday	7s4¼d	7s6d	7s6d	7s6½d	7s6d	7s6d
Friday	7s4¼d	7s5¾d	7s6d	7s6½d	7s6d	7s6d
Saturday	7s4¼d	7s5d	7s5¾d	7s6¼d	7s6¼d	7s6d
Monday	7s4¼d	7s4½d	7s5½d	7s6d	7s6d	7s6d
Tuesday	7s3¼d	7s3½d	7s4¼d	7s5d	7s5d	7s5d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	37s6d	37s6d	37s6d	Firm.
Friday	37s6d	37s6d	37s6d	Firmer.
Saturday	37s6d	37s6d	37s6d	Quiet.
Monday	37s	37s6d	37s6d	Quiet.
Tuesday	37s7d	37s6d	37s6d	Easier.

Eastern Grain Markets.

The following shows the closing prices of wheat in New York for the past week:

Day.	Sept.	Oct.	Nov.	Dec.	May.	June.
Thursday	106	107	108¼	109⅝	113⅝	...
Friday	105¾	106	107⅝	108⅜	113⅝	...
Saturday	104½	105	106⅜	107⅜	112	...
Monday	103⅝	101⅝	....	104⅜	108⅜	...
Tuesday	101⅜	102½	104	105¼	109⅝	...

The closing prices for wheat have been as follows at Chicago for the past week:

Day.	Oct	Dec.	May.	June.
Thursday	104	106½	110¼	...
Friday	103½	105⅝	110⅝	....
Saturday	101⅞	104⅛	108⅛	...
Monday	98¾	101	105	....
Tuesday	99	101⅜	106	....

CHICAGO, Sept. 17.—Wheat—$1 04¼ for October, $1.02½ for December and $1.07 for May.

NEW YORK, Sept. 17.—Wheat—$1.03½ for cash, $1.06⅛ for December and $1.10½ for May.

Eastern Wool Markets.

BOSTON, Sept. 12.—Wool is firm. Further large sales of Territory wool have been made at 58@60c for fine; fine medium, 55@58c; medium, 52@55c; California 17@24c, as to quality. Oregon wools are dull.

NEW YORK, Sept. 12.—*Bradstreet's* says: There is noted a better feeling in the wool market. The buying is confined largely to worsted and dress goods mills. The most noticeable movement is in Montana and other good staple Territory wools. There have been several reasons assigned, but the principal one is the expectation that the tariff question will soon be settled. Ohio and Michigan combing wools are very firm under a decrease in quantity. The past week has developed considerable inquiry, especially in Texas and carpet wools. The clip will fall far below that of last year. It is expected that from now on there will be an improvement followed by a gradual rise in prices.

Hops.

NEW YORK, Sept. 14.—*Bradstreet's* this week says: Estimates vary as to the probable total output of domestic hops this year, but that given out by Messrs. Rothbarth & Sons is that the aggregate will not exceed 165,000 bales, which is 2000 bales less than the lowest estimate of the total domestic hop crop in 1889. If the increasing demand for malt liquors be followed by a corresponding gain in the request for hops, the aspect of affairs becomes of interest. The old hops remaining here are all in brewers' hands, possibly 40,000 bales. If the home crop amounts to 169,000 bales, and the output of beer equals 29,000,000 barrels, the consumption of hops being only one pound to the barrel, the available surplus would be about 55,000 bales. At least, this is the brewers' point of view.

Again, it should be stated that exporters have already engaged freight-room for 25,000 bales to go to England within two months, and the export demand will undoubtedly call for more than double that quantity before the end of this crop year. In England, mold and mildew have stricken the plants and the outlook is described as gloomy. The production there is variously estimated at from 180,000 to 280,000 hundredweight of 112 pounds each. Perhaps it will equal 240,000 hundredweight, but the quality will be poor. The consumption in England is between 600,000 and 700,000 hundredweight, and the English deficit will therefore amount at least to 250,000 American bales. The French, Belgian and Dutch hop crops will be short this year, and in Germany the crop will not exceed two-thirds of that in 1889. This points to the likelihood of Germany's not being able to export much to exceed 100,000 hundredweight during the coming year, as compared with the annual exports for five years past, amounting to 300,000 hundredweight.

These data all lead up to one very important point. Germany and the United States will have enough hops for their own requirements, but in the light of the present information concerning the hop crop in England, not enough to supply the shrinkage in the English hop crop. If the indications are well founded, higher prices for hops would appear to be reasonably certain.

LONDON, Sept. 16.—The English hop crop is revealed by general picking, which is fairly under way, to be poor.

NEW YORK, Sept. 16.—English advices say English hop-dealers are trying to bear the hop market. It is known here that old hops are selling there at a handsome premium, the price in some instances reaching £7.

Local Markets.

BARLEY

	Buyer Season. H.	L.	Seller 1890. H.	L.	Buyer 1890. H.	L.
Thursday	147½	146	...	...	142½	140½
Friday	146½	146	...	...	140½	140½
Saturday	146	146	...	...	140½	140
Monday	146	146	...	...	140½	140
Tuesday	146	146	...	...	140	139½

WHEAT.

		S. S.	Nov.	B. '90.	B S.	S. '90.
Thursday	h	138	....	142½	150§	....
	l	138	...	142	150	....
Friday	h	....	....	141½	149½	....
	l	....	....	140⅞	149	....
Saturday	h	....	...	139⅞	148½	....
	l	....	....	139⅝	148	....
Monday	h	....	....	139⅜	148⅛	....
	l	....	....	139⅛	148	....
Tuesday	h	137	....	139½	148⅝	....
	l	137	....	139½	147⅞	....

BAGS—The market has ruled dull and heavy for standard-sized bags. There are sellers at 7⅜@7⅝c.

BARLEY—The market has fluctuated slightly for both cash and future delivery. The receipts continue free, but no accumulation in stocks is reported, notwithstanding the light export demand. In futures, trading has been fair. The following are the sales reported on to-day's Call:

Morning Session: Buyer season—300 tons, $1.45¾ ₱ ctl.

BUTTER—The market for gilt-edged is quite firm. Large dealers do not express much confidence in the market, fearing that with cooler weather Central State creamery will come in more freely than can be cared for. Pickled butter is moving off fairly free, as is solid packed. California creamery is in good demand. Some creamery from Wisconsin, choice grades, came in the past week and sold at 23@24c in tubs.

CHEESE—The market is dull and heavy. At the recent advance large distributors ordered from the Central States, and having to buy in carload parcels so as to get low freights, they are now well supplied.

EGGS—Choice, fresh laid of good size can be placed at 37½c, possibly a shade higher; but other California eggs—those that are greasy and which will rattle or shake—are sold at the same price obtainable for Eastern.

FLOUR—The market is easier, with large buyers able to get concessions.

WHEAT—The market has been unsettled, owing to export buyers being out of the market except at concessions. Their withdrawal was due to a money stringency at the East and also a decline in silver. The stringency caused many speculative holders at the East to realize, which was taken advantage of to lower prices. The decline in silver caused exporters to fear free offerings of Indian and Russian wheat. In futures, trading has been light. The following are to-day's reported sales on Call:

Morning Session: Buyer 1890—400 tons, $1.39⅜; 300, $1.39½; 200, $1.39⅜. Buyer season—200 tons, $1.47¾ ₱ ctl. Afternoon Session: Buyer 1890—600 tons, $1.39; 200, $1.38⅞; 300, $1.38¾. Buyer season—300 tons, $1.47½; 400, $1.47¼ ₱ ctl.

[COMMUNICATED.]

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Sept. 16th, were as follows:

Flour, qr. sks	70,691	Middlings, sks	4,027
Wheat, ctls	268,280	Alfalfa, "	....
Barley, "	29,789	Chicory, bbls	120
Rye, "	276	Broomcorn, bdls	114
Oats, "	20,289	Hops, bls	797
Corn, "	1,133	Wool, "	2,232
*Butter, "	1,424	Hay, tons	3,768
do bxs	380	Straw, "	44
do bbls	17	Wine, gals	240,390
do kegs	633	Brandy, "	5,880
do ½ do	....	Raisins, bxs	....
†Cheese, ctls	782	Honey, cs	112
do bxs	95	Walnuts, sks	....
Eggs, doz	48,040	Flaxseed, sks	....
do " Eastern.	97,860	Mustard, sks	2,107
Beans, ctls	4,374	Almonds, sks	....
Potatoes, sks	35,619	Peanuts, sks	....
Onions, "	2,912	Popcorn sks	....
Bran, sks	12,741	Beet sugar, bbls	261
Buckwheat, sks	280		

*Overland 60 ctls. †Overland 110 ctls.

Cereals.

Dornbusch, a well-known London circular, says: Considering the scarcity of old wheat in Russia, the shipments from Black Sea and Azov ports continue liberal, those in the week ended 9th inst. amounting to 188,720 qrs. The total exports from July 1, 1889, to June 30, 1890, were 90,492,376 bu., in comparison with 109,146,816 bu. in 1888–89, and 102,862,704 bu. in 1887–88. The present cereal campaign is beginning with the reserves of former crops almost exhausted, and were it not that the area under wheat this season is considerably larger than in previous years, the export trade would be seriously curtailed.

A late report says of the Danubian crop, which is the greatest competitor of America, that on August 16 the crop on the left of the Danube had suffered from the drought and in places was quite parched up. Right of the Danube, owing to the uninterrupted great heat of nearly six weeks, the fields were in very bad condition, and only a medium or under medium crop could be expected. Right of the Theiss the corn was almost everywhere backward through the prolongation of heat, and was generally in weak condition.

Foreign crop reports were favorable. Latest advices from Austria-Hungary are: There is no improvement in the condition of the corn crop in this country, but the estimates concerning wheat are very rosy. One Pesth journal puts the yield in Hungary at 160,000,000 bushels, which would mean as the home consumption is 88,000,000 bushels, and Austria requires about 40,000,000 bushels, that about 32,000,000 bushels would be available for export; still another advice estimates the surplus as 56,000,000 bushels. Judging from the latest official report as to the condition, the yield cannot be over 152,000,000 bushels, while that in Austria may reach 48,000,000 bushels. The surplus for export may be judged by the following figures of previous crops and exports:

	Crops, bu.	Exports, bu.
1887–88	193,600,000	16,800,000
1888–89	187,248,000	26 400,000
1889–90	128,240,000	10,000,000
1890–91, estimated	200,000,000	28,000,000

A point which is often overlooked is the decrease in the American crop of wheat in the past ten years and the increase in consumption. A few figures will show this fully.

	1880–84.	1885–89.	Changes.
Average crop	463,953,000	485,418,000	Dec. 28,535,000
	1880.	1890.	Changes.
Crop	498,550,000	415,000,000	Dec. 83,550,000
Consumption	233,000,000	301,000,000	Inc. 68,000,000

The local wheat market was dull throughout the week, with buyers bidding lower. Sellers, as a rule, are reported to be warehousing rather than place their holdings at present bids. The scarcity of ships is against the spot market, but as the tonnage on the way is quite large, it is only a question of time when charters will be lower and export buyers be in the market. The decline in silver is against American farmers. It is quite evident that we will not have any stability to and higher prices for silver until we remonetize the metal by passing a free-coinage bill. In the Central States, and also in portions of this State, farmers will vote only for Congressmen who will under any and all circumstances vote for a free-coinage bill. If farmers do not look after their own interests, others will not. The recent advance in silver made quite an advance in Russian and Indian wheat laid down in England and other importing countries, and with the metal at par, a little over $1.29¼ an ounce, the cost would be still greater, which would cause American wheat to be correspondingly higher. A London telegram dated Sept. 11 says: "A veritable panic prevails among the South Russian grain exporters, owing to the unprecedented rapid rise in the value of rubles (silver money). The whole Russian export trade is demoralized. Though the harvest was good, no doubt the season will close with a general crash. Two Southern exporters have already failed." The exporters sold cargoes for delivery in England and the advance in silver caused the wheat to cost more laid down in the latter country than the price at which they had contracted to deliver.

Barley has shaded off under free receipts and a lessened demand. Threatening weather, with a general expectation of early rains, are against the market. The exports so far this season show a decided falling off. The supply is, beyond a doubt, short of our requirements up to June, 1892, yet prices are considerably in advance of last year's ranges.

Oats are heavy under free receipts from Oregon and reports of liberal supplies to draw from. The impression prevails that with free shipments to this city, prices will recede.

Rye is fairly steady at unchanged quotations.

A good shipping demand for Central America and Australia has advanced prices for yellow corn. The supply of old is light. It is difficult to obtain correct estimates regarding the probable outturn of this year's crop, and until we are able to give them, it is useless to express an opinion regarding future prices.

Feedstuff.

Ground feed is in good demand, with an advance quoted in both bran and middlings, Ground and rolled barley is stronger, with a good demand ruling.

Hay continues firm at full prices. Receipts are not large, while the demand is good. There is a slightly better shipping inquiry. Choice grades of hay are reported scarce.

Fruits.

All kinds of melons are dull and in oversupply; cool weather being against the market.

Peaches, pears, plums, figs, etc., as is usual at the tail end of the season, are dull with prices barely sustained. Canners are running chiefly on tomatoes, which makes other fruits more quiet.

Grapes are weak for table and canning, but wine grapes are advancing under a good demand in sympathy with better prices for wines. The large quantities of wine grapes dried are in favor of still better prices for the fresh.

Apples are coming in quite freely. There is an increasing demand for export. The more choice good keepers are wanted.

For raisins there is a good inquiry. Buyers appear anxious to keep prices down. It now looks as if we can market all of our surplus, large as it is, at good prices before December 1st. Large packers will sell before the holidays, fearing to carry over into 1891.

Dried apricots are getting scarce, owing to heavy shipments to the East. Free shipments are being made to the East of dried apricots, prunes, pears, and peaches. Nectarines are well cleaned up. Wholesale merchants in this city are not carrying large stocks of dried fruits, fearing that the high prices will restrict consumption.

Vegetables.

Garden truck is reported essentially unchanged.

Marrowfat squash are easier, although not quotable lower. Receipts are increasing.

The overland shipments of potatoes and onions during last month were quite heavy.

Onions are steady, with a strong tone reported. Receipts are barely equal to the demand.

Potatoes are weaker under heavy receipts. Both the shipping and home demand is quite active. The partial failure of the crop at the East is in our favor.

Live-stock.

Bullocks are offering quite freely. Mutton sheep are firm at higher prices. The offerings are said to be light. Hogs are easier under liberal receipts. In milch cows and horses there is nothing new to report.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4¼@4½c ₱ lb; dressed, 7¼@8½c ₱ lb.; heavy, 3½@3¾c ₱ lb.; dressed, 5¾@6¼c ₱ lb. Stock hogs, 4¼@4½c ₱ lb

BEEF—Stall fed, 6½@—c ₱ lb.; grass fed, extra, 6@—c ₱ lb.; first quality, 5¼@5½c ₱ lb.; second quality 4¼@5c ₱ lb.; third quality, 4c@— ₱ lb.; bulls and thin cows, 2@3c ₱ lb.

VEAL—Small, 6@8c ₱ lb.; large, 4@6c.

MUTTON—Wethers, 7½@8c ₱ lb.; ewes, 7@7½c ₱ lb.; lamb, spring, 9@10c.

Miscellaneous.

From the *Commercial News* of Sept. 15th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	286,348	234,718
On the way to neighboring ports	21,478	18,893
In port, disengaged	4,829	23,472
In port, engaged for wheat	47,788	63,139
Totals	360,443	340,222

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Sept. 10, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	2,138,366	2,118,893
Flour, bbls	209,827	232,317
Barley	54,852	268,524

Free receipts of poultry from the Central States are against Californian. The consumption appears to be increasing.

Beans have a weaker tone. Receipts are increasing.

Choice grades of honey are in good request, but the poorer are slow.

Hops are slower. The market is very strong at full prices. Some holders are asking 40c a pound for choice grades.

Wool begins to show signs of increasing strength, but as yet no higher quotations are given.

Overland shipments in last month are as follows: Beans, lbs, 3,467,450; brandy, gals, 24,854; wine gals, 97,686; fruits, lbs, dried, 6,897,890; citrus, 47,600; deciduous, 20,721,660; hops, lbs, 302,700; canned goods, lbs, 12,880,350; mustard seed, lbs, 70,020; onions, lbs, 264,460; hay, lbs, 44,800; potatoes, 8,068,680; wool, lbs, grease, 1,089,440, pulled, 90,810, scoured, 437,510; honey, lbs, 368,780; vegetables, lbs, 114,130.

Exports by sea the past week aggregate as follows: Wheat, ctls, Central America, 1002; Mexico, 452; Cork, 83,566; Hull, 51,970. Flour, bbls, Central America, 3082; Honolulu, 4042. Barley, ctls, Honolulu, 3272. Rolled barley, Honolulu, 500 sacks and 161,283 lbs. Potatoes, sks, Honolulu, 189; Central America, 125; Honolulu, 976. Hay, bls, Honolulu, 1572. Wine, gals, New York, 29,597; Central America, 4083; Mexico, 3051; Panama, 13,551; Panama, 110; Honolulu, 5344. Raisins, bxs, Central America, 68; Mexico, 76; Honolulu, 653. Beans, lbs, Panama, 2450; Victoria, 3090; Honolulu, 17,064. Brandy, gals, Central America, 738. Canned fruits, cs, Victoria, 250; Philadelphia, 411. Dried fruits, lbs, Victoria, 1000; Honolulu, 845. Bran, sks, Honolulu, 1800.

The receipts of eggs at San Francisco during the past eight months were as follows:

Months—	California.	Eastern.	Oregon.
January, doz	162,774	213,720	.....
February	317,761	412,050	12,510
March	337,930	88,260	210
April	355,770	320,460	.....
May	263 234	414,080	.....
June	163,675	335,670	.....
July	218,529	310 200	510
August	184,425	202,560	900
Totals	1,943,998	2 296,950	14.130
1889	2,112,063	1,917,330	12,990
Decrease	168,065	.....	.....
Increase	.....	379,620	1,140

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Sept. 17, 1890

Bananas, bunch	1 00	@ 3 00	Plums, lb	3	@ 3½
Cranberries	—	@ —	Green Gages lb	3	@ 3½
Limes, Mex	5 00	@ 6 00	Watermelons 100	3 00	@ 5 00
Lemons, Cal., bx.	2 00	@ 5 00	Cantaloupes crt	1 00	@ 1 75
do Sicily, bx	9 00	@10 50	Nutmeg melons	35	@ 50
do Malaga	9 00	@10 00	Crabapples, box	75	@ 1 00
Pineapples, doz.	3 00	@ 5 00	Quinces, box	35	@ 50
Strawberries			VEGETABLES.		
fair, chest	5 00	@ 7 00	Okra, dry, lb	6	@ 10
Bl'kberries, do	4 00	@ 6 00	do green bx.	50	@ 65
Huckleberries lb	7	@ 8	Parsnips, ctl	1 25	@ —
Figs, box, black.	50	@ 65	Peppers, dry, lb	12	@ —
do white	25	@ 50	do green, bx	25	@ 40
do Smyrna	—	@ —	do Bell	40	@ 65
Pears, bx	50	@ 1 50	Turnips, ctl	75	@ —
do Bartlett lb	3½	@ 4½	Beets, sk	—	@ 1 60
Peaches box	75	@ 1 10	Cabbage, 100 lbs	75	@ —
do choice	1 25	@ 1 75	Carrots, sk	10	@ 65
do canning, lb	4	@ 6	Cucumbers box	20	@ 40
Apples com box	50	@ 1 00	do for p'ckling	70	@ 80
do choice	1 00	@ 1 75	Tomatoes, bx	35	@ 65
Grapes, box	15	@ 40	Peas, lb	2	@ 3
do Muscats	35	@ 50	String Beans	2	@ 2½
do Rose of Peru	20	@ 40	Lima do	2½	@ 3½
do Tokay	50	@ 75	Squash, summer, bx	25	@ 50
do Blk Hamb'rg	25	@ 50	Marrowfat, ton	15 00	@ —
do Isabella	70	@ 1 00	Garlic, lb	8	@ 10
do Malvoise	20	@ 35	Green corn choice	12½	@ 20
do wine Zinfandel	16 00	@19 50	do do com sk	50	@ 1 00
do other wine			Egg Plant, bx	40	@ 50
black kinds	15 00	@17 50	Cauliflower doz	40	@ 60

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Sept. 17, 1890

BEANS AND PEAS.			Cal 1890 Choice	37½	@ —
Bayo, ctl	3 00	@ 4 00	do Fair to G'd	32½	@ —
Butter	2 00	@ 2 25	ONIONS		
Pea	2 60	@ 3 00	Silver Skin	2 00	@ 2 40
Red	2 49	@ 2 75	NUTS JOBBING.		
Pink	2 40	@ 2 70	Walnuts, Cal. lb	9	@ 10
Large White	—	@ —	do Ch'ce	11	@ 12
Small White	2 60	@ 3 00	Almonds, hd shl.	5	@ 6½
Lima	4 00	@ 4 75	Softshell	14½	@ 15½
Fld Peas, blkeye	1 75	@ —	Paper shell	16	@ —
do green	1 25	@ —	Brazil	11½	@ 12
do NLes	1 80	@ 2 00	Pecans	9	@ 11
Split	5	@ —	Peanuts	7	@ 9
BROOM CORN.			Filberts	11½	@ 12½
Choice to Extra	75 00	@ 85 00	Hickory	6	@ 8
Fair to Good	55 00	@ 70 00	Chestnuts	14	@ —
Poor	45 00	@ 60 00	Pine nuts	7	@ 8
CHICORY.			POTATOES.		
California	6	@ 6½	Early Rose, sks.	80	@ 80
German	6½	@ 7	Chile	75	@ 95

DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair, lb	15	@	22½
do good to choice	25	@	32½
do Gilt edged	35	@	36
do pickled	18	@	22½
do in kegs	17	@	20
do Creamery in rolls	36	@	37
Eastern do	25	@	30
do do, in tubs	20	@	23
CHEESE.			
Cal. choice mild	10	@	11
do fair to good	8	@	9
Young America	10	@	11
N. York Cream.	10	@	12
Western	8	@	10
EGGS.			
Cal. ranch, doz.	32½	@	35
do do sel'cted	36	@	—
do. store	27½	@	—
Est'rn, cld st'rage	—	@	—
do fresh	17½	@	25
do selected	27½	@	—
do to arrive	—	@	—
FEED.			
Bran, ton	17 00	@	19 50
Feedmeal	28 00	@	29 00
Gr'd Barley	29 00	@	31 00
Middlings	26 00	@	27 50
Oil Cake Meal	24 00	@	28 00
Manhattan Food Per 100 lbs	7 50	@	—
HAY.			
Compressed	12 00	@	16 00
Wheat, per ton	10 50	@	14 50
do choice	15 00	@	16 00
Wheat and Oat	10 50	@	15 00
Wild Oats	8 00	@	12 00
Tame do	8 00	@	12 00
Clover	8 00	@	11 00
do ch'ce red top	—	@	—
Barley	9 00	@	11 50
Barley and Oats	8 00	@	11 50
Alfalfa C'mpr'sd	—	@	—
Straw bale	45	@	55
FLOUR.			
Extra, City Mills	4 25	@	4 50
do Co'try Mills	4 20	@	4 50
Superfine	3 25	@	4 00
GRAIN, ETC.			
Barley, feed, ctl.	1 28	@	1 33½
do Choice	1 36	@	1 37½
do Brewing	1 37½	@	1 42½
do do Choice	1 45	@	1 47½
do do gilt edg'd	1 50	@	—
Chevalier once	1 50	@	1 52½
do com to good	1 32½	@	1 45
Buckwheat	1 75	@	2 00
Corn, White	1 31½	@	1 37½
Yellow	1 27½	@	1 36½
Oats, milling	1 62½	@	1 70
Surprise	1 67½	@	1 72½
Choice feed	1 60	@	
do good	1 55	@	1 57½
do fair	1 50	@	—
do Gray	1 45	@	1 55
do Black	1 55	@	1 70
Rye	1 20	@	1 32½
Wheat, milling.			
Gilt edged	1 42½	@	—
do Choice	1 40	@	—
do fair to good	1 38½	@	—
Shipping, cho'ce	1 37½	@	1 38½
do good	1 35	@	1 36½
do fair	1 33½	@	—
Sonora	1 32½	@	1 37½
HIDES.			
Dry Ight to h'vy	10	@	11
Salteu	5	@	8½
HOPS.			
Oregon, 1890	32½	@	37½

Peerless	80	@	85
River Reds	—	@	—
Humboldt	—	@	—
Petaluma	—	@	—
Burbanks	55	@	1 20
Sweet	1½	@	2
POULTRY AND GAME.			
Hens, doz	5 00	@	7 00
Roosters, old	5 00	@	6 00
do young	4 50	@	6 50
Broilers, small	2 50	@	3 50
do large	4 00	@	—
Fryers	4 50	@	—
Ducks, tame	3 50	@	4 50
do large	5 50	@	7 00
Geese, pair	1 25	@	1 75
Turkeys, Gob'r.	16	@	20
Turkeys, Hens	15	@	16
Pigeons	1 75	@	2 50
Rabbits, doz	75	@	1 25
Hare	1 00	@	1 50
Venison	9	@	13
Dove	75	@	—
EGG FOOD.			
Manhattan, ⅌ lb	12	@	—
PROVISIONS.			
Cal. Bacon.			
Heavy, lb	10½	@	11
Medium	12	@	—
Light	13	@	13½
Extra Light	—	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11	@	12
Hams, Cal	13	@	14
do Eastern	14	@	15
SEEDS.			
Alfalfa	8	@	8½
Canary	3½	@	4
Clover, Red	11½	@	11½
White	17½	@	20
Cotton	20	@	—
Flaxseed	2	@	3
Hemp	4	@	5
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German	5	@	6½
do Common	5	@	6
Mustard, yellow	1½	@	2½
do Brown	2½	@	3½
Rape	1½	@	2½
Ky. Blue Grass	14	@	16
2d quality	13	@	14
Sweet V. Grass	75	@	—
Orchard	12	@	14
Hungarian	7½	@	8
Lawn	27½	@	40
Mesquit	6	@	7
Timothy	6	@	7
TALLOW.			
Crude, lb	3	@	5
Refined	8	@	
WOOL, ETC.			
SPRING—1890.			
Humboldt and Mendocino	19	@	24
Sac'to valley	15	@	22
Free Mountain.	18	@	24
S Joaquin valley	12½	@	17
do mountain.	17	@	22
Cala'v & F'th'll.	15	@	24
Oregon Eastern.	13	@	22
do valley	20	@	25
So'n Coast, def.	10	@	14
So'n Coast, free.	12½	@	19
FALL—1890.			
North'n, choice	15	@	17
do defective	12	@	14
Mountain Free	11½	@	14
San Jo quin defective	8	@	11
Southern do	8	@	11

Rope.

Baling, Duplex, lb	12
" Manilla, lb	14
Twine, for hops, balls, tarred, lb, Manilla	16
" " grape vine, balls, lb "	16½
" " " coils, lb "	16½
" spring, lb "	18
" binder (65 ft. to lb), lb	15½

Duplex twine 3c per lb le s.

California Fruits East.

NEW YORK, Sept. 12.—E. L. Goodsell sold California fruits at auction yesterday, for account of the Earl Fruit Co., Sacramento, at the following prices: Beurre Hardy pears, $2.70; Susquehanna peaches, $1.90; Orange Cling peaches, $1.90; Yellow Cling peaches, $1.50; Salway peaches, $1.40; Egg plums, $1.75; green gages, $2 25; German prunes, $2.25; Gros prunes, $2.70; single crates Muscat grapes, 90c @$1.15; Tokay, $1.10@2.10. Grapes were all in bad order.

CHICAGO, Sept. 12.—The Earl Fruit Co. to-day sold California fruits at auction as follows: Beurre Hardy pears, $3.05@3.10; Howell pears, $3 50; Bartlett pears, ripe, $3.40; Beurre Clairgeau, $2.15@$2.40; Duchess pears, $2.50; Beurre Diel, $2.60; Louise Bonne pears, $2.60; half-crate Tokay grapes, $1.75; Salway, $1.50; Strawberry peaches, $1.45; White Malaga, 70c@$1.

CHICAGO, Sept. 13.—Porter Bros. sold nine carloads of California fruit to-day as follows: Grapes, hf-crates, Tokay, $2.10@2.75; full crates, Verdelle, $2.50; full crates, Muscat, $2.50; Portugal, $2.50; hf-crates, Muscat, 75c@$1; do, Tokay, $1@$1.40; Cling peaches, $1@1.50; pears, Beurre Clairgeau, $2.75; Duchess, $2.75; Bartlett, $3.10@3.25; Howell, $3.35; Onondaga, $3; Silver prunes, $1.15; German, $1.25.

CHICAGO, Sept. 13.—California green fruits are coming forward quite freely. Pears are rather firm, and plums are steady, being scarce. Peaches and grapes, however, rule easy. Peaches, 20-lb boxes, Crawford, 75c@$1; Orange Cling, 75c@$1.50; pears, Bartlett, ripe, $2@3; Duchess, $2.75@3; Beurre Clairgeau, $2.75@3; Beurre Hardy, $2.75@3.25; Howell, $2.75@3.35; Beurre Bosc, $2.75@3; Gros prunes, $2.25@2.50; Egg plums, $1.50@1.75; German prunes, $1.75@2.25; grapes, hf-crates, four baskets, Muscat, 50c@$1.25; Tokay, 75c@$1.50; Damascus, $1; Morocco, 75c@$1.25; Rose de Peru, 75c@$1.25. There is reported a moderate trade in a small way in the California dried-fruit market. Stocks are light and prices rule high. The latter fact checks the demand and trade is quiet, and not the activity of a year ago. Several cars of raisins are on the way. Quotations range: Apricots, 17½@18c ⅌ lb; peaches, unpeeled, 21@23c; do, peeled, 30@32c; nectarines, Red, 17@18c; do, White, 19@20c; dried grapes, 5½@5¾c. Beans continue to rule dull.

NEW YORK, Sept. 15.—Sgobel & Day, agents of the California Fruit Union, sold two carloads of California fruit as follows: Bartlett pears, $3.50; Tea Grant peaches, $1.70@2.25; Salway peaches, $1.85; Black Hamburg grapes, $2@2.25 per hf-crate; Muscat grapes, 65c@$1.15 per hf-crate; Tokay grapes, $2.30@3.50 per full crate; $1.15@1.50 per hf-crate; Emperor grapes, $1.10; Malvoise grapes, $1.25.

CHICAGO, Sept. 15.—The Porter Bros. Co. sold seven carloads of California fruit to-day, at the following prices: Tokay grapes, $3.25 per full crate; 80c@$1.70 per hf-crate; Black Morocco grapes, $1.95 per hf-crate; Muscat grapes, 60c@$1.25 per hf-crate; $2 20@2.25 per full crate; Blue Malvoise grapes, $1.20@1.45 per hf-crate; Black Hamburg grapes, $1.40 per hf-crate; Salway peaches, $1.50@1.40; Duchess pears, $2.70; Beurre Diel pears, $2.45; White Doyenne pears, $2.45; Beurre Gris pears, $2.40; Howell pears, over-ripe, $2.80; Bartlett pears, over-ripe, $3.10.

The Earl Fruit Co. sold California fruit as follows: Bartlett pears, $3; Beurre Clairgeau pears, ripe, $2.20@2.35; Tokay grapes, $2.20@2.35 per full crate; Edible, $3 40; Strawberry and Orange Cling peaches, $1.70; Susquehanna peaches, $1.60; McKevitt peaches, $1.70; Salway peaches, $1.40.

CHICAGO, Sept. 16.—The Earl Fruit Co. sold to-day: Winter Nelis pears, $2.25@2.35; Keifers, $2.55; Salway peaches, $1.40; Susquehannas, $1.45 @1.50; Orange Clings, Heath and Rose Clings, $1.45. Grapes—In fair condition, Tokays, full crates, $2@2.60; Muscats, full crates, $1.90@2.20. Weather fine and cool.

Porter Bros. sold to-day ten cars California fruit. Full crates Muscat grapes, $1.80@2.50; full crates Tokay grapes, $1.70@3.30; half crates, Tokays, 85c @$1.45; Nectarines, $1.90@2; White Cling, $1.45; Bartlett pears, $3.5c@4.95; Beurre Hardy, $3.50@ 3.55; Beurre Clairgeau, $2.25@2.90; Golden Drop plums, $1.25; Fellenburg plums, $1.15@1.40; Beurre Bosc pears, $3.85@3.95; Howell pears, $3.50@3.85; Japan plums, $3.20; Orange Cling peaches, $1.10@ 1.80; Silver prunes, $1.30@1.35.

CHICAGO, Sept. 17.—In the California green fruit market peaches are steady and pears firmer, with fair demand. Plums are scarce and steady, but grapes continue to rule easy. Peaches—Crawfords, 20-lb boxes, $1.50@1.75; Orange Clings, $1.50@ 1.75; Bartlett pears, green, $4@4 50; ripe, $2@3; Duchess, $3.25@3.50; Beurre Clairgeau, $2 75@3; Beurre Hardy, $3@3.50; Howell, $2.75@3.25; Beurre Bosc, $2.75@3.25; Gros prunes, 20-lb boxes, $2.50@2.75; Egg plums, 20-lb boxes, $1.25@1.50; German prunes, 20-lb boxes, $1.75@2; Grapes, half cases, four baskets—Muscats, 75c@$1; Tokay, $1; Damascus, $1; Black Morocco, $1@1.50; Rose Peru, 75c@$1.25. Inquiry in the California dried fruit market is restricted and the supply is very moderate. The market is ruling very quiet; Apricots, ⅌ lb, 16½@17c; peaches, unpeeled, 18½@20c; peeled, 30@32c; Nectarines, red, 17@18½c; white, 19@20c; dried grapes, 5½@5¾c; prunes, 50 to the lb, 12@12½c; 70 to the lb, 11½@11¾d; 80 to the pound, 10½@11c.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING SEPT. 9, 1890.

436,204.—SNOW PLOW—L. J. Bergendahl, Port Townsend, Wash.

436,170.—WATER-WAY AND GATE FOR RESERVOIRS—T. B. Craycroft, Panoche, Cal.

436,228.—STEAM COOKER—Jane E. Ford, Ross Station, Wash.

435,966.—SASH HOLDER—F. Frank, Suisun, Cal.

436,230.—SAFETY GAS-BURNER—Frechette & Dupuis, Carson, Nev.

435,926.—GAFF JOINT FOR VESSELS—P. E. Frostad, La Conner, Wash.

435,927.—PIPE COUPLING, ETC.—J. Ginty, San Diego, Cal.

436,180.—FENCE MACHINE—T. P. Madill, Albany, Ogn.

436,293.—WINDMILL—R. B. Sinclair, Alameda, Cal.

435,983.—ELECTRICAL TRACTION APPARATUS—Wm. Stephens, Santa Rosa, Cal.

436,027.—ORE STAMP—C. W. Tremain, Portland, Ogn.

435,986.—DIE FOR MAKING LATHING—Geo. H. Tucker, S. F.

436,278.—REFRIGERATOR—Vecchio & Mignola, S. F.

The following brief list by telegraph for Sept. 16 will appear more complete on receipt of mail advices:

California—George S. Andres, S. F., apparaus for making extracts; James T. Fish, S. F., fruit-pitting machine; Smith McGaryin, San Jose, running gear; Frank McClure, Stockton, chuck for turning lathes; Dr. F Oliver, S. F., hay rickers; Henry A. Peabody, Ukiah, fence post; Charles B. Towle, Vallejo, school desk; Frank White and F. J. Murphy, Pomona, animal trap.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE, September 10-16.	Olympia. Rain	Temp.	Wind	Weather.	Portland. Rain	Temp.	Wind	Weather.	Eureka. Rain	Temp.	Wind	Weather.	Red Bluff. Rain	Temp.	Wind	Weather.	Sacramento. Rain	Temp.	Wind	Weather.	S. Francisco. Rain	Temp.	Wind	Weather.	Fresno. Rain	Temp.	Wind	Weather.	Keeler. Rain	Temp.	Wind	Weather.	Los Angeles. Rain	Temp.	Wind	Weather.	San Diego. Rain	Temp.	Wind	Weather.
W.	.00	44	E	Cl.	00	50	0	Fy.	....	....	....	....	.00	56	NW	Cl.	.00	50	SE	Cl	00	54	W	Cy.	00	68	W	Cl	....	....	....	....	.00	58	0	Fy.	.00	64	NW	Cy
T.	....	....	....	....	.00	48	NW	Fy.	....	....	....	....	.00	60	NW	Cl	00	54	SE	Cl	.00	54	W	Cy.	00	58	W	Cl	.00	68	N	Cl.	00	58	0	Cl	.00	64	0	Cy.
F.	.00	56	SE	Fy.	.00	54	N	Cl.	.00	48	SW	Fy.	.00	60	NW	Cl.	00	54	SE	Cl.	00	54	W	Cy.	00	58	W	Cl.	.00	68	SE	Cl.	00	56	0	Cl	00	62	0	Cy.
S.	.00	38	N	Cl	.00	46	N	Fy.	.00	48	N	Fy.	.00	62	NW	Cl.	.00	54	SE	Cl	00	54	W	Cy.	.00	62	NW	Cl	.00	70	E	Cl.	.00	62	NW	Cl.	.00	62	0	Fy.
S.	....	....	....	....	.00	50	0	Cl.	....	....	....	....	.00	66	NW	Cl.	.00	54	0	Cl.	00	52	W	Fy	....	....	....	....	.00	74	SW	Cl.	00	54	NE	Cy.	00	64	0	Cy.
M.	.00	48	N	Fy.	.00	56	N	Cy.	.00	56	SW	Fy.	.00	64	NW	Cl.	.00	54	SE	Cl.	.00	52	S	Fy	.00	58	S	Cl	.00	68	E	Cl.	.00	60	E	Fy	.00	64	0	Cy.
T.	....	....	....	Cl.	.00	50	N	Cy.	.00	52	W	Cy.	.00	56	0	Cl.	.00	52	SE	Cl	00	54	S	Cy.	.00	58	W	Cy	.00	72	N	Cy	.00	64	E	Cy.	.00	64	SW	Cy.
	.00				.00				.00				.00				.00				.00				.00				.00				.00				.00			

EXPLANATION. Cl. for clear; Cy., cloudy; Fr., fair; Cm., calm; — indicates too small to measure. Temperature, wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

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Some time ago James McDonald of this city generously furnished the means for the publication of the life work of the late Dr. Kellogg in relation to West American oaks. Recently a second part of the work has been published, and in a prefatory prepared by Prof. George Davidson, who was a life-long friend of the late doctor and took a good deal of interest in having placed before the public the work of his friend, the professor says: "Upon the publication of the first part of this work, the 'West American Oaks,' Mr. McDonald was impressed with the necessity of further examination and study of the new species and varieties mentioned therein. These had not been known to Dr. Kellogg; the systematic plan of collection, investigation and representation, which was his life work, being broken by declining health and adverse circumstances.

"After a few copies of the work had been sent out, the further distribution was suspended until the new species should be illustrated, and Mr. McDonald suggested that special examination should be made to secure satisfactory specimens. When the matter had been fully discussed, Prof. Greene volunteered to give his vacation for the summer to field work in the Sierra Nevada and in the Rocky mountains of Colorado and Montana. Mr. McDonald generously bore all the expenses of the trip, and the result has been the verification of former species and the acquisition of new ones. Prof. Greene has since employed his hours outside of University duties in the description of all these species, and in the direction of the drawing by Mr. George Hansen."

This addition by Prof. Greene makes the history and bibliography of the work complete, and makes it one of the most interesting additions to works heretofore published in relation to forest trees. The engravings are of the finest, and are beautiful representations of the several varieties of the oak thought worthy of illustration.

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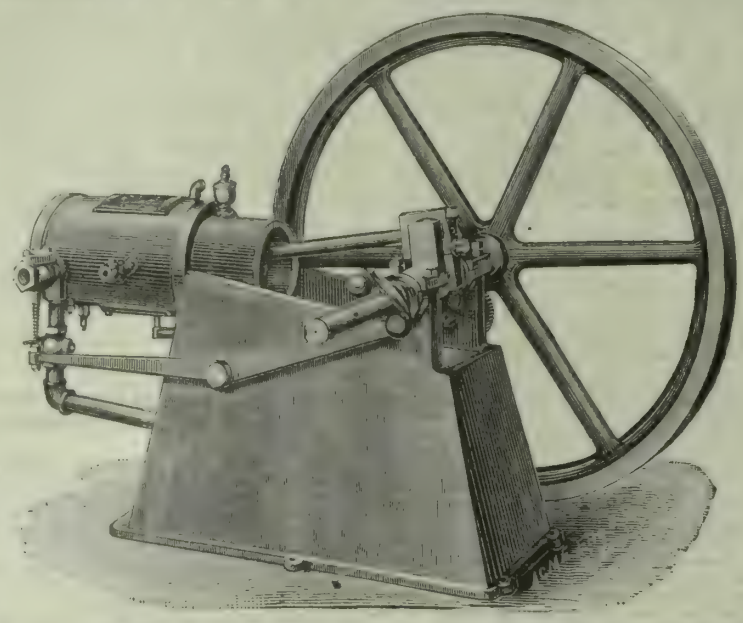
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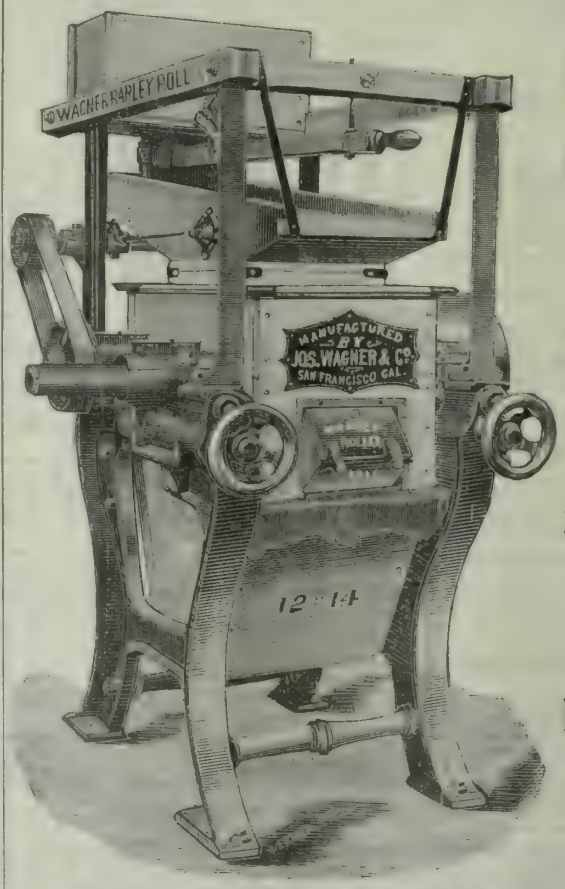
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50th Year. (*Mention this paper.*)

WHITE ADRIATIC FIGS

The undersigned has 10,000 one and two-year old trees of this popular variety, which will be ready for next season's planting.

The Knights Ferry White Adriatic is conceded by all to be the best Fig produced in America.

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TREES! TREES!

—AT—

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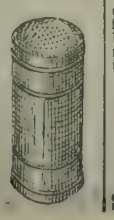
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THE SMITH PATENT IMPROVED Combined Kitchen Utensil consists of a Can, Biscuit or Cake Cutter, Doughnut Cutter, Patty or Tart Cutter, Measure, Dredge, Nutmeg, Cheese or Bread Grater; also Nutmeg and other Condiment Holder; and a copy of the most valuable Egg-Preserving Receipt that has ever been used; and a Soot-Removing Receipt which absolutely does away with the tedious and nasty job of cleaning out a stove or chimney. By mail, 50 cents. SMITH MFG. CO., Alameda, Cal. Agents wanted.



OUR SPECIALTIES:

Cultivated Wild Oats,

Red Top, Timothy, Red Clover, Kentucky Blue Grass,

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W. H. WOOD & CO., 117 to 125 J Street. SACRAMENTO.

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We are prepared to furnish the leading varieties of fruit trees and vines for planting season of 1890 and 1891 Our trees are grown in rich alluvial soil, entirely free from scale. An inspection of our stock is respectfully invited. Write for prices.

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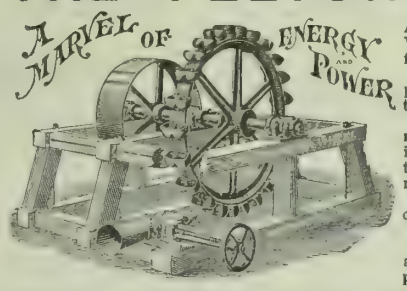
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THE PELTON WATER MOTOR



Affords the cheapest and most convenient power for Ranch, Vineyard or Dairy purposes, as well as for running dynamos for electric lights, pumps and every other variety of machinery.

It possesses in the same degree the wonderful energy and power that has made the Pelton Wheel famous in all parts of the world.

These motors are made of varying sizes, with capacities ranging from the fraction of one up to 15 and 20 H. P., enclosed in iron cases, all ready for pipe connections, and are warranted to develop a given amount of power with one-half the water required by any other wheel.

The cost, considering capacity and efficiency, is fully 50 per cent less.

Circular, giving full information, sent on application.

Parties writing for information should give full particulars as to power wanted, source of water, supply, with head or pressure. Address

THE PELTON WATER WHEEL CO.,

121 Main Street, San Francisco, Cal.

THE

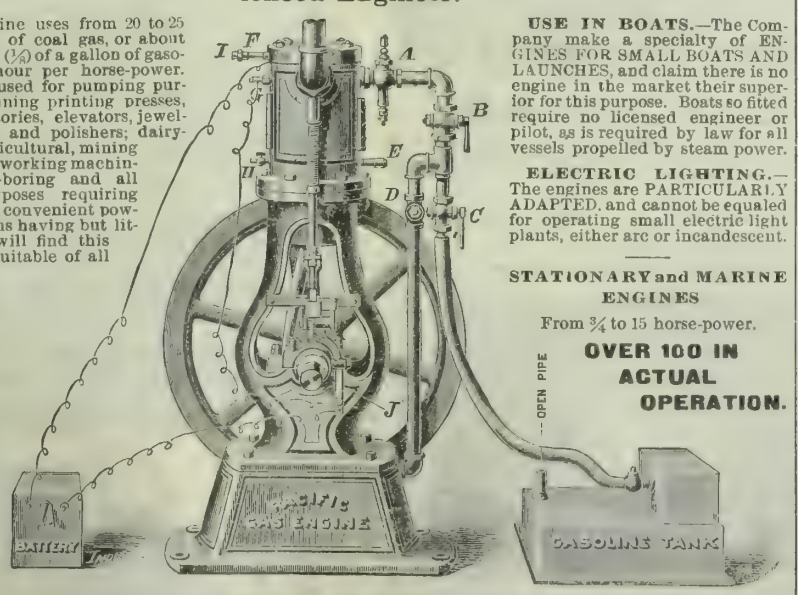
PACIFIC GAS OR GASOLINE ENGINE.

PATENTED JUNE 17, 1890—NOS. 430,504, 430,505, 430,506.

Also in Great Britain and other foreign countries.

Starts Instantly Without the Necessity of Boiler, Fire or Experienced Engineer.

The engine uses from 20 to 25 cubic feet of coal gas, or about one-eighth (⅛) of a gallon of gasoline per hour per horse-power. It can be used for pumping purposes, running printing presses, small factories, elevators, jewelers' lathes and polishers; dairymen's, agricultural, mining and wood-working machinery; well-boring and all other purposes requiring cheap and convenient power. Persons having but little space will find this the most suitable of all motors.



USE IN BOATS.—The Company make a specialty of ENGINES FOR SMALL BOATS AND LAUNCHES, and claim there is no engine in the market their superior for this purpose. Boats so fitted require no licensed engineer or pilot, as is required by law for all vessels propelled by steam power.

ELECTRIC LIGHTING.—The engines are PARTICULARLY ADAPTED, and cannot be equaled for operating small electric light plants, either arc or incandescent.

STATIONARY and MARINE ENGINES

From ¾ to 15 horse-power.

OVER 100 IN ACTUAL OPERATION.

READ THESE TESTIMONIALS.

ALAMEDA, April 8, 1890.

PACIFIC GAS ENGINE CO., GENTLEMEN: Permit me to add my testimonial to the many you have received indorsing your engine. As you are aware, mine was a Regan engine which gave me considerable trouble. I had to remove the head and raise the tappet valve every time I wanted to start the engine. I sent you the engine; you removed all the Regan appliance except the cylinder and stand. You put in your appliance, head, sparking device, inlet valve, and, in fact, changed it to the Pacific Gas Engine, which now works splendidly. I have not had to remove the head for any cause since you made the change (over two months). It gives me no trouble; my boy, 14 years old, attends to it.

The change from the Regan to the Pacific is a decided improvement. I can also get a third more power since the change, and I cheerfully recommend your engine as being simple, effective, and cheap. Respectful y yours,

B. S. HILL, S. W. Cor. Encinal Ave. and Morton St.

MAYFIELD, March 26, 1890.

PACIFIC GAS ENGINE CO.—We have given your little 1-H. P. engine a splendid advertisement. A fire broke out at 2:30 o'clock this morning, in a tenement house on my premises. I started the engine, connected the hose, and by its use saved at least $3000 worth of my property. I saved my blacksmith shop, lying 12 feet from the burning building, my barn and my dwelling. Three times the fire started in these buildings, and I extinguished it every time. The engine never faltered, and threw water between 50 and 60 feet high. The whole town was astonished, and they acknowledged that I saved at least $20,000 worth of property.

A fire department is being organized here, and I think they will have one of the engines on a truck for fire purposes *They cannot be beaten.*

Hoping that all of your customers will be as well pleased with the engine as I am, I remain, Yours truly,

JOS. P. PONCE.

PACIFIC GAS ENGINE CO.,

Send for Circular and Price List. 230 FREMONT STREET, SAN FRANCISCO.

Windmills, Pumps, Etc.

HORTON & KENNEDY still continue to supply the famous

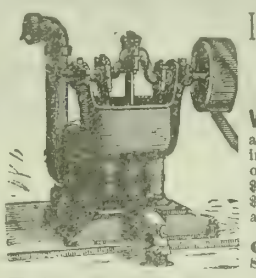
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These Windmills have been advertised in and known by the readers of the PACIFIC RURAL PRESS for over 20 years. The Best is the Cheapest. Write for circulars and prices.

HORTON & KENNEDY,

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Horse Powers

Windmills, Tanks

and all kinds of Pumping Machinery built to order. Windmills from $65. Horse Powers from $50. Send for Catalogue and Price List.

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We have the Latest Improvements in

WELL DRILLS

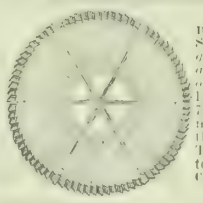
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Send 20 cts. for mailing Catalogue.

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If you want the most WONDERFUL, EXTRAORDINARY, SIMPLE Wind Mill of the age, *of that you've been hearing made a business of building Mills for over 20 years.* Send for catalogue giving full information TO SIZES AND KINDS BUILT more than any other house in the world. Pumps, Cylinders, Tanks, Horse Powers, Cutters, etc. Address,

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HEALD MFG. CO.

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TRACTION ENGINES,

Portable Straw-Burning Boilers & Engines.

IRON AND BRASS CASTINGS.

Machinery of all kinds furnished at shortest notice.

Heald's Patent Wine-making Machinery,

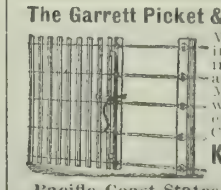
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The Freeman Implement Co., Portland, Or.

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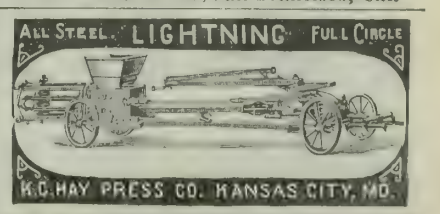
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K. C. DUSSENBERG,

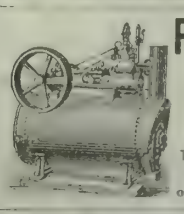
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ALL STEEL. LIGHTNING FULL CIRCLE



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Upright and Horizontal.

Simple, Effective, Durable.

Write us before buying.

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DOUBLE Breech-Loader $6.75. RIFLES $2.00 PISTOLS 75¢

GUNS

All kinds cheaper than elsewhere. Before you buy, send stamp for Catalogue. Address

POWELL & CLEMENT, 180 Main Street, Cincinnati, Ohio.

WATCHES, CLOCKS, Etc.

The Whole Country Needs Fertilization

ADMONITION TO FARMERS!

GUAYMAS, MEXICO, September 9, 1890.

R. E. CUNNINGHAM, ESQ., Agent Mexican Phosphate and Sulphur Company—DEAR SIR: In answer to your request as to the value of phosphates for worn out lands, I will state that it is my opinion the lands of the older settled portions of California afford a good field for the use of phosphates. These lands have been cropped for years without any restoration of the chemical constituents necessary for an abundant crop. They therefore show plainly that they need assistance artificially to produce crops good in quantity and quality, let the crop be whatever it may.

Take, for instance, San Joaquin and Santa Clara valleys, and what do you see? [illegible] crops that are so imperfect in quantity and quality that the eye at once detects the defect. The [illegible] resorted to must be infused into the soil to replace the chemical properties that have been [illegible] previous crops, and the writer is of the opinion that a liberal supply of phosphates will accomplish this.

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The attention of the cultivators of the soil is sharply turned to rotation of crops, hoping thereby to get wealth out of their lands without fertilization. Some have turned their attention to beet cultivation in soil worn out by other crops. Beet or other seeds will not grow successfully unless the soil will nourish them.

This summer I saw several crops of beets on excessively cropped lands, the majority of which showed that there was something wanting to complete the plants to ample size and in quantity that should be expected of sugar beets under favorable circumstances. If a good crop is not obtained, there is deficiency in profit. It costs as much to cultivate soil deficient in chemical properties as it does if ample nutrition was in the soil. Under the former condition a deficient crop is certain, while under the latter condition he may reasonably expect an ample crop with profit.

Fields often are allowed to go to weeds, supposing thereby to enrich the soil. This is an uncertain method and not profitable. Your weeds have grown up and seeded; the dead stems can only add a limited addition to fertilize the soil, while the seeds of the same will cause much expense to exterminate them from the future crops. Besides, while thus only weeds as a crop, no profit was realized, while if a supply of phosphates had been applied to the soil, a profitable crop of beets or corn would be had. Besides, the weeds would have been exterminated during the cultivation of the said crop. I am, Sir, your obedient servant,

EDWARD PALMER, M. D.

THE MEXICAN PHOSPHATE SULPHUR CO.

Manufacture three grades of this Superior Fertilizer of the following analyses:

GUARANTEED ANALYSIS.	Brand [A] for Sugar Cane, Suga Beets, Etc	Brand [B] for Grain, Gardens, Lawns, etc.	Brand [C] for Fruits, Vineyards, Etc.
Phosphoric Acid	10 to 11 per cent.	15 per cent	12 per cent.
Potash	9 to 10 "	2 "	5 to 6 "
Ammonia	3 to 4 "	2 "	3 to 4 "

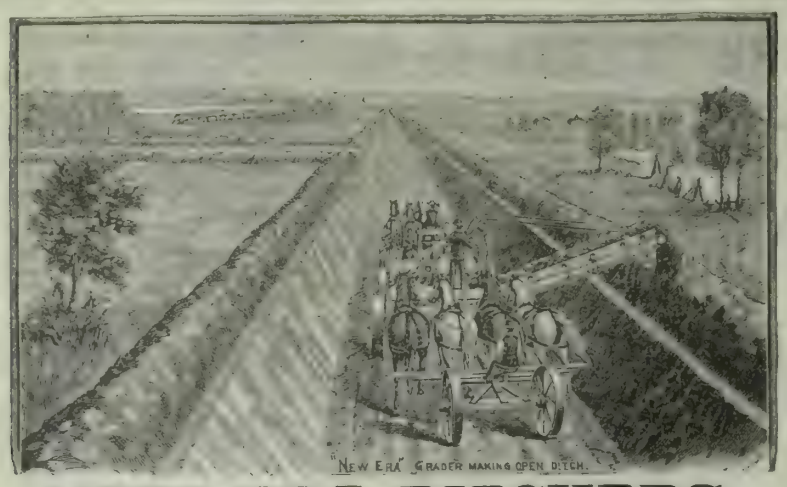
And will sell in lots to suit.

PARTICULARS AND CIRCULARS MAY BE HAD OF THE UNDERSIGNED.

H. M. NEWHALL & CO.,

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309 & 311 SANSOME STREET, SAN FRANCISCO, CAL.



"NEW ERA" GRADER MAKING OPEN DITCH.

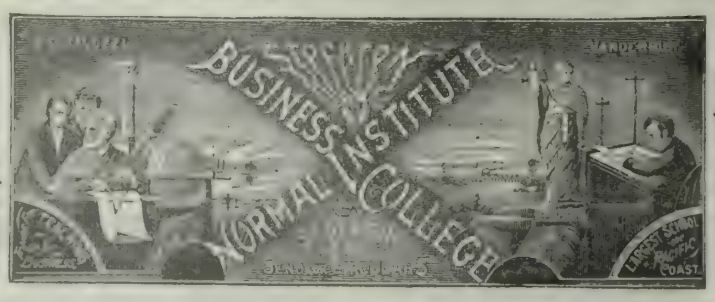
NEW ERA DITCHERS.

Guaranteed capable of placing in embankment *1,000 to 1,500 cubic yards of earth in 10 hours* with 6 teams and 3 men, or of loading 600 to 800 wagons of 1½ yards each in the same time, at a cost of *2 cents per cubic yard.* F. C. AUSTIN MANUFACTURING CO., CHICAGO, ILL.

H. P. GREGORY & CO., Agents,

SAN FRANCISCO, CALIFORNIA.

EXCELLENT BOARD, $10 per Month.

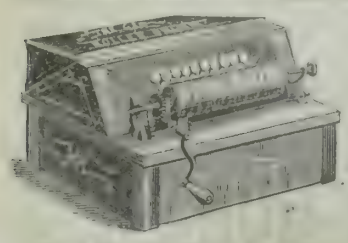


FURNISHED ROOM, $3 per Month.

Occupies two elegant buildings, containing over 70 rooms. Employs the ablest teachers, has the largest attendance and is the most highly recommended of any private school on the Pacific Coast. Board, Room and Tuition for six months, $128. Board, Room and Tuition for fifty-two weeks, $244.

Circulars containing Rules, Rates of Tuition and Board, and Courses of Study sent free to any address; also, beautiful specimens of Penmanship. Address,

TRASK & RAMSEY, Stockton, Cal.



Price $7, with Three Rollers.

18,000 NOW IN USE ON THE PACIFIC COAST

And Still Booming.

THE ROLLER ORGANS

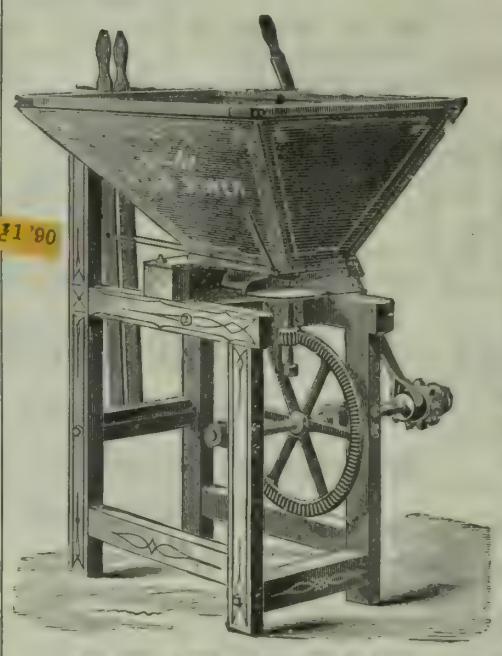
Have no equal and the price is in reach of all. Saves its cost in one night for dance music. Any one can play them. Plays sacred and popular songs and dance music.

We sell all kinds of musical instruments at bedrock prices. Circular free on application. All goods sent C. O. D., subject to examination before paying.

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GEM SEED SOWERS

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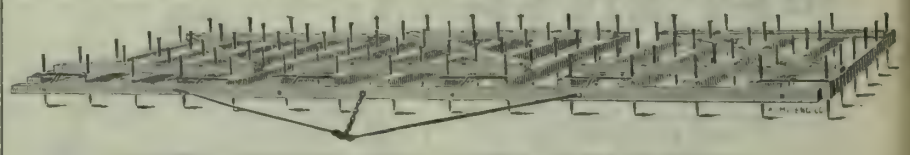
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NO. 1—WEIGHT . . . 130 POUNDS
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We call special attention to the prices and construction of our

EUREKA WOOD BAR HARROWS.



THE BEST IN THE MARKET.

Made Especially to Meet the Demand for a Light Weight Wood Bar Harrow.

Write for REVISED Price List and Circular.

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ANOTHER STEP UPWARD!

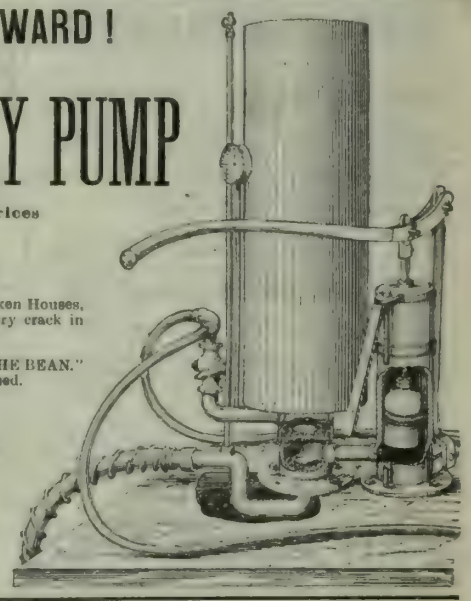
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Is now made in FIVE SIZES with Prices that will Suit.

You can Whitewash your GRAIN HOUSES, Chicken Houses, Barns and Fences at a great saving of time, and every crack in the ceiling will get a dose.

Tree spraying is made easy and cheap by using "THE BEAN." With our LARGE pump four strong sprays can be used.

Go to the Pavilion at the State Fair and see them, or send for circulars and testimonials to



BEAN SPRAY PUMP CO.,

LOS GATOS, CAL.

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Buckeye Spring Tooth Harrow and Seeder.

31 MARKET ST. SAN FRANCISCO.



A PERFECT BROADCAST SEEDER AND CULTIVATOR.

SIZES AND PRICES:

6½	foot Spring Tooth Harrow and Seeder	$100 00
8	" " " " " " with Improved Buckeye Cas.or	125 00
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For full description, write for catalogue with cuts and price list of BUCKEYE DRILLS, BUCKEYE SEEDERS, Etc., Etc.

P. P. MAST & CO., 31 Market Street, San Francisco.

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PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XL.—No. 13. SAN FRANCISCO, SATURDAY, SEPTEMBER 27, 1890. { DEWEY & CO., Publishers, Office, 220 Market St.



Autumn Scenes and Songs.

The summer's throbbing chant is done
And mute the choral antiphon;
The birds have left the shivering pines
To flit among the trellised vines,
Or fan the air with scented plumes
Amid the love-sick orange-blooms,
And thou art here alone—alone—
Sing, little bird! the rest have flown.
—*Holmes.*

I love to wander through the woodlands hoary
In the soft light of an autumnal day,
When Summer gathers up her robes of glory
And like a dream of beauty glides away.
—*Whitman.*

The sweet, calm sunshine of October, now
Warms the low spot; upon its grassy mould
The purple oak leaf falls; the birchen bough
Drops its bright spoil like arrow-heads of gold.
—*Bryant.*

Now Autumn's fire burns slowly along the woods,
And day by day the dead leaves fall and melt,
And night by night the monitory blast
Wails in the keyhole, telling how it pass'd
O'er empty fields or upland solitudes,
Or grim wide wave; and now the power is felt
Of melancholy, tenderer in its moods
Than any joy indulgent Summer dealt.
—*Allingham.*

There is a beautiful spirit breathing now
Its mellow richness on the clustered trees;
And, from a beaker full of richest dyes,
Pouring new glory on the autumn woods,
And dripping in warm light the pillared clouds.
—*Longfellow.*

Crown'd with the sickle and the wheaten sheaf,
While Autumn nodding o'er the yellow plain, comes jovial on.
—*Thomson.*

There is a fearful spirit busy now;
Already have the elements unfurled
Their banners; the great sea-wave is up-curled,
The cloud comes; the fierce winds begin to blow
About, and blindly on their errands go,
And quickly will the pale red leaves be hurled
From their dry boughs, and all the forest world,
Stripped of its pride, be like a desert show.
—*Cornwall.*

What visionary tints the year puts on,
When falling leaves falter through motionless air,
Or numbly cling and shiver to be gone!
How shimmer the low flats and pastures bare,
As with her nectar Hebe Autumn fills
The bowl between me and those distant hills,
And smiles and shakes abroad her misty, tremulous hair!
—*Lowell.*

Thy mellow autumn came, and with it came
The promised party to enjoy its sweets.
The corn is cut, the manor full of game;
The pointer ranges and the sportsman beats
In russet jacket; lynx-like is his aim;
Full grows his bag and wonderful his feats.
Ah, nut-brown partridges! ah, brilliant pheasants!
And ah, ye poachers!—'Tis no sport for peasants.
—*Byron.*

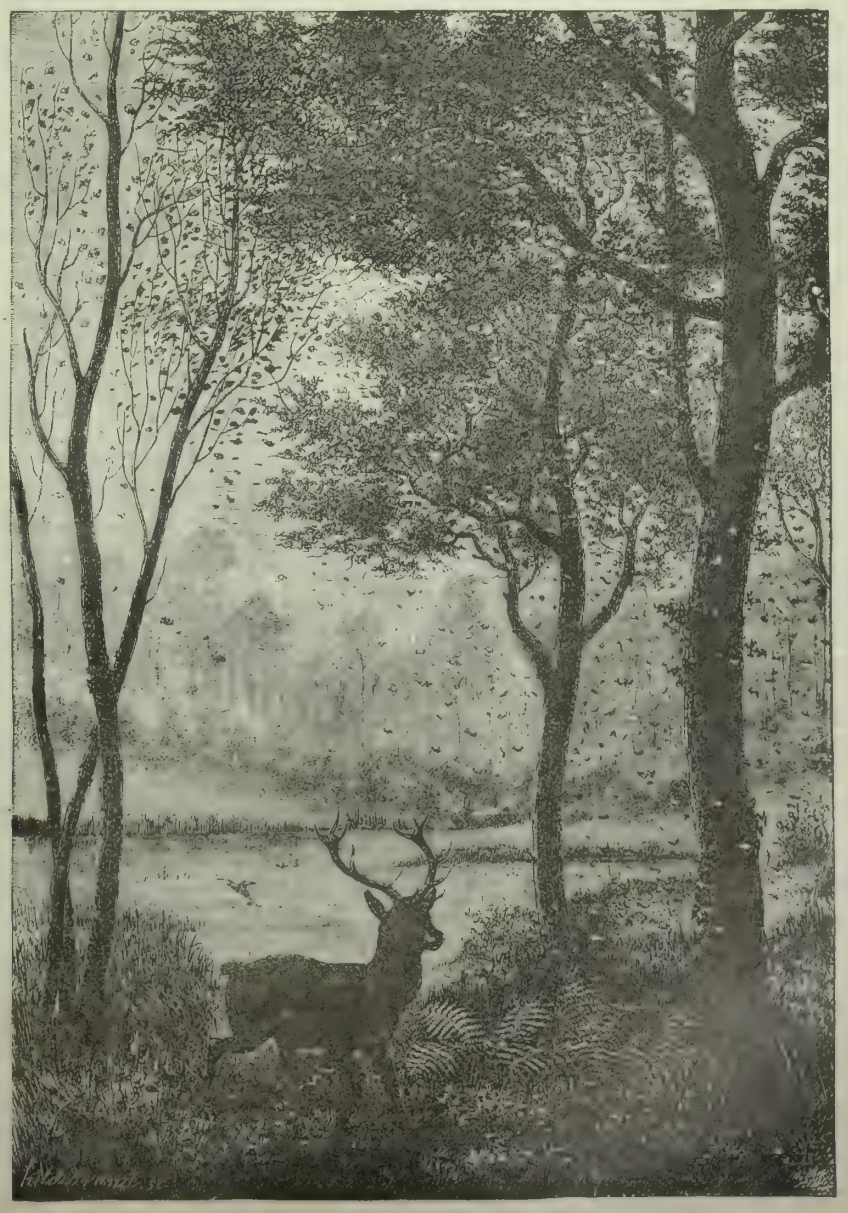
It is the season where the light of dreams
Around the year in golden glory lies;
The heavens are full of floating mysteries,
And down the lake the veiled splendor beams!
Like hidden poets lie the hazy streams,
Mantled with mystery of their own romance,
While scarce a breath disturbs their drowsy trance.
—*Reade.*

All-cheering plenty with her flowing horn,
Led yellow Autumn, wreathed with nodding corn.
—*Burns.*

It was autumn, and incessant
Piped the quail from shocks and sheaves,
And like living coals, the apples
Burned among the withering leaves.
—*Longfellow.*

Every season hath its pleasures,
Spring may boast her flowery prime;
Yet the vineyard's ruby treasures
Brighten Autumn's sober time.
—*Moore.*

Sorrow and the scarlet leaf,
Sad thoughts and sunny weather;
Ah me! this glory and this grief
Agree not well together.
—*Parsons.*



CORRESPONDENCE

Correspondents are alone responsible for their opinions.

From Humboldt County.

[illegible].

EDITORS PRESS.—I verily believe that Humboldt county has the most varied resources of any county of like area in this State. It has unexcelled dairy and cattle ranches. Its sheep ranges yield excellent mutton, and the wool commands the highest market price of any wools grown in California. It can produce plenty of fruit of quality equal to the product of any country. Apples, pears, prunes, plums, peaches, nectarines, apricots, cherries, grapes, figs, almonds, etc., grow and yield abundantly. It has farms which produce astonishing crops of alfalfa and excellent grain. Corn does well, and I could relate facts in regard to potato crops which would gain for me the reputation of being the "boss prevaricator." Vegetables of all kinds grow finely and anything grows and yields without irrigation.

Humboldt county has an extensive area of redwood timber lands, and a larger area of fir, madrone, laurel and tanbark. It has gold mines and undeveloped coal and copper mines. It produces petroleum in an insufficient quantity, yet capable of development by intelligent prospecting, and a low grade of silver ore.

Do not believe that this variety and excellence occurs on every 40-acre lot. The climate and soil of the county are as varied as its productions and resources. The coast section, south of Humboldt bay, is devoted mainly to dairying and cattle-raising, while north of the bay the chief interest is lumbering, and in the interior wool-growing is the leading industry. The whole is interspersed with a variety of farming, fruit-growing, etc, in keeping with the nature of the soil, climate, and inclination of the country. The tendency of a large portion of the county to incline occasions a series of multiform landscapes fully in keeping with its variety of healthy and invigorating climate. Near the coast it is not unusual to wear an overcoat on the Fourth of July, while a neighbor a few miles farther east celebrates Independence Day where the thermometer is 100° in the shade. During the Christmas festivities the "coaster" wears the same overcoat while his neighbor shivers before a blazing fire and remarks: "I think it is going to snow," and should he chance to be a resident on one of the higher ranges it is not unlikely that his prediction will be fulfilled to the extent of three or four feet in depth; yet little snow falls upon the larger area of the county, but it rains and rains, until one is weary of being soaked, and crops never fail from lack of moisture, and everywhere one encounters springs, brooks, creeks and rivers of clear, cold, excellent and wholesome water. An abundance of fuel and water, crops never fail from drouth, no cyclones, tornadoes nor blizzards, no malarial fevers, chills nor ague, surely this county is bountifully blessed.

So much for the topography of the county generally, which we conclude by saying that railroad communication with the interior of the State, north, south and east, is the only element lacking to bring Humboldt to the front as one of the most populous and leading counties of the State.

We will review all sections of the county in detail, beginning at Shelter Cove, which is the most southern shipping point and the most convenient outlet for the large quantities of wool and tanbark produced in the southwestern portion of the county.

Shelter Cove

Is an open port, having a fine wharf which extends from the shore outward to a convenient and safe place of anchorage for vessels, and is well sheltered from "nor'westers," which sometimes prevail off the coast; and it is not unusual for northbound vessels to put in here and anchor until the weather becomes calm. During the shipping season, from April to November, the steamer Newport makes regular weekly trips to San Francisco and returns laden with supplies for the merchants, stockmen and woodsmen of Briceland, Garberville, Harris and the intervening country. From December to March, southerly storms prevail and the cove does not afford a safe anchorage for vessels, consequently shipping is abandoned until more favorable weather.

Mr. John Ray is the sole owner and proprietor of the Shelter Cove wharf and warehouse, and connected therewith is the Shelter Cove ranch—a very desirable property, especially adapted to dairying and stock-raising. Although the prevailing fogs do not admit of satisfactory fruit and grain growing, small fruits yield abundantly and calla lilies bloom in the open air all the year round. The scenery is grand and picturesque. The ranch consists of a succession of terraces which terminate in a range of mountains several hundred feet above the seashore, while to the north and south the Pacific beats against precipitous and inaccessible cliffs, surmounted by mountains of evergreen woodland and lofty peaks.

Leaving Shelter Cove by wagon-road, we wend our winding and weary way five miles to the summit of the first range of mountains and reach the coast-route wagon-road, which is a thoroughfare between the coast sections of Humboldt and Mendocino counties. Here we pause for a fine view of the ocean, should it not be foggy, and ask ourselves why it should be quite cool at the cove and very warm at the top of this range overlooking the ocean. Then away we go—down, down, this way and that way, around here and around there, and a few minutes bring us to Frank McKee's in a cosy little vale, shut in on all sides by wooded peaks, and containing groves of laurel from the burls of which Mr. McKee has succeeded in producing incomparable specimens of furniture.

Laurel Burls.

I have never seen anything equal it. It is both rare and beautiful and cannot easily be duplicated. He has also invented a knife which turns out very artistic lumber for wainscoting and finishing purposes. The knife should be patented and introduced throughout the country, as it is now used only in Mr. McKee's mill, which is a small concern for his own use mostly.

Here is another junction of roads: The coast road to Mendocino and another known as the Garberville and Shelter Cove road connects the coast road with the interior, and taps the wool-growing section of country connecting with the South Fork and overland wagon-roads, and connecting the South Fork road with the White Thorn valley road which forms the coast-route mail and stage line, which is beyond a doubt a desirable route for travelers, as it embraces the redwood belt of both Mendocino and Humboldt counties, and connects all places in either or both counties. T. B. L.

Notes from the Antipodes.

EDITORS PRESS:—From the report of the superintendent of the Botanic Gardens of Adelaide, South Australia, for the past year (1889) we learn that the rainfall for that year was the most copious on record, footing up 30 872 inches. This unusual occurrence was accompanied by other marked abnormal atmospheric conditions. The large amount of rain was, however, very favorable to the agricultural interests of the region, which had previously passed through several dry seasons.

Several new plants have been introduced and are being experimented with, among them a new vine from Mexico; the Chinese Artichoke (*Stachys tubirifera*); the Sisal Hemp (*Agave Sisalana*) for fiber; and the *Lathyrus sylvestris* for fodder.

The Lathyrus is said to yield as much as four tons of hay per acre, and this in the poorest soil.

It is found growing wild in some parts of Europe, and the nutritious value of the hay made from it is about twice that of clover hay.

It is so highly prized in Prussia that the Government has issued an order granting a subsidy of about $2.50 per acre to landholders who will cultivate it upon their waste land.

The California coniferous trees, which in their native habitat are found at an altitude of from 500 to 1000 feet, flourish on the plains of South Australia, as do many succulent plants, such as Agaves, Yuccas, Aloes; and species of several genera of cactaceous plants.

In the matter of fruit trees, it is remarked that all the stone fruits attain a large size and are of excellent flavor, but the trees are short lived, in consequence of their quick and luxuriant growth and early and excessive production of fruit. L. G. YATES, F. L. S.

Santa Barbara.

Marginal Notes.

EDITORS PRESS:—On page 226 of the RURAL PRESS of Sept. 13th are two articles on which comment is needed. Concerning the article "Is It Chance?" I have to say that the growing top of a morning glory vine swings around toward the east on the south side of the object which it climbs; a hop-vine twines the other way. A cyclone in the northern hemisphere moves eastward on the south side of its center; south of the equator the motion is the reverse. Possibly trees of the same kind are prone to twist alike, but there are both right and left contortions among the sticks in my wood-pile.

Another article is headed "Wonderful Trees." The traveler who could say of our grandly beautiful sequoias, "They are not beautiful—simply enormous," should consult an oculist. The same language concerning a lily would express the whole artistic appreciation of a mite groveling at its base.

The quivering tree of Georgia, the moving palm of India and the iron plant of Africa may safely be placed in the genus *hoax* along with the snow-flower of Russia, which blooms only on New Year's Day, and the carnivorous tree of Mexico whose tentacular branches clutch birds and suck their blood. The marvels of fiction are not needed to augment the admirable wonders of the vegetable kingdom.

San Jose. VOLNEY RATTAN.

Merced County.

EDITORS PRESS:—About one year ago you published a communication from my pen concerning this locality. Another year's crops have demonstrated the statement I then made that this part of Merced county is especially adapted to the production of peaches, pears and other orchard fruits. Two hundred dollars net per acre have been obtained from young peach orchards here this season. Pears paid nearly as well. A large area was planted to Malaga grapes last spring, but unfortunately cuttings were used instead of rooted vines, and much of the setting will have to be done over. It is hard for some people to see that haste makes waste.

Several carloads of green fruit have been bought of the Buhach Co. here, and shipped to Texas. Our dried fruit is sold in your city.

It seems to me that this is one of the most favorable localities for men of small means to engage in fruit-raising. Good fruit land can be had for $100 per acre, with water right and one dollar per acre annual water rent. We have an abundance of water flowing in our ditches now (Sept. 15th) and will have until it rains. Our sandy soil requires irrigating less frequently than the hard lands. There are vineyards which are never irrigated, that yield good crops. We have the S. P. R. R. through our neighborhood, and the Oakdale extension a few miles east of us where the new Rotterdam is being established. W. T. KIRKMAN.

Atwater.

HORTICULTURE.

Cutting Back Pruning.

EDITORS PRESS:—I have just been reading with much pleasure J. M. Edmiston's article in the RURAL of Sept. 6th, which, by the way, I consider one of the finest issues of your usually fine issues that I have seen, on "Summer Pruning of Deciduous Fruit Trees," wherein he propounds the question, "What, then, is the theory of summer pruning?" and his answers are so rational and agree so nearly with the practice I have so persistently recommended and practiced, that I cannot forbear reiterating that not only the theory but the practice of pruning at any and all seasons of the year should be "to make the branches short and stubby so they can bear a heavy load without breaking down, and to increase the number of fruit-bearing branches and develop the fruit-buds near the trunk of the tree, etc." I am pleased to notice this mode of pruning is being so generally advocated, and it is to be hoped will be universally practiced, for, unquestionably, it is a correct one.

The plan usually practiced of commencing at the lower extremity of the trunk and trimming up, leaving the trunk exposed to the scalding rays of the sun, sending the sap skyward to develop fruit-buds and nourish fruit-growing at the extremity of long, slender branches, should be put a stop to at once, and a new departure be taken, by commencing at the top and pruning downward. Even this should be done when small trees are being set out. Cut off the top of a long, slender tree and a stout, stocky body will grow, needing no staking to keep it in position. J. S. TIBBITS.

Muskegon, Mich.

A Eucalyptus Fruit-Ladder.

EDITORS PRESS:—I saw a description of a fruit-ladder in the RURAL PRESS for Sept. 6th, which seemed to be just the thing to fill a long-felt want, and I cut a eucalyptus pole (every one should have abundance of these growing on his farm for many different purposes besides firewood) three inches through at the butt and 1½ inches at the top when the bark was taken off, 13 feet long; partly sawed and partly split it to within two feet of the top, where I wound around a bale-rope to prevent further splitting, spread the bottom 3½ feet, sawed notches half an inch deep into which I nailed strips of boards for steps, as the pole was too small to bore with an auger, and I had the neatest, lightest, handiest fruit-ladder that ever was! I had several other ladders, including a step-ladder, but this, after I saw the point, was a necessity. It is almost a pleasure now to pick fruit. It is rather small for some of my tallest apple trees; with this exception, it seems about as near perfect as they usually make things in this lower world. The wonder is that such a ladder has not been in use long ago. Moral: Read the PACIFIC RURAL PRESS S. P. SNOW.

Santa Barbara

The French Prune in Ventura.

EDITORS PRESS:—It is a peculiar fact that the culture of the French prune has been heralded by the newspapers of various counties in the State for its adaptability to the soil for their respective localities, and a stranger might infer that it could not be successfully grown in other places. But such is not the case, however. It can be proven that Ventura county is not in arrears by any means. It is grown three miles from the coast, and in the interior valleys it is likewise productive. It is interesting to note the yield of some of the orchards in other counties, and I have yet to learn of any statement being published from Ventura county. I wish to add an appendage to show we can raise prunes here. I have less than 1500 prune trees, six and eight years set, with walnuts placed between, and every alternate tree in the walnut row is a prune. I harvested over 104 tons this season. On less than two acres I have 240 prune trees six years set, put out described as above. From them I harvested 25 tons, 480 pounds, and I sold them for $40 per ton. It is a simple matter to make a calculation of the yield in dollars per acre, and it demonstrates the fact that the production and prices compare well with other localities.

Ventura. N. B. SMITH.

[The French prune is perhaps our best all-around fruit variety. Though, of course, it has preferences, we doubt if any one variety succeeds in so many different localities.—EDS. PRESS.]

A Prune Yield in Tulare.

The following statement is sworn to by several witnesses: My name is C. W. Clarke. I reside in the city of Sacramento, California, and have resided there for the 40 years last past; that on the 1st day of September, 1890, in company with several other gentlemen, I went to the Briggs orchard, situated on Section 9, Township 19 south, Range 25 east, M. D. B. and M., about four miles southeast from Visalia, Tulare county, California; that while there we had gathered the product of one tree of the French prune variety, which said tree is six years old; that from said tree I saw gathered, cleaned and weighed one thousand one hundred and two (1102) pounds of prunes, and I am confident that many other trees in same orchard, of same variety and age, will produce as many, if not more, pounds of prunes than the one whose product I saw gathered and weighed.

Copperas and Pruning.

EDITORS PRESS:—I have read with much interest and profit F. S. C.'s communication in your issue of Aug. 26th. Mr. Bassford's decision on the "Iron" question was something new to me, and feeling assured that he was speaking from personal experience, I would like to know how much copperas he intended would be sufficient for bearing trees of say from six to seven years old.

I also notice that he does not approve of cutting back the long shoots of bearing prune trees. If they are not cut back somewhat, will not there be too much fruit on the extremities of the trees? My prune trees are well topped, and have been bearing for three years. Shall I allow the long, young growth to remain or not? J. M. C. MOORE.

Otay, San Diego Co.

THE VINEYARD

Raisin-Growing in San Diego.

One of the most interesting subjects discussed at the San Diego Horticultural Convention last week was raisin-culture. The subject was brought up in an essay by A. W. Hawley of El Cajon, which was followed by a general talk. The article, as published in the National City *Record*, is given below:

The varieties of grapes used in making raisins are but two—the Muscat of Alexandria and Muscatel Gordo Blanco. Some contend that there is but little or no difference between the two. Gustav Eisen says: "Both varieties are found promiscuous in most raisin vineyards." Most vineyardists in California favor the Gordo Blanco, claiming that it is a better and surer bearer, giving both larger clusters and larger berries.

In regard to planting, I should make but little difference between cuttings and rooted vines. The roots are preferable for a dry year. The first year the rooted vines show a greater growth, but after that there seems to be no perceptible difference. If irrigation is used I would recommend planting from 8 to 10 feet apart; if not, from 10 to 12. The soil should be plowed deep and be thoroughly pulverized before planting. The system of plowing in winter has become almost universal as the mode of cultivation. By plowing both ways, nearly all the ground is stirred to a good depth, and tends to prevent the formation of a hard crust just below the depth to which the cultivator teeth penetrate, and prevents the formation of evaporator tubes, by which the soil is deprived of its moisture. The cultivator should then be used to destroy all weeds and break the crust after each rain.

The most particular part in raisin culture is to get the vine filled to its capacity with large clusters, for upon this depends the final returns for our labor at the end of the year. There are vineyards in the Cajon that are not filled to half the capacity of the vines, and others that are overloaded. There is seldom a good crop set on vines in a shallow soil, but the trouble comes on our rich, moist land or irrigated vines from the disease termed coulure. Wickson in his "California Fruits" says: "A frequent misfortune of the vine, and for which no remedy is yet known, is coulure, a term signifying the failure of the fruit to set or remain on the cluster." It is pretty generally acknowledged to be caused by mildew, and sulphur is the accepted remedy, yet this fails on vines closely pruned, on moist land. I think we have a certain remedy for this in a system of winter pruning, summer pruning and suckering. I have never had a failure in getting a vine well filled with large clusters of first-crop grapes

where the Chaintre system of pruning is pursued, while with the old system the larger portion will be second crop, which are not so valuable to the producer. This method distributes the grapes along the row and not in a cluster about the head, leaving them so the sun and air, which seem to be death to mildew, can get at them. I would recommend this only on such ground as that of which I speak, on shallow soil. I would advocate the spur system of pruning, by leaving five or more arms or branches, three to six buds long. To develop these buds it will require strict attention to remove all suckers as they appear. On next year's pruning, instead of cutting off any of the old wood, you trim the new wood to one bud beside the base bud. This will throw the majority of the bearing canes away from the center, and by removing suckers whenever they appear, will let in the light and air and prevent coulure. Summer pruning or shortening in the growing canes, if done just as the grapes are going out of bloom, has a tendency to prevent coulure. It causes laterals to start which furnish the much-needed shade later, to prevent the grapes from sunburning and from premature ripening. It also, by checking the vine, develops the fruit. Grapes should not be picked before the expressed juice tests 24 degrees by the saccharometer, after which they should be picked as soon as possible, to get them cured before the rains. An unripe grape will not dry as quickly or weigh as much when dry as a ripe one; so too much haste may make waste. The picked grapes should be placed one thickness on trays. After they are about two-thirds dry they are turned. This is done by two men, one at each end of the tray. They place an empty tray on top of the full one and clasping both ends firmly, invert them, using the emptied tray for the next one, and so continue. When most of the grapes are dry they have to be sorted, taking out what will make layers from those that make loose. In regard to the shelling, grading and packing of raisins, that has almost passed out of the producer's hands into that of the packer's, the producer having to deliver them sorted in sweat-boxes to the packing-house.

At the close of Mr. Hawley's article quite a discussion ensued. The principal point in this was the advisability of summer pruning, on which several members spoke, including Frank Kimball, G. C. Swan and Mr. Edmiston. The latter was in favor of summer pruning just as soon as the blossoms begin to open. His theory was that the pruning prevented a rapid evaporation and thus for a time raised the temperature of the vines. This caused the vine to set greater quantities of fruit. Subsequent pruning was considered injurious, and was only resorted to to stop the dropping of the fruit.

A lady inquired about the best time for winter pruning, and Mr. Hawley answered that any time after the leaves had fallen, about December 1st.

The Chaintre, or as Americans call it the Chaine system of pruning, which leaves branches three or four feet long, was also discussed and was favored by J. M. Asher. Mr. Asher's talk drifted to the growing of Zante currants, which he believed were even more profitable than raisins.

Mr. Edmiston was opposed to the Chaine culture system, and favored the spur system, and would leave from 10 to 25 spurs on each vine, the number of the spurs depending upon the vigor of the vine.

Isaac Martin was also opposed to Chaine pruning, and favored spurs on arms.

Mr. Griffin from Chula Vista expressed the opinion that any system that would produce an unusually large amount of grapes one season would be usually followed later by a decreased crop. He appeared to think both grapes and other fruits would find an average.

Mr. Kimball spoke of Thompson's seedling, which is a seedless raisin grape, of a quality which Mr. Kimball recommended.

Production of Brandy.

The Viticultural Commissioners have received from John W. Mason, Commissioner of Internal Revenue, a statement of the production of fruit brandies in California, as shown by the official statistics since 1864. These figures were obtained by Secretary Scott and are the first that have ever been published in California. The figures show the production for the fiscal year ending June 30th:

Year.	Gallons	Year.	Gallons	Year.	Gallons.
1865	20,415	1873	118 605	1881	351,206
1866	74,773	1874	99 680	1882	502,513
1867	47,303	1875	297,147	1883	324,717
1868	152,418	1876	142 799	1884	295,039
1869	286,753	1877	157,159	1885	383,756
1870	169,791	1878	318,071	1886	402,121
1871	157,107	1879	158,393	1887	742,445
1872	211,916	1880	238,928	1888	953,580
				1889	915,573

It is to be regretted that the totals of apple and peach brandy are included in the figures given, but this cannot be avoided from the manner that the records are kept. The total of brandy from these sources in California is very small—so small, in fact, as not to be worth consideration.

LONG DISTANCE POWER.—One of the features of an electrical exhibition at Frankfort, Germany, is to be the transmission of power (500 horse) a distance of 140 miles. It is not pretended that this can be done economically, but the mere doing of it will be one of the wonders of the exhibition.

POULTRY YARD.

The Hatching Season.

EDITORS PRESS:—The time having now arrived, or nearly so, for the fall hatching, perhaps a few words of "experience" and direction may be appropriate and be of assistance to some one. With poultry-raising, as with many other things, there are certain matters which it is necessary to keep in mind in order to insure success, and the only way to do this is to keep in constant practice or to keep well supplied with good practical poultry journals made up of the experience of thorough and successful poultry-raisers who know of what they write and do not give mere theory or hearsay which serves so many times merely to mislead and bring to grief those who adopt it for their guidance. It is always well to experiment wisely, as in this way we possess ourselves of valuable knowledge many times, but if we can, by informing ourselves of the "ways of those who know," arrive at the desired result, it often saves us much time, much useless expense and much worry.

I suppose that poultry literature or stock literature is, equally with other kinds, susceptible of being presented in more attractive and amusing form, and indeed I have read quite an interesting and entertaining novelette having for its subject-matter the doings of the denizens of the poultry yard, and in such a way much information might be pleasantly imparted; but after all, "dry facts" serve the earnest seeker perhaps quite as well, and are easier written or told, so here goes for dry facts.

In my last I talked mostly of incubating, and so long as incubating is followed there will always be something to learn and something necessary to say about it. The conditions of each hatch seem to differ, and sometimes very materially, owing sometimes to difference in the condition of the eggs or to difference in the outside temperature which may be sometimes excessively warm, at other times cool or windy or damp and overcast. All of these different conditions necessitate different treatment of the eggs in process of hatching—a little less or more of heat or moisture or a little more careful closing of the room or house where the incubator is kept.

One great difficulty is to find coal oil of the requisite quality—oil which will not crust the wick or cause the blaze to flicker or rise and fall. I have used all of the finer brands, any of which have done finely until, perhaps, I would get hold of a case which I could not use, as, in spite of all care, it would give off fumes which were not only plainly to be noticed in the room, but in the egg chamber also to the manifest harm of the eggs therein. For this reason I do not think that any particular brand can be recommended as fully reliable. I use now, as I did once before for a long time, "Pratt's Astral," and find it quite as reliable as any and quite a third less expensive. I use it for both incubators and brooders, except when I use hens as brooders, and as a matter of fact I do then, spraying them lightly if there is a suspicion of lice; but if this is done it must be done with great care, as if used at all freely it may cause the loss of sight of the chicks they are brooding. Perhaps the use of insect powder would in many cases be less likely to result in harm to the chicks and the less objectionable.

I have noticed that where women conduct the incubating, they, true to their character as careful managers, invariably have the machine or machines in the house, if not in their sleeping-rooms, where they can watch it closely through the night, getting up at least once to look at the thermometer in the egg chamber, no matter how self-regulating the incubator may be. This is a very safe precaution, for often the regulator itself needs regulating, according as the night turns cool or warm. I have not yet seen an incubator whose inside temperature—that is, of the egg-chamber—was not more or less susceptible to change in the outside temperature, making it necessary to raise or lower the flame of the lamp furnishing the heat as the room got cooler or warmer.

I think that a house intended as an "incubating" house should be built in such a way as to be as independent of changes in temperature on the outside as possible, and be well ventilated, as, for instance, thick walls and floor and well ceiled. Many windows are not needed, and they might be double-glass, with the sash constructed in a way to admit of it, thus having a space between the inside and outside panes as one sees them in incubators where a little "window" is left for the purpose of allowing one to see the thermometer in the egg-chamber and to see the eggs as well; then for ventilation there should be means of slightly warming the air before it enters the room when the outside air has a chill in it, or it would be difficult to maintain an even temperature in the room, and this might be arrived at by means of pipes from the outside at the bottom of the room and continued to the ceiling, thus causing the cool air from the outside to mix with the warm air at the top and become tempered to the right degree.

This I take to be a much better plan than having the incubator in one's bedchamber or even in the house, for although it may not be unhealthy, it certainly has its inconveniences, not the least disagreeable of which may be considered the odor arising from the flame of the lamp and that thrown off by the eggs in process of incubating, and, in very warm weather, the added heat. On the other hand, if one really means to neglect no possible duty to the future chick and among these duties finds that of getting up once at least during the night to see that everything is going on rightly, then having the incubating done in the house might be considered preferable to the necessity of going outside, particularly in bad or cold weather.

The many failures of beginners are, in the majority of instances, to be traced to the lack of careful observance of detail, and seemingly many times they have to learn by dearly-bought experience that if they would be successful they must be careful to leave nothing undone that should be done, no matter how fussy or unimportant it may seem to them. As they become "older hands" at the business, they will find that attention to detail pays in poultry-raising, as in fact it does no doubt in any and all kinds of business, but perhaps more noticeably so in "chicken-raising," and the superiority of women as poultry-raisers is due to the fact of their greater care in attention to small matters.

Chickens are small things, and a little care or a little neglect tells sweepingly for or against their well-doing, and consequently for or against the interest of the would-be poultry-raiser, more particularly now that we have such low prices in poultry to contend with in consequence of the oversupply of cheap Eastern poultry and eggs. Although really choice poultry and eggs bring as yet a fair profit, and while they are becoming perhaps still cheaper, we must learn how to raise them in a less expensive manner and be able to thus put them on the market at competition prices and still realize a living profit.

My former practice was to raise my chicks wholly by artificial brooding and yarding, but I have since somewhat gotten out of the practice and have used more and more the natural brooders—good, motherly, careful old hens—and allowed them to run at large, keeping, however, as I have before said, the hen confined in a coop (if found advisable) which the chicks can run in and out of at will, and if one selects good hens and keeps all free from lice, I think that in the greater number of instances one raises a larger percentage of chicks than by artificial brooding. My method is to set the requisite number of hens some time during the incubating process, say at any time before the last week, and when the chicks come off give them to the hens, who, almost without exception, take them with great satisfaction and go at once to scratching for them.

The fault with the generality of artificial brooders is their lack of the means of furnishing the chicks a proper supply of fresh air and necessary warmth at the same time, and unless this is done the coming off in the morning into the outside air is a time of great danger for them, especially if it should be somewhat cool, as being warm and sweaty from their close, warm quarters they chill and it results in diarrhea and consequent loss of a great part, if not all, of the chicks.

Great care should be observed in the matter of air and warmth for the chicks during the night. Not too warm, or it weakens them and retards their growth, nor too cold, or you chill them, and in either case you have a chick which does not pay you to raise, as it never becomes a good fowl.

I am still incubating and using hens as brooders, and shall continue to do so through the winter, or until I find, as possibly I may, that artificial brooding is more profitable during the wet, cold months when chicks cannot be allowed to run out at all times as they may in the warm, dry months. I intend to test it, and can speak of it by-and-by more understandingly, perhaps. At present I am decidedly in favor of Mrs. Biddy as a brooder, but prefer the incubator as a hatcher because it is always ready for duty, hatches a greater number than a hen or many hens, does not consume as much, and admits of more hens laying eggs, which would be otherwise setting, and is also less trouble to one than the care of setting hens, which one has to feed and water and keep clean and free from vermin.

I have so far found Langshan hens to be the best mothers, and I am almost of the opinion that taking the whole year through, winter and summer, they are the best layers, which I am aware may to some sound like heresy and an unwarrantable attempt to dethrone the Leghorns, who seem to have reigned supreme as the laying fowl, but my Langshans lay when the Leghorns do and they lay when the Leghorns do not, and so far 100 Langshans have given me more eggs than 100 Leghorns. I am inclined to think, however, that the Langshan being a quieter fowl, stands confinement in yards better than the Leghorn, and when allowed free range the Leghorn might be the best.

With the Leghorn we get large white eggs, which seem to be in more demand than dark ones, although the darker ones are much richer and more nutritious, and the old saying, "For eggs to beat into a light, stiff froth, choose white ones, but for frying or kindred purposes choose always dark ones," still holds good.

When the census returns are in and published, if the number of fowls in the State is shown, I think that if means can be found of comparison with past years, we will see that the number is many times multiplied, as each day seems to find some new hand at poultry-raising, and the cry of overproduction begins to be heard, but many years will pass before that result is reached. I don't fear that as much as I do the Eastern evil, and that, as I have already said, can be met, I think, by practicing a greater economy in our conduct of the business, raising our own feedstuff. Young growing fowls can, I find, be fed almost entirely on green stuff chopped, such as carrot-tops, cabbage, green corn, turnip and onion-tops, etc., some of which may, if thought necessary, be wet and sprinkled with middlings.

T. B. GEFFROY.

Lodi, Cal

Poultry Disease.

EDITORS PRESS:—I have had several deaths among my poultry the last few days; perhaps some of your valued poultry correspondents can enlighten me as to the cause and cure. They have been fed as usual, and there have been no deaths previously for some time. They droop for a few days and die, and those attacked ranged from half-grown to two years old. On opening the crop, it was full of stringy, slimy, *watery stuff* mixed with wheat that they evidently could not pass along. There has been no change in their usual food, and they have no access to foul or dirty water; they were not confined, but had the range of some 20 acres. What is the trouble and the cure?

Otay, San Diego Co. J. M. C. MOORE.

FORESTRY.

Acacias for Tanbark.

EDITORS PRESS:—The experiments in the cultivation of various species of acacia (the so-called wattles of Australia) in South Australia and Victoria, for the production of tannin, have proved eminently successful, and is being carried on as a profitable pursuit.

Mr. J. H. Maiden, F. L. S., in his "Wattles and Wattle-barks," gives full and interesting accounts of the various tannin-producing acacias, with tables of their comparative values for that purpose.

Some of the landed proprietors of Southern California are beginning to look into the matter with a view to the extensive planting of trees suitable for furnishing tanbark. This, by the way, is one of the things which should be worked up for the benefit of the State at large.

There are many thousands of acres of land in California which are better adapted to the profitable culture of trees for tanning purposes and plants for fiber than for any other purpose.

The successful introduction of these industries means a large increase in the productive wealth of the State, and they should be experimented upon by our Government Stations as well as by individuals.

The latter, while testing the capabilities and prospects of these industries, may not only demonstrate the possibilities but, at the same time, if only the best trees and plants for the purposes be selected, make for themselves a source from which they may receive profitable and readily available returns for the outlay of time and money involved.

The tannin-producing acacias or wattles are natives of Australia, where they grow in the poorest soil and require but a moderate rainfall. The trees begin to give returns in from five to seven years.

A statement compiled from evidence given before a "Board of Inquiry on Wattle Cultivation in Melbourne," shows that 100 acres of wattles may be made to yield a profit of about $10,000, after paying for the rent of the land and expenses.

The trees are planted 10 feet apart, and at the expiration of five years every third tree is stripped and a new tree planted in its place. This is repeated for the next two years.

After this, two years of waiting for the new growth of trees to come to maturity; so that after the first five years, three years out of five yield bark in large quantities, while the intervening or off years yield something from the trimming of the young trees.

The matured bark of the black wattle (*Acacia decurrens*) yields from 15 to 36 per cent of tannic acid.

The bark of the broad-leaved wattle (*Acacia pycnantha*), as high as 46 per cent of tannic acid, and many other species yield tannin but in less quantities, some as low as 2½ per cent, but these are classed as "worthless."

Hence it is very important that seed of the proper species for planting be obtained.

The writer has just received some fresh seed of two of the most desirable species, for experimental purposes.

LORENZO G. YATES, F. L. S.

Santa Barbara, Sept. 15, 1890

[As we remarked in a recent issue, the black wattle is already widely distributed in this State and is seeding freely. The University has sent it out to correspondents for the last five years. The tree does remarkably well in many parts of the State.—EDS PRESS.]

SHASTA COUNTY FAIR.—We are indebted to the officers of the 27th District Agricultural Association for a "season complimentary" to the annual exhibition to be held at Redding, 23d to 26th instant, inclusive.

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found all items matter from this and other periodicals of special and importance to Patrons. Any subscriber who wishes can change free to that edition.

In a Very Few Days.

Promptly at 10 A. M. Tuesday, Oct. 7th, Worthy Master DAVIS will doubtless call the 18th Annual Session of the State Grange of California to order. It convenes at Watsonville, in the rich, fruitful and healthful Pajaro valley. Within a radius of 30 miles are the flourishing towns of Hollister, Gilroy, Santa Cruz, Castroville and Salinas, and within about 50 miles are San Jose (the Garden City of California) and the historic town of Monterey.

The citizens of Watsonville, inspired by the grand hospitality extended the National Grange by the State Grange of California last November, have outdone all former State Grange occasions in their invitation of welcome and program of choice social, educational and friendly offerings.

Watsonville Patrons and citizens beckon us all with wide-extended arms. Let us not disappoint them in our numbers, but greet them with an overflow of our noble-minded Order.

If any are wavering in their minds as to going to Watsonville, let them give the benefit of the doubt on the safe side for securing recreation and experience that will uplift the better lines of life for all time.

Our Good Waterloo.

EDITORS PRESS:—Last Saturday I had the pleasure of visiting Waterloo Grange, which was a great treat. There were 62 members present (with nothing special to attract), the majority young people, yet enough whose hairs are silver to add dignity to the assembly.

I doubt if there is a Grange in the State whose members take more interest in the Order. That they have been well instructed is evident by the prompt and easy manner in which they dispatch business.

Seven applications for membership were made that evening, which proves that work is being done outside as well as within the gates.

Under the head of "Good of the Order," the Lecturer made some well-timed remarks and tried to impress upon every member that it is far better to see how much each one can do and not how little. Then a very entertaining literary and musical program was rendered by different members. This was followed by lots of good advice and encouragement from Bro. P. M., Overhiser, who also spoke of the RURAL PRESS and secured six new subscribers.

After the Grange had closed, the young people amused themselves for an hour in tripping the light fantastic, while the older members indulged in a social chat.

Long live Waterloo Grange, and may it continue to increase in membership and influence! May Bro. O. be the means of instituting another Waterloo Grange soon! Fraternally,

A VISITOR

Rally at Selma.

To flank the circus, the conference meeting of Patrons, farmers and Alliances at Selma was set for Saturday, September 27th, at 10 A. M. There should be a large gathering to greet the old war-horse and General Deputy, C. J. Cressey. His immense fund of good humor and sensible farm and home talk is worthy of a large audience. No one goes away disappointed wherever the Worthy Treasurer of the State Grange speaks. His words are full of attraction and encouragement for the weary toilers—Husbandmen and Matrons. Do not fail to hear him.

Although no encouragement had been given him up to the close of last week, Bro. Cressey, as General Deputy of the district, determined to visit and interview the members of Lucerne and Hanford Granges some time this week; also to go to Visalia and view the field there as to the feasibility of reorganizing the Grange at the county seat. We wish him success.

A Hearty Invitation

From Generous Watsonville.

In the center of Pajaro valley is the gem city, Watsonville, and many of her citizens are busily planning how best to entertain the State Grange.

Among the proposed features are a free excursion and clam-bake (the genuine quahaugs are found in abundance along the beach), free carriage excursion and barbecue, plenty of music and other entertainments, numerous souvenirs, etc.

They all join in the invitation to all Grangers: "Come and bring your friends with you; make an old-fashioned New England visit and stay a couple of weeks, for you can live here cheaper than many do at home—plenty of the best for all!"

The Master's Desk.

B. W. DAVIS, W. M. S. G. OF CALIFORNIA.

Hoi for the Seaside.

If you belong to the Grange, you are specially invited to join the "crowd" and be at Watsonville Oct. 7, 1890. There will be a great many there, but "the more the merrier," so come along. Bro. Roache is preparing entertainment for all, and for *one more* there will surely be room. Just consider yourself that one, and, before you start from home, go to the garden or granary, go to the library or larder, go to the field or flower-bed, go to the orchard or go to the newspaper—at least go somewhere—and select a few choice thoughts. Don't go to Watsonville empty-handed. Take an offering, and if some one does not give you an idea, I'll be mistaken. At any rate, you will be duly and truly prepared to give them ideas, and we are taught "it is more blessed to give than to receive."

Idle Hours.

Did you ever stop to think how much of your own life has been spent in idleness? It matters not how busy a life you may have led, there has never been one day when there were not idle moments. Idleness is not a companion that will help you to be a bigger man than you would otherwise be. There is no loss of time in taking reasonable rest; but even when one is resting from *physical* exhaustion, there may be some pleasant and profitable *mental* work going on. So, too, when one is mentally tired, then may be found pleasant, light, physical employment. The hours of sleep and perfect rest are not hours of idleness. The hours to which attention is called are not these, but those when one might be doing or saying something useful. If the idle hours of life were but fully utilized, how much good could be done! If the idle hours of the Grange could be utilized (not that they are more plentiful than in other Orders), how the Grange might be benefited! Let us utilize *idle* hours, and see how many new Granges can be organized!

Tariff or Free Trade?

That is the question, but don't let any party, or any unworthy man, put a tariff on your vote or make free trade of your rights. Stand for your country, vote for the best men, and protect your family and property rights. That is what farmers want. That will give all industrial interests Protection and Free Trade at one and the same time, and no one will be sufferer unless it be the ward politician, and his interests the farmer is not bound to protect.

Our Government pensions and assists loyal and disabled soldiers and sailors, and it is proper and right and its *duty* so to do. To do this, laws were passed. Now let Congress pass suitable, reasonable and proper laws to protect and assist that largest class of its citizens who pay so heavily of taxes, viz., the farmers. Don't think the farmers ask for more than a fair share. All they want is an even show. No class legislation—just general, wholesome and equitable laws, that's all. Even the "Old Fellow" is entitled to his due.

This is a period of agitation! No farmer who wants good government, pure homes, intelligent citizens and equal and exact justice for all, can afford to hold aloof from a farmers' organization. His patriotic duty calls him to the front, his manhood is appealed to, and he should unite, with voice, vote and fellowship, to bring about needed reforms. The generous citizen will not fail to do his share in times of public calamity. The faithful farmer has now an important duty to perform. Let him study well the situation; let him inquire into the merits of all the agricultural organizations, and then—he ought to conclude to join the Grange, and with the many other patriotic Patrons battle for the right.

A clear conscience, a duty well performed, a smile, and now a tear, are all good tonics. Try them. They will befriend you when patent medicines fail.

Practical education means honest elevation in the scale of manhood and womanhood.

The fairest of the Native Daughters of the Golden West are to be found in the Grange of California. The young farmer who wants a wife, *provided* he is a No. 1 young man, might do well to happen down Watsonville way early in October next.

"If you are waking, call me early," for I want to be at Watsonville the first Tuesday in October.

"Of all sad words of tongue or pen
The saddest are these, it might have been."

And you'll think so if you miss the good time prepared for you by the members of Watsonville Grange.

"Let us then be up and doing, with a heart for any fate,"
Be sure to be at Watsonville, and *be sure* not to be late.

Brother H. E. Hayes, Worthy Master of the Oregon State Grange, may be expected at Watsonville. He and Sister H. will come via California on their way to Atlanta.

A Delightful Missive from Japan.

EDITORS PRESS:—Regularly the steamships across the Pacific bring the RURAL PRESS, and I assure you its bright pages are welcomed and appreciated in our home in this Grangeless land. We read with great pleasure the inspiring weekly jottings of the State Grange Master, the accounts of Grange meetings and picnics and the well-expressed opinions of thinking Patrons and Matrons on the burning questions of the day.

As we read, the longing comes ofttimes to be back again in the thick of the Grange work and toiling with beloved fellow-Patrons for farm and home and native land. Some of your regular contributors seem already like old friends, their names have become so familiar, and we find ourselves wondering how does this brother or sister look, and have they a good Grange grip for a fellow-member of the Order.

It is pleasant to think that an ocean ride of less than three weeks would at any time take us to the hospitable Golden State, where Patrons are many and warm-hearted and we should feel at home. But our work for a season is here in the north of the "Land of the Rising Sun." There is a great work to be done here "to elevate and dignify our calling," and yet here as elsewhere agriculture is bearing the great burdens, feeding and clothing the people, supporting the Government, furnishing factories and commerce with their materials—all these and more—by a stupendous amount of slow, drudging manual labor, with the aid only of the rudest implements, except where in this new North country foreign implements and machines are gradually coming into use. It is a sad thing to see agriculture so reduced, as it is here in the Orient, to a dull, unthinking plodding in the wake of sleeping centuries. It was time, indeed, that the strong rays of the setting sun, reflected from the "Land of the Occident," roused these people from their long slumber!

We have here at Sapporo an agricultural college which at the start was modeled after the Massachusetts Agricultural College. Some of your readers doubtless remember the mission of President Clark, under the auspices of the Japanese Government in 1876, when he came to establish this college in Yezo. He laid the foundations solidly, and they are lasting and a lasting testimonial to his strong and noble character. The superstructure has been somewhat changed and added to, in order to adapt it to Japanese conditions and time's progress. We have about two hundred students in collegiate preparatory and practical departments. Yezo is, in a certain way, the California of Japan. It is a new country, opened to settlement only about twenty years ago. Here are mountains with, they say, exhaustless beds of coal, and from these mines coal has even been shipped to San Francisco; so you see that, after all your boasting of your big and wonderful State, you are dependent on us to keep you warm on chilly days.

This is a great island of mountains, valleys and plains. Many fine rivers furnish salmon-fishing, which has become an important industry here in its season. Sulphur as well as coal is mined. The valleys and valley plains, though not all adapted to agriculture, yet contain many thousands of acres of fertile land which, had the Japanese been as eager as Americans are to enter and subdue, would long ago have been taken up and developed into a thriving agricultural country. Large areas are splendidly adapted to stock-husbandry, grain-growing and fruit culture. The mountain-sides and much of the lowlands are covered with forests, and timber in considerable quantities is being taken out.

We are sure of several feet of snow throughout the winter, and although that may send the shivers down the spines of your tender Californians, nevertheless it is very enjoyable, for it gives us good sleighing and snowshoeing. Much as some of your roses-all-the-year-round, strawberries-every-month-in-the-year people delight to laud the mildness and salubriousness of the great but gentle Pacific State, I know some of your New-England-born denizens would enjoy a trip, some crisp February morning, up one of these mountains or out over the fields and through the woods on the hard snow crust. There is inspiration in every creak of the frosty crust under the snowshoes for a true New Englander, and it does not in the least lessen his appreciation of the bursting buds and green leaves and pleasant fruits that come later "in their season." If we only had one good, hearty Grange here, our contentment would be very great. It will take some time to prepare the actual agriculturists for the Grange—that is, for realizing the higher objects of the Order. I have faith in the P. of H. and its future, however, and believe it will yet spread world-wide, not doing the same work in all countries, but accomplishing *some* good work in each, according to conditions. I have been greatly interested in the call for the Grange in Australia, and hope to hear soon that the Order has begun its quiet but effective work in that fair land.

May you live, Messrs. Editors, to report in your progressive Grange paper the proceedings of the first and many succeeding meetings of the Granges of the world, where from countries many, faithful and intelligent tillers of the soil shall come to consult and confer together "for the good of our Order, our globe and mankind." Pacifically and fraternally yours,

ARTHUR A. BRIGHAM.

Agricultural College, Sapporo, Japan, Aug. 11 1890.

Achievements of the P. of H.

In addressing the great concourse lately held at Williams' Grove, Hon. Leonard Rhone, W. M. S. G. of Pennsylvania, reverted to O. H. Kelley's tour in the South to inquire into the farmers' condition soon after the close of the Civil War, at which time he complained of "a great lack of interest on the part of farmers—a visible want of energy on their part to favor progressive agriculture." But in August, 1867, he wrote to his friend, Wm. Saunders: "I think we can revolutionize all this, and I suggest the organizing of an Order to embrace in its membership only those persons directly interested in cultivating the soil." After outlining the principles of the proposed Order, he went on to say: "The grand head of the organization will be an auxiliary to the Department of Agriculture, and as soon as this shall become a permanent department, *with its Secretary* in the Cabinet, it seems to me Government can aid materially in advancing the agricultural interests of the entire country."

In summarizing the work accomplished by the Grange in its life of three-and-twenty years, W. M., Rhone mentions the following facts: The Secretary of Agriculture has been seated in the President's Cabinet; railroad rates have been reduced, discriminations prohibited, Commissioners appointed in some States, and laws, State and National, enacted to protect the people from injustice in the matter of transportation, and against the manufacture and sale of oleomargarine and kindred stuffs as butter. In Pennsylvania, at least, they have doubled the appropriation for public schools, and thus relieved the farmers of the State from the payment of $1,000,000 taxes.

"This," he says, "is a record of work accomplished in which any organization might take pride, and it demonstrates that the farmers of this country are as capable of intelligent action, when acting together, as any other class, guild or profession.

"But our work is not done; it is still in progress and but partly finished. There still remains the need of persistent and well-organized effort. The grip of corporative power is by no means relaxed; fertile in resources, fruitful in schemes and determined in action, it has armed itself with all its powers, not only to resist any further demands of the people, but to nullify the work already done.

"How are we to cope with this formidable power? By organization. If the farmers will come into the Grange and stand up manfully for the principles of the Order, which has already done so much for their amelioration, these giants which threaten to devour us can be changed into tractable servants. There is no time to waste! The battle is on, and we must not only align our forces but secure new recruits as well. We need the help of every farmer in this broad land in this struggle for the right, and if the proper effort is made we can have it."

From S. G. Lecturer.

EDITORS PRESS:—The Arroyo Grande Grange held a meeting on Saturday, the 20th, and conferred the third and fourth degrees on a class of seven. There were several others who should have received the degrees but failed to put in an appearance.

After degree work was over we had a Harvest Feast and open meeting. Bro. Webster and other speakers expected all failed to materialize, so we had to depend on local talent. Suffice it to say, we had an enjoyable season, "a feast of reason and a flow of soul," as well as plenty of good things to eat.

We elected as Alternates to State Grange Capt. Marcus Harloe and his good wife. Several of our members contemplate attending State Grange. Unfortunately, the Arroyo Grande Agricultural Fair will be in session at the same time as the State Grange, so a number of our members will be kept at home on that account.

A number of the Arroyo Grande Patrons and Alliance men clubbed and purchased their bean sacks of our local merchants at a reduced rate, thereby making a saving of several hundred dollars. Fraternally, GEO STEELE.

Edna S. L. O. Co., Sept 22, 1890

From Eden Grange.

EDITORS PRESS:—At the last regular meeting o' Eden Grange the communications from the State Secretary's desk were read and duly discussed, also the duplicate from Stockton. An interesting talk on insurance management by Bros. Blackwood and Adams, resulted in Bro. Adams offering the following resolution, which was unanimously adopted by the Grange:

Resolved, That the State Grange pass resolutions instructing the Committee on Legislation to use their best endeavors to have laws passed at the next session of the Legislature under which mutual fire insurance companies may be organized.

Fraternally. JOSIE SHARAI, Secy.

Haywards, Cal., Sept. 21.

Gridley Grange and Harvest Feast.

EDITORS PRESS:—The charming little city of Gridley is situated within a few miles of Butte county's southern border and just over the line, as it were, of the northern border of Sutter county. It stands in the midst of one of the richest and most attractive sections of Butte county, if not of the State, and is owned and cultivated in small subdivisions by as prosperous and enlightened yeomanry as blesses any country under the sun.

The writer was more familiar with the locality when it was a sheep range, 30 years ago, and when the first isolated settler began to encroach upon the usurpations of the sheep and cattle kings, than for the past 15 years or since the country began to be developed. To one so situated the transformation is always more impressive than to those who grow up with the country; hence the displacement of the settler's cabin by the imposing dwellings, the well-cultivated fields, the ever-present groves of fruit, shade and ornamental trees, which in many instances completely embower the cosy residences, aroused in me an admiration never thought possible, according to my earlier recollections. The cereal industry having reached its zenith, the fortunate possessors of the soil are turning their attention to fruit-culture and with marked success; thus the orchard, vineyard and orange groves are rapidly reducing the wheat acreage, so that the wildest fancy cannot picture the situation as it shall appear ten years hence—at least *I* will not attempt it.

Saturday morning, Sept. 20th, wife and I took an early start by team and for 25 miles drove along in Sutter and Butte counties, through the matchless country referred to above but not described, to Gridley—one of the handsomest and most prosperous towns in Northern California. The first glimpse revealed an unusual commotion and the chance acquaintance soon wanted to know "what's up," or whether the wicked Grangers had resolved on taking the town. The rush to and fro was explained thus: The hall where the meetings were being held was found to be inadequate, and the managers had accepted the use of the Masonic hall which has that necessary adjunct, a banquet-room. After many greetings extended to the numerous visitors who hailed from March, North Butte and Yuba City Granges, Worthy Master Biglow placed his gavel in the hands of Bro. B. F. Frisbie, District Deputy, who presided with his customary grace and ability. The third and fourth degrees were conferred on two brothers and two sisters in a successful and impressive manner, after which the fair Matrons took possession of the masculine portion of the audience and marched them about the hall to inspiring music. In due time exits were revealed, and there we stood in the presence of a feast never to be forgotten while mind sits upon her throne. It was the first attempt of Gridley Grange, and her talented sisters are certainly entitled to the belt. Only a few hours previous had I seen the State pavilion at Sacramento, with all her glorious exhibits, and yet this display of the products of the orchard, vineyard and garden was not excelled, if indeed it was equaled. But this so grand in beauty and proportions was only a side-show to the victuals and cookery so richly displayed upon the two long tables. There was chicken, ham and other meats in abundance; there were pies and cakes in endless variety and quantity, with coffee and tea or ice-water to facilitate the operations of the banqueters; best of all, there was a grand supply of old-fashioned, home-made pumpkin pie, the handiwork of Sister May Fagan, a charming youthful member of this young Grange. The pie was as handsome as a picture and even better than it looked, and received universal praise.

The gustatory exercises, interspersed with merry-making and repartee, put every one in the best of humor, which accompanied the audience back to the main hall where the spirit of sociability, fraternity and fun held sway for hours. I think I never saw so much real, hearty enjoyment crowded into a single occasion. Every one appeared to be warmed up and inspired with hilarity. It was the general remark that the absentees missed a rare treat, and all seemed spellbound to the hall, though the sun began to show an inclination to hide behind the Coast Range. At the breaking up of festivities, three hearty cheers and a tiger went up from the visitors for Gridley Grange; the hosts responded in kind, and then this scribe and his better-half departed for their home, where they arrived in good condition at 7:30 P. M., the tiresomeness of their long, dusty ride completely overcome by the enjoyments of the day. Fraternally, GEORGE OHLEYER.

Yuba City, Sept. 22, 1890.

[We can well believe the Gridleyites and their guests had a fine time last Saturday—our Grange folk generally do when they can "rope in" our correspondent, the worthy old hero of the anti-debris cause.—EDS. PRESS.]

BOUND FOR WATSONVILLE.—Besides those mentioned last week as likely to attend State Grange, Bennett Valley expects to send five or six members; San Jose, 10 or 12; American River, 10 or more; Danville, 8; Pescadero, 12; Washington, 6; Kibesillah, 2; Walnut Creek, 5; Paso Robles, 2 or 3; Sebastopol, 3 or more; Selma, 3 or 4; Rosevile, 6.

Pescadero Grange.

EDITORS PRESS:—Pescadero Grange is surely making progress. The third and fourth degrees were conferred on a class of seven, the 6th inst., and on the 20th, at the largest meeting of the season, the first and second degrees were conferred.

The third and fourth degrees are to be conferred on the first Saturday in October, to be concluded with a Harvest Feast.

All Patrons in good standing are cordially invited.

Dormant members are returning to the fold, and the work of the Grange is being more thoroughly appreciated by the people in this vicinity.

Patrons of Husbandry thoroughly imbued with the purposes of our Order know that a true and noble manhood and womanhood are developed by faithful effort to make them practical.

Why should we falter in the effort to do good when happiness results from such effort? Why should one Patron hesitate when others falter? It is the faithful worker who gains strength to overcome difficulties. *Progress* in a high sense *demands devotion to principle.*

I. C. S.

Amendment to the Constitution Adopted.

NATIONAL GRANGE, P. of H.,
Office of the Secretary, 514 F street,
WASHINGTON, D. C., Sept. 17, 1890.

Proclamation.

WHEREAS, I have been officially notified that the following amendment to the Constitution has been adopted by the constitutional majority of State Granges:

Amend Article VII by adding thereto the following:

Provided, That State Granges shall have the power to reduce the fees within their respective jurisdictions to any sum not less than one dollar for men and fifty cents for women;

I therefore promulgate the same, and declare said amendment to be a component part of the Constitution of the National Grange of the Patrons of Husbandry.

In testimony whereof I have hereto subscribed my name and affixed the seal of the National Grange this 17th day of September, 1890. J. H. BRIGHAM,
Master of the National Grange, P. of H.

William A. Armstrong,

The able and accomplished editor of *The Husbandman*, died at his home near Elmira, N.Y., Aug. 21st, after an illness of several months.

He was born in 1827, in the town of Hector, N. Y., where he passed his boyhood. He came to California in 1849, and spent five years in the gold regions. Since 1861 he had resided at Elmira, N. Y.

Mr. Armstrong was a practical farmer and for many years tilled the soil of his West Hill farm with profit, being at the same time a reader and student. He was one of the nine who organized "The Elmira Farmers' Club" 21 years ago, was the Secretary of the club and did a tremendous amount of work. As an outgrowth of the Club came the *Husbandman*, a weekly agricultural paper, started in 1874, with Mr. Armstrong as its editor.

He early identified himself with the Grange movement. For six years he did good service as Secretary of the N. Y. State Grange, and was for ten years its Master. In the Order he was recognized as a leader and his counsel was always regarded. He was a forcible and interesting speaker and his presence at Grange meetings was much sought after.

True and sincere in all things, his integrity could never be doubted. A warm personal friend writes: "His kind words and acts in which he never tired until prostration made him incapable of performing, will forever be indelible upon the hearts of the recipients. True courtesy was extended to friend and foe alike. Perhaps no man could be more missed in the circle in which he moved than he; his character was above reproach both in public and private life; he was generous to a fault and always felt that he had not sufficiently repaid a kindness."

Invite "Little Hero."

Bro. H. E. Hayes and wife may tarry several weeks in California. They are noble, straightforward writers and speakers and should be detained by large district and union meetings in various parts of California. Appoint committees for holding union meetings just after the State Grange and invite them, and you will have a glorious time with the Oregon Master and most magnetic organizer.

LECTURE IN OAKLAND.—Rev. Mr. Goodenough, pastor of Oakland Universalist Church, lectures in Hamilton hall under W. C. T. U. auspices, Saturday of this week, and James G. Clark, the poet-singer of America, will be present to sing some of his original reform songs, such as he is known by all over the land, and has sung at State and National reform conventions throughout the East.

Oregon State Fair.

NUMBER I.

[Written for the PRESS by MRS. I. L. HILLEARY.]

The first day of the fair opened with favorable weather, morning cool and atmosphere hazy with smoke, as it always is at this season of the year.

The crowd was large for the first day and the receipts at the gates over $1400. These two news items soon spread and every one wore a cheerful countenance. The society and the people felt that success would crown the effort of 1890. The camp-grounds were literally packed, and as Sec'y Gregg expressed it, everything was "a howling success." The people of our grand old State came from its every part, bringing with them the products of our rich soil and wondrous beauties—the fruits of man's invention and woman's tireless hands. Even Salem, the sleepiest city of the State, was in holiday attire; flags were swung to the breeze, show-windows were a study, grocerymen's shelves groaned beneath their loads of vegetables and fruits, and the city of schools, churches and piety really did put her best foot forward and prepared to receive the pilgrims, numbered by thousands, who came to tarry for a day at her door.

The State Agricultural Society

Was organized in 1860, and held its first meeting in Clackamas county, near Oregon City, on the farm of P. M., Rhinearson. This was its place of birth, and from the child of thirty years ago it has now grown to man's estate. Those struggling pioneer days were wondrous and full of promise; but as old Father Time garnered the years, trials came, disappointments multiplied, indebtedness piled up, the people lost confidence, and for a time it seemed as if the Agricultural Society as an organization must cease and the Industrial Fair of Portland take its place. But "the mists have rolled away" and the fair is "altogether lovely." The press and the people of Oregon can say, of a truth, the fair of 1890 is a success.

The Pavilion.

E. M. Waite was set as general supervisor over the pavilion, and had it ceiled and painted inside and out. This gave an air of cleanliness and thrift to the whole, which aided greatly in the general effect when the exhibits were placed in position; for it is well known that a work of art loses half its beauty if hung in a barn.

The Merchants of Salem

Showed their public spirit and energy in making several fine exhibits, among which we found creditable and tastily arranged displays from the firms of J. C. Brown, Crawford, W. Brown, Geo. F. Smith, and Krausse.

The Salem Woolen Mills exhibited a very fine lot of blankets, cloths and flannels.

The Salem Flouring Mills had a pyramid of 50-pound sacks of flour.

Singer and Davis sewing machines had each an excellent showing. The work was artistic and beautifully arranged.

The Art Department was never better. Prof. Clyde Cooke of Salem had a quaint, unique and handsome painting—the study a great quiet grove and a young musician listening as the echoes of his flute die away in the depths of the forest. In portraits, that of Mrs. Olive Stanton Eagland, life-size and regal in its bearing, is a central attraction. Next comes a hand-painted mirror, by a Kentucky belle, that elicits much admiration and some comment. But in this department there are altogether too many pieces worthy of mention to attempt anything like a general write-up in an agricultural paper.

The display by the ladies was extensive, and more new and exquisite articles, lovely, rich and artistic in design, were on exhibition than had ever before appeared.

Pomona's Output.

For the first time in the history of our Order in Oregon, Marion County Pomona Grange has lent the helping hand. The exhibit by this Grange, taking all things into consideration, is well worthy of praise, and, like the "potato" show of the Oregon Experiment Station, was a central object of observation from its uniqueness. Here we have the different grains displayed, not in sameness, but in almost wild array. Luxuriant specimens are shown of the growth from one kernel, giving roots and heads, as pulled from the field. Then there are great bunches of native grasses, the tallest on exhibition; timothy heads by the gross, a foot long; clovers, sunflowers, potatoes, squashes, melons, tomatoes, peas, beans, fruits, etc. Mrs. Martha Minto, that true sister of Salem Grange and courageous woman of pioneer days, has her wedding dress of 1845 for the curious to look upon. It is a light calico, with bright sprays of flowers, made with full skirt, hem one inch deep, infant waist and neck of the present day. Draped by its side is an apron 85 years old, of a style no mortal of this present age has ever seen worn. Sister Keene of Turner Grange exhibits a quilt, the neatness and finish of which the lassie of to-day cannot excel. Howell Prairie Grange certainly surpasses in her gifts to Pomona's exhibit those of any other Grange. Salem Grange stands second and Turner Grange third. We won't give away the name of the Grange standing fourth. A more complete report of this exhibit will be furnished, as seen by Hon. John Minto. Finally would say, Pomona's display, though not the best nor yet the most extensive, was a success and added greatly to the general effect of the various agricultural exhibits, and Pomona means to come again next year, her cornucopia overflowing with rich gifts from her fields.

Fruits and Vegetables.

D. D. Prettyman has charge of the State display of fruits, which is almost double that of last season.

John G. Wright furnishes the State display of vegetables, as was done last year, from the gardens of Savage, Whittaker & Chatman. Gardner Wright of Marion county has a splendid exhibit of vegetables, and the only reason why more of these displays are not made is simply because men cannot live on talk. It is too cheap, and it takes money to buy the baby a dress. Men go down into their pockets and pay from $150 down to $75 and $50 for a grain, vegetable or fruit display (county); but our Agricultural Society offers $25! Do any wonder at failures when this paltry sum is offered? Philanthropy is a good plant, but it won't "make the mare go." The Board of Managers should see with clearer eyes, and give with generous hands. From the Portland Board of Managers, an exhibitor of any article receives either a complimentary day ticket or a season ticket, according to worth of display. Even then, in the great city of Portland, the society is not "overrun by worthless entries." Thousands are left to pay toll at the gates. This very act of generosity is one secret of the success of the Portland Fair.

The State Experiment Station

Has the largest and best exhibit yet from its fields. One entire section is covered with potatoes, 425 varieties, clean and of average growth. A second section has 75 varieties of wheat and 25 of oats. A third feature is the lovely exhibit from the greenhouse. These, though not numerous in kind, are yet beautiful to look upon because of their luxuriant growths. A fourth and fifth feature of this exhibit are the grasses and seeds, all from the station and all cared for by the "boys" (?).

The society has on exhibition the usual assortment of grains and grasses from Lane county.

A. F. Miller exhibits for the N. P. R. R. grains, grasses, woods, etc., all looking fine. If this display had the same flourish of carpet and banner, as at Portland last year, it would be more than taking (If any mistakes are made in these rambling remarks please take no offense, but correct the same.)

There are general complaints at the small premiums offered for the products of the farm and the miserable arrangements and requirements of the premium lists. Kind does not compete with kind. For instance, one "peck of white beans," $2 and $1. In this, the little New York pea bean must compete with the marrowfat, the kidney and great Lima bean. Only *one* kind can take the premium. No farmer can enter a potato unless he raises three varieties. But, as our genial president, D. H. Looney, says: "We have outgrown our premium lists, they must be enlarged; we must grow and keep up with the times," so we may expect improvements before another year.

Notes on Fairs.

Bishop—Eastern Slope.

The "Eastern Slope" fair at Bishop was opened Sept. 10th. On that morning, says the *Inyo Independent*, nothing had been taken to the pavilion for exhibit. During the day loads of products and articles of all kinds kept coming in and the ground floor of the schoolhouse was fairly well filled. The fruits and farm products would do credit to any country. Grapes, apples, pears and other fruits of high excellence and beauty were shown, proving that the north end of the valley has a great future as a fruit-producing region. Corn was shown worthy of the virgin prairie soil of Illinois, and all other farm products were of equal excellence. A marked improvement was evident in all kinds of exhibits, live-stock as well as the produce of the orchard, the vineyard and farm, over the exhibits of other years. It is gratifying to every good citizen of the county to see that these fairs are producing their intended effect of stimulating everybody to constant efforts after greater excellence.

Santa Maria Valley.

The Santa Maria *Times* of 13th instant says: Our fourth annual fair, opening on Wednesday, excels all our previous efforts in display of farm products, fruit, flowers, fine arts, etc. The space of the pavilion was greatly enlarged this year, while the department for farm products was more than doubled. The entire space is utilized. The tables in the pavilion are all closely covered with the most magnificent display of fruits—green and dried—ever witnessed in Northern Santa Barbara county. R. D. Cruikshank, superintendent of the Experimental Station at Paso Robles, was on hand with a fine display of grain, consisting of 48 varieties of wheat, 18 of barley, 6 of spelt, 18 of oats and 5 of rye. The races have been quite lively, there being a good crowd present each day. At the pavilion there has been a perfect jam evenings and a fair crowd during the day. The baby show drew a crowded house.

THE National Committee of the World's Fair has selected Washington and Jackson Parks and Midway Plaisance as the site for the exposition.



Whatever Is—Is Best.

I know as my life grows older,
And mine eyes have clearer sight,
That under each rank wrong, somewhere,
There lies the root of right;
That each sorrow has its purpose,
By the sorrowing oft unguessed;
But as sure as the sun brings morning
Whatever is—is best.

I know that each sinful action,
As sure as night brings shade,
Is somewhere, some time punished,
Though the hour be long delayed.
I know that the soul is aided
Sometimes by the heart's unrest,
And to grow means often to suffer,
But whatever is—is best.

I know there is no error
In the great supernal plan,
And all things work together
For the final good of man.
And I know when my soul speeds onward
In its grand, eternal quest,
I shall cry, as I look back earthward,
"Whatever is—is best."

—*Ella Wheeler Wilcox.*

The Bounding Broncho.

There was a young man who came out to the West—
Came out from the East that is shop-worn and busted—
And much there occurred that troubled his rest,
But the chiefest of these was the broncho he trusted!

For that broncho he bucked, and that broncho he tore;
He tipped up behind and he reared up before—
This self-rising broncho, this tip-snorting broncho,
This broncho which made the young man so disgusted!

He mounted the critter to take a short ride,
And tried to start off with a Central Park trot,
But that broncho had cussedness stored in his hide,
And mentally whispered he guessed he would not.

Then he crooked up his back with a terrible hump,
Got up on his hind legs, proceeded to jump—
And the young man shot through the atmosphere—
Away toward the firmament calm and clear,
Far up among the stars so high,
That nightly wheel athwart the sky;
Up from this world of doubt and care;
Up from where bronchos pitch and tear—
This high-flying young man, this sky-scraping young man,
Who mounted the broncho which seemed hung in air.

—*Dakota Bell.*

His Proper Name.

[Written for the RURAL PRESS by MARGARET R. HARVEY.]

Young women—attention!

Oh, yes, I know—you've been lectured often enough and long enough by all sorts of people who seem to think that a joint was loosened in creation when *you* were made, and that it will never be tightened up again till they set *you* straight, just as if you weren't the sweet and sole hope of creation, precisely as you *are* for this world at any rate! What I have to say, however, won't hurt your feelings in the least; it won't make you feel a bit meaner or smaller.

It is this: If you ever marry, call your husband by his proper name—"Mr. Smith," or "Mr. Von Ettinghausen," as the case may be, "before company;" of course it is neither their business nor mine what you say to him in private or in the presence of the family or intimate friends. But before your next-door neighbor, your calling acquaintance, yea, even your pastor, speak of or to your husband precisely as you would speak of or to any other gentleman. Can you not see why? You thereby continually remind him and others that he *is* a gentleman; or, if he is not, you are determined to consider him such.

I know it sounds a little absurd to say "Mr. Morton" to his own relatives. But, even if you are his own wife, remember you cannot afford to give the impression that you are presuming too much; they knew him before you did, and might be the very first ones to resent the familiarity, particularly if they have not yet quite forgiven you for taking him away from them. (Oh, don't shake your head—there is more or less antagonism to every marriage in every family—the bride herself is likely to be the last person to suspect such a thing. At least she can't be too sure of her ground all at once.) If you call your husband "Charlie" before everybody, somebody will be sure to question, inwardly if not outwardly, why you don't say "dearie" or "honey" and be done with it. You can far better afford to call your cousin's husband "Charlie;" if you do, that shows that you have acknowledged him as a relative; it would be so understood.

And, naturally, you don't like to say "Mr. Morton" to young men and women of about his own age and yours, particularly if you were all schoolmates together. It is, perhaps, but a few years back when he was better known as "Bay Mule" or "Pud" or "Lunky." Let no parent suppose that his boy's baptismal name is in general use during the years between twelve and twenty. But suppose the boy has suddenly jumped into a man—the hobble-dehoy or pollywog period is amazingly short—that boy ought to be a man if he has a wife. Now, then, his wife has it in her power to say whether or not he shall be known as "Lunky" all the rest of his life. She can gradually define his position among his former schoolmates; it will not be many months before they will begin to call him "Mr. Morton," too. He need never be moved to write to a popular magazine, as did a gifted scientist a few years ago, that his attainments never won recognition in his native village because there he could never be known as anything but "Sam."

At this writing I recall the case of a worthy young man who declared that his good, old-fashioned name of Henry became particularly odious to him because he never could get beyond the sound and memory of "Hello, Hen!"

Every village, every boy's school, has its "holy terror," its "awful boy," the horror alike of babies, dogs and old people, the last predicting that he will surely come to the gallows (which he never does; he is more likely to reach the White House!). Your husband may have been that very boy. You can live down his past for him better than he can do it himself. Or, he may have been that other ubiquitous boy—the timid, sensitive one whom everybody said was a hopeless dunce, but who is destined to make one of those brilliant discoveries which have rendered American inventive genius respected the world over. You can show that you have faith in him before he takes out his patent. As soon as he has done so, your faith in him will be remembered.

Young women, I meant this for you; but older women may lay it to heart, too. I might quote a dozen examples to impress the lesson. I think of a dozen older women as well as younger ones who learned it in time for their own self-respect and peace of mind.

Does not every community contain a "reduced gentleman," who, left to himself, would soon degenerate into what may be remotely, if somewhat coarsely, described as a "soaker"? Everybody knows what reduced him—except, of course, his wife, whom the world charitably supposes to be quite ignorant of the fact that he *is* reduced. To her he is still the gentleman that he always was. She still calls him "Mr. Wharton," and so speaks of him. If she accidentally overhears some such expression as "Old Wharton was full last night," she innocently supposes that there must be another person of the name in town.

This man, strange to say, always has lovely daughters. These are received in the best society and generally marry well; but when there is a wedding in the family, "Mr. Wharton" is unable to stand up to give his daughter away. Is Mrs. Wharton disturbed? Not in the least, so the guests say. At the hour appointed for the ceremony, Mr. Wharton is safe in bed, with his door locked on the outside. Mrs. Wharton stands up before the assembled company and smilingly makes her graceful little speech:

"Mr. Wharton begs that his friends will kindly excuse him this evening. He is slightly indisposed and feels unable to appear. He has authorized me to take his place, so that I shall have the novel experience of giving away my daughter myself."

Of course, the wedding passes off beautifully and the guests keep their comments to themselves. They are not fools, however, and know ten times as much as they have been told; but they go away well-nigh forgetting all about the man in their admiration for the courage of the woman.

To go a little lower down in the social scale, everybody knows of the man who seems to do nothing thoroughly but drink whisky. He is the "dead beat," the "scalawag," the—anything you please. He is worthless generally, even if he has sufficient decency to keep out of jail. No matter—that man is as likely to have a good wife, yea, a "ladylike" one, as any other kind. To her he is "Mr. Short," and she considers him every bit as good as "Mr. Wharton." When the "smart Aleck" of a grocer's boy calls with a bill far too big (no matter whose fault it is), and airily shouts over the rickety fence, "Where's Jim?" this plucky little woman is ready for him.

"That's not our dog's name!" she declares with quiet dignity. "If you want to see Mr. Short, he's in the house. If you will come to the door properly, I'll ask him if he can see you."

The boy goes away in meditative silence; perhaps he utters a subdued whistle. Whatever he does, of this much he is sure—"Mr. Short's" veneering of respectability is a little thicker than people thought. Nor is this all. Mrs. Short sees that it grows thicker; the chances are that in the end it becomes quite a substantial coat. True, this is not always accomplished until the poor body is laid in the graveyard. No matter; Mrs. Short manages to appear in widow's weeds quite orthodox, which certainly complete the work, if anything can. Nobody thinks a whit the less of her or the departed for showing her crape and bombazine in church the Sunday after the funeral, even if she was never known to enter a church before. Nor does any one dare say she is a hypocrite if she asserts that "she is going to try to live better now so as to be able to meet Mr. Short again." Those who have doubts about Mr. Short's future, seeing that his past amounted to so little, are discreet enough to be silent, knowing very well that whatever they cannot understand, of this much they are sure: Women have unaccountable ways, and while women exist we shall see unaccountable manifestations thereof every day in the year. Like as not some prophetic soul, gifted with spiritual insight, will declare with all the force of conviction, "Mrs. Short is in earnest. She believes that her faith has saved him."

I don't know who may read these words—probably all sorts and conditions of women. Some don't live where "Anglo-mania" and "shoddyism" run riot, but I have lived in just such a place. I have seen so much thereof that I know how disgusting they can become. I honestly believe that they are more dangerous to American sentiments and American institutions than the general public imagines. Now, what am I driving at? Why, this: I believe that the young matrons of our beloved republic can set their faces like flints against these foreign elements and finally grind them out. How? Simply by calling their husbands by their proper names.

I don't like to hear the proprietor of a great building speak of the janitor as "Brown." It sounds too snobbish. The proprietor's father may have been even less respectable than "Brown." At any rate, "Brown" is as much a citizen of the United States as the proprietor of the building is; his vote is worth as much. And I don't like to hear small shopkeepers, mechanics, etc., spoken to in a similar manner. It is to be presumed that they have votes and souls. How much more has the railroad magnate got? When he takes a fellow-creature for a coachman and makes that coachman wear a steel collar to keep his neck straight, I think that the railroad magnate has a very small soul and a very small conception of the dignity of an American citizen. (However, *I* don't believe an American *would* wear a collar like a dog. Don't *you* begin to see why Americans won't perform our ordinary labor, and foreigners must be imported to fill their places? It is because they are robbed of their dignity and addressed as "Brown," if they do. Similarly, American girls don't like to be called "Susie," and told that they are not fit to sit at the same table with respectable people; but this opens another question.)

Now, my dear young friend, if you have a husband and he's nothing but a huckster; if he has nothing in the world but his horse and cart, let people know that to you he is "Mr. Jones," and you wish it understood. He is, or means to be, a gentleman just so far as his limited circumstances will allow. He is at least honest and respectable, he is a good citizen, and, for all anybody knows, he may turn out a successful business man, rich enough to be envied. Don't tolerate any such names as "Oyster Jack," or "Bill, the Cabbage Man." Plant your foot firmly and keep it so. Perhaps I ought to add, insist on being "Mrs. Jones" yourself. If you don't, before you are aware, all the children along Mr. Jones' route will probably know you as "Sally, Oyster Jack's wife."

Perhaps I have said enough. You catch the general drift of my remarks; your pride, your dignity, your delicate instincts will do the rest. Trust women to see the clearest, shortest way home!

A BUSY MANUFACTURING TOWN.—Mrs. Flora M. Kimball, writing in *The Great Southwest* of her late Eastern travels, says: South Bend, Indiana, was a most delightful resting-place. The amount of manufacturing done there is simply enormous. The famous Studebaker wagon and carriage manufactory gives employment to 1400 workmen, and turns out a wagon every six minutes of working-time during the year. The proprietors are making an addition to their buildings, giving 10 acres extra floor room. Oliver's Chilled Plow Works employ nearly a thousand hands, mostly Polanders. One shirt factory has 400 girl operatives; another 200. There are here also woolen-mills, paper-mills, and many similar industries that give life to the town, employment to a large population and a large amount of freight to the railroads. I found at South Bend a former *protege*, a pepper tree, that a lady took from my National home 20 years ago. It has had excellent care, spending its winters in the cellar and its summers in the owner's beautiful grounds, and has attained the hight of three feet!

A SMALL BOY, descended from a celebrated general of the Revolution, visited Independence Hall in Philadelphia with his mother. Wishing to impress upon him the good blood from which he had sprung, she pointed to an oil portrait and said: "See! there is a picture of your great-great-grandfather, hung by Gen. Washington." The child apparently took no notice of what she said at the time, being interested in the liberty bell and other curious things. But some months afterward, when distinguished guests were dining at his father's table, he broke an interval of silence by asking: "Mamma, what did you tell me in Philadelphia about my great-great-grandfather being hung?"

A NEW game among amateur photographers is called "the guessing bee." The photographers take a lot of pictures, and he who succeeds in guessing what they are supposed to represent is rewarded by not having any of them presented to him.—*Philadelphia Times.*

Domestic Economy in the Oregon Agricultural College.

In our issue of September 13th we gave views at the Agricultural College at Corvallis, Oregon, one of which was a group of pretty girls with white caps busily engaged in kitchen chemistry. At a farmers' institute at Grant's Pass last month, an essay was read by May Warren which gives further information in the same line as follows:

There is no department more in harmony with an agricultural college than is this chair of Domestic Economy; for the object of an agricultural college is to teach the boys practical knowledge concerning farm work and those studies that will make the farmer's labor an intelligent art, so that instead of the ignorant farmer who knows nothing about the composition of the soil, the conditions necessary for the development of the seed, we may have farmers who watch the germination of the seed with delight and take pleasure in the later growth and ripening of the grain and fruit, simply because they understand the conditions necessary for these changes. As this is the object aimed at in the education of the boys at the agricultural college, what could be more in keeping with this than to teach the girls the arts of cooking and sewing, which are fully as essential to a girl's education as the farm work is to the boys.

While in some countries the farmer and farm work are looked down upon and thought to be of a degrading nature, so also is the closely allied art of cooking; yet we know that in reality there is no work that may be of a more elevating nature than these. What could be more ennobling than continual companionship with nature, which shows forth the power and excellence of God? So let these occupations which are necessary to maintain existence be raised, by education, to the elevated position they deserve.

In the agricultural college the boys are taught the art of producing good fruits and vegetables and the girls the art of cooking them.

While the boys, after a three years' course upon satisfactory examinations, receive the degree of Bachelor of Agriculture, the girls, who take cooking and sewing along with the other studies required in the course after the same length of time, receive the degree of Bachelor of Economy.

During this three years' course the girls must become thoroughly acquainted with all the implements used in the kitchen, particular attention being given to the stove, which really bears the same relation to the art of cooking that the heart does to the circulatory system. A history of all the articles of food used is given, thus making cooking an intelligent art and adding a charm to the work, for if a woman knows that the tea she is using comes from Japan, the coffee from Mocha, and so on through the long list of articles used, food for intelligent thought is thus furnished and the work does not seem a drudgery, but intelligent and interesting.

The chemistry of food is also taken up, giving a knowledge of their chemical composition and the chemical changes which take place in cooking them. Now the object of cooking our food is to make it palatable and digestible. Physiologists tell us that there is nothing more injurious to our indigestion than poorly cooked food, and we know by the sympathy which exists between all the organs of the body that when one is diseased the workings of all are impaired, so for the sake of the general health and welfare and comfort of mankind every girl ought to learn the art of cooking.

Marketing is another very important branch taught; a knowledge of what to buy and how to buy is obtained, and how to distinguish fresh vegetables, meats, etc., from stale ones. Among the many other useful things taught, dairying and gardening are not omitted.

Not only the theory of cooking is given, but actual practice. The cooking of plain food is first taken up, how to set the table artistically. What could be more desired than a knowledge by which we may prepare the repast, however scant, so that it will be appetizing?

Later on in the course, instruction in cake-making and fine cooking is given, so by the time that the three years have expired each girl becomes a thorough master of the art of cooking. In addition to this, fully as thorough instruction is given in the art of sewing, a very important factor in a girl's education. Plain sewing, hemming, darning, patching, buttonholes, and lastly knitting and fitting is taught.

It is admitted by all that there is nothing so desirable as a pleasant home, but in order that the fireside may be a happy one, many duties are devolved upon the keeper of a home. The prosperity and pleasure of the entire household depend largely on the way in which these duties are performed; if they are done orderly and at the right time, everything will go pleasantly and smoothly, but if not the opposite is the result.

The poet has said, "Be it ever so humble, there is no place like home." Now this is true if construed in two ways; on the one hand there is no place so pleasant as a bright, orderly home, while on the other hand there is no place so loathsome as a disorderly home.

Since so much of the happiness of the present and future generations depends upon the girls of the present and future, should we not look well to

their education and teach them the real, practical lessons of life as well as the theoretical? Teach them cooking and sewing as well as German and Latin, for these are sciences as well as they, although they are not often looked upon as such.

To be able to make good bread, cake and pies at all times and know that if your ingredients are good you will never have a failure, requires more science than to give a geometrical solution of the right triangle.

The well-known adage that "a stitch in time saves nine" verily speaks the truth, and all housekeepers will vouch for its truthfulness; but if one does not know how to patch and darn nicely, she is apt to put this work off till the morrow; this does not make the doing of it easier, for each day brings its own duties. Thus one's work accumulates day after day, and it is never done up and in order. The condition of a woman's work has a marked effect upon her mind and temper, and she will gradually and unsuspectingly grow cross and irritable, till the house is anything but pleasant. While on the other hand, the skillful woman always does her work at the right time, has a nicely cooked meal when the men come from work, the house orderly, and a happy, pleasant face; all are in a large measure due to the faculty of knowing how.

Nothing has been said about the important feature of economy, however; this is aimed at in all of the instructions. The saying that "a woman can throw out more with her teaspoon than a man can bring in with a shovel," is very true.

So while we educate the lads of our land that they may be better farmers, let us educate the lassies that they may be better wives for the farmers.

Chaff.

VANITY is the besetting sin of women. Some women are as vain as men.

BECAUSE a man has climbed the ladder of fortune from its lowest rung is no reason why his praises should be rung in on us continually. —*Siftings.*

INTENDING PURCHASER: Is this an old horse? Horse Trader: I should say not. Who did you think was running this stable, anyway—George Washington?—*Drake's Magazine.*

AN ocean greyhound should be bark-rigged.

AN old and popular design in paper-cutters is the exchange editor.—*Binghamton Republican.*

NO mouse has ever caught a woman yet. Why all this trepidation?—*Dallas News.*

CUMSO: Jaysmith is penurious, isn't he? Fangle: I should say he was. He won't even laugh at a joke unless it's at some one's else expense.—*Epoch.*

THE difference between men's and women's ways is nowhere shown so plainly as in trouble. Where woman gives way to a flood of tears, man proceeds to put up a few strong dams.—*Terre Haute Express.*

COUNTRY SWAIN (timidly): Would you be mad if I asked you to be my wife? City Girl (briskly): Not at all; but I'd be mad if I said "yes."

"IT'S hotter than—" began the deacon, when the minister interrupted him with: "S h-h." But the deacon wouldn't be bluffed. "Than it was yesterday," he added.—*Pittsburg Commercial Gazette.*

CANVASSER: I have here a work— Master of the House: I can't read. Canvasser: But your children— Master of the House: I have no children (triumphantly). Nothing but a cat. Canvasser: Well, you want something to throw at the cat. (He took it.)—*Life.*

CAN a man be said to be unsexed when he is cowed?

"SCHOOLMASTERS were the original switchmen," remarked the horse editor. "Yes," replied the snake editor, "and they struck frequently, too."—*Pittsburg Chronicle-Telegraph.*

WHAT strange survivals of old forms of speech we constantly meet with! It is said, for instance, that there are still some old settlers in Chicago who refer to the Chicago river as "the drink."

"YOU haven't a pension?" queried the astonished Fenderson of the legless veteran who was scrubbing the marble floor of the corridor of the Bangup Building. "No, I hain't got no pension, and I don't expect to get none, neither," answered the veteran as he bent to his work. "How can you expect a man with no legs and one of his eyes most gone to hustle round with healthy men to get a pension? I tell you a man who is going to get a pension in the rush has got to be in first-class health and strong as an ox."—*Boston Transcript.*

THE ENGLISH LANGUAGE FAST BECOMING UNIVERSAL.—*Kuhlow's German Trade Review*, a leading German periodical, but which is largely read by business and literary men throughout the world, and which is published at Berlin, the capital of the German Empire, is printed in English. A late number of that journal, after referring to the great number of persons who speak various languages in Europe, sums up by saying: "The English language is now used by nearly twice as many people as any of the others, and this relative growth is almost sure to continue. This is the reason of *Kuhlow's* appearing in the language of the trans-Atlantic world—English." Forty or fifty years ago we heard it prophesied that the universal language of the world would eventually be the Anglo-Saxon, and we now believe it more firmly than ever.

YOUNG FOLKS' COLUMN.

One Afternoon.

Papa and mamma went out to row,
And left us alone at home, you know,
Roderick, James, and me.
"Now, dears," they said, "just play with your toys,
Like dear little, good little, sweet little boys,
And we will come home to tea."

We played with our toys the *longest* while!
We built up our blocks for nearly a mile,
Roderick, James, and I.
But, when they came tumbling down, alas!
They fell right against the looking-glass.
Oh, *how* the pieces did fly!

Then we found a pillow that had a rip,
And all the feathers we out did slip,
Roderick, James, and I.
And we made a snow-storm, a glorious one,
All over the room. Oh, wasn't it fun,
As the feathery flakes did fly?

But, just as the storm was raging around,
Papa and mamma came in and found
Roderick, James, and me.
Oh! terrible, terrible things they said,
And they put us all three right straight to bed,
With the empty pillow-case under my head,
And none of us had any tea.

—*St. Nicholas.*

Threshing-Machine Day.

"Here comes the 'Thrash-machine!' Hooray! Now we'll have some fun!" And Billy and Tommy and Ben and Sukey Mixer tumbled over each other out of the carriage-house where they were industriously cutting apples—and their thumbs likewise—to see the big green threshing-machine come lumbering into the yard drawn by Farmer Bean's yoke of oxen.

Threshing-machine day was a day always looked forward to with delightful anticipations by the little Mixers. The great fly-wheel going around faster and faster, the horses gathering to the work and plodding hopefully on, always up hill and never getting anywhere, the cruel, many-toothed beater devouring like some great hungry animal huge piles of wheat and oats, with a *whish* and a crunch, almost faster than the stout "thrasher" with a sponge over his nose could feed it, the clank and clatter and rumble of whirling cogs and wheels, making such a din that everybody had to shout at the very top of his voice to be heard at all, the dust that filled every cranny of the big barn like a dense brown fog, out of which grimy men would rush now and then, and in a moment be swallowed up in the thick stifling clouds—how delightful it all was!

The task of "doing apples" was mercifully suspended *this* day, so that the little Mixers might hang over the "lean-to" railing and take it all in with eager eyes. After a time they were promoted to "tramperr," and the whole troop bounced and tumbled and danced over the great bin of golden straw, every now and then, to get breath, sticking their little noses into the wide cracks of the barn, through which the bright sun streamed, turning the stifling dust to grains of gold.

But best of all was the long nooning when the tired men had all gone to the house up on the hill to dinner. Then they got up into "lag lane," as the children called the place where the horses walked, and digging their toes between the "lags" slowly turned the "power."

Just as they had got it well to going, "Squealy-ow," a big, long legged hog that was always jumping out of his pasture to nose about the granary, appeared at the barn door.

"Let's make him help us!" shouted Ben

"The old greedy!" cried Billy! "He's been at our dry apples! There's a string hanging out of his mouth!"

Away went all the little Mixers.

"Squealy-ow's" yoke stuck in the fence and in a trice, with the help of a rope, a stout switch and an apple, he was led up into "lag lane" and hitched to the bar.

"Now let's get 'Wall-eye' and have a span!" cried Tom.

"Wall-eye" was a huge, big-horned sheep that was hitched to a sweep out by the orchard. The next minute "Wall-eye" was dragged and pushed along up beside "Squealy-ow," with much angry stamping and many small nibblings from an ear of corn Sukey carried before him, and hitched by one horn.

The children rolled on the grass and laughed till they cried at sight of the odd pair.

"Wall-eye" didn't like "Squealy-ow," and every time he grunted he stamped his foot, and nodded his great horns threateningly at him if he but turned his long snout his way. At last he hit it such a thump that "Squealy-ow" broke out into loud lament, at which the children all scrambled for more apples to stop his mouth. Then they got in behind and set the "power" going. The "span" couldn't understand it and were balky.

Switch! Switch!

"Get up there!"

But "Wall eye" wouldn't "get up," neither would "Squealy-ow"—he shrieked at the top of his voice. In his present temper "Wall-eye" couldn't endure such a noise and began butting him in a great rage—*bump, bump!* at length tumbling him out of "lag lane," where he hung by his halter, his hind legs just reaching the ground.

The children now set up such a terrified scream that "Wall-eye" jumped after "Squealy-ow."

Crack went a horn, then "Wall-eye" got up and ran off, shaking his head and "grumbling" to himself,

Hearing the din, the men all ran to the rescue. "Squealy-ow" was cut down and he dashed off and hid himself under the cart-body. "Wall-eye's" horn, or the end of it, lay there with the rope hitched to it; but "Wall-eye" himself had fled to the great pasture where the sheep were, and the little Mixers had a time of it catching him again.—*Portland Transcript.*

P. T. Barnum's Advice to Young Men.

To young men who would "get on" in this world and reach the age of fourscore years, with happiness and prosperity, there is little more to be said; but I will refer them to a study of my own rules of action:

Briefly, I would say: Be honest; do not spend as much as you make; don't smoke or drink; depend upon your own personal exertions, and do not leave important affairs to a third person; don't have too many irons in the fire; do not get above your own business; and above all, be systematic. Advertise your business on all possible occasions, but attend to it, too, and see that your claims and promises made to the public are fulfilled. It does not pay to have a single customer go away dissatisfied, nor does it pay to take money for services for which you do not render an equivalent.

The best working years of a man's life are usually between 26 and 60; but much good work is possible long after the threescore-year mark has been passed. I can say, for myself, that every moment of my time is put to some definite purpose, and though I have numberless calls and demands, I enjoy a reasonable recreation each day. Both work and rest, and joy also, should make up the sum of a busy life.—*P. T. Barnum in Ladies' Home Journal.*

GOOD HEALTH

Health of the State.

By the report of the State Board of Health for August it appears that reports were received from 96 localities with an estimated population of 806,360, among which were 1065 deaths, an annual average of 15 84 per thousand, somewhat less than the report for the preceding month.

Among the principal causes of death, the greatest number, 157, were from consumption, an increase from last report.

Cholera infantum is reported to have been the cause of 76 deaths; this large percentage has been due to the average high temperature during the month.

Heart disease appears to be increasing; 63 deaths are attributed to this cause.

Pneumonia has claimed 41 deaths; a decrease of 10 since last month.

Bronchitis is credited with 29 deaths, 20 of which were in this city, over two-thirds of the whole number, although its population is but a small fraction short of one-third of the whole population reported upon.

A Fatal Neglect.

Under the head of diphtheria, a circumstance is recorded to which general attention should be called as a warning against similar neglect in the future, and as an evidence of the manner in which that dreadful scourge (diphtheria) is sometimes induced. We copy as follows from the report: From the latter city (Alameda) Dr. J. T. McLean reports 18 cases of diphtheria, nearly all of whom were attending one of the public schools. He says: "An old cement sewer laid 12 years ago in the block on which this public school is situated, wore out and caved in, thus stopping the flow of sewage from the residences and school in this block. The old sewer was taken up and replaced by a new ironstone one. The process of change from the old to the new sewer occupied a fortnight. During this time, sewer gas and disease germs escaped and contaminated the atmosphere in the neighborhood. The school children were more or less exposed, especially those whose curiosity drew them frequently and for a length of time to the vicinity of the sewer. The disease developed in these children, and it is believed this broken sewer, with its escaping gas and disease germs, was the exciting cause of this sickness. In one family, where three children had diphtheria, one of them dying, the plumbing and sewage were defective, the filth that should go into the sewer escaping into the cellar and contaminating the atmosphere of the house, from which the sickness and death in this family resulted. Other cases of the disease are of a mild type."

MILK INSTEAD OF MEDICINE.—Leading physicians are becoming bolder. Many have courage now to prescribe a certain diet instead of drugs. Is not the food an important factor in determining the character of our future lives? The infant whose mother drinks alcoholic stimulants while nursing it, will, three chances out of five, be addicted to the use of such stimulants when grown. A weary business man comes home from his office at night nervous and out of temper. A glass of milk heated to about 90 degrees, sipped a little at a time, and no food taken with it, or at most only a little bread and butter, will do more toward restoring him to a happy mind and good physical condition than all the tempting viands that can be placed before him. A lady in Platte county, Mo., was pronounced incurable. A well-known physician in Kansas City advised her to give up all medicine, and, in order to prolong her life, prescribed three ounces a day of a mixture of sweet cream and sponge cake. Inside of four months she was well.—*Ex.*

REMEDY FOR CHOLERA.—It is said that a remedy for cholera has been discovered by a Frenchman from Cette. People either attacked by or in fear of the disease must sit for some hours in a garment soaked in paraffine, which irritates the skin, producing a healthy reaction, and kills the cholera microbe. How can such a remedy act upon the cholera microbe securely ensconced within the most interior portion of the human system?

DOMESTIC ECONOMY

OATMEAL GEMS.—Two cups of the finest oatmeal, two cups milk, two eggs, one tablespoonful butter, one tablespoonful sugar, one saltspoonful salt.

JELLY TOAST.—Cut stale bread into neat rounds or squares; fry each slice in boiling deep fat; spread it thickly with some fruit jelly nd serve very hot.

STRAWBERRY AND BLACKBERRY PRESERVES. Pick and prepare the berries, put a pound of sugar to a pound of fruit. Sprinkle the sugar over and let stand several hours. Boil slowly half an hour.

TURKEY HASH.—Remove the meat from the bones of a turkey and cut it into neat bits; stir two cups of this into two cups of white sauce; season to taste. Make the stuffing of the turkey into neat cakes, fry them, and arrange them on the dish around the hash.

NURSERY MUFFINS.—Two cups milk, two cups fine bread-crumbs, one cup flour, saltspoonful salt, one egg, one tablespoonful butter, three teaspoonfuls baking powder. Beat the egg light, stir in the butter, the bread soaked in the milk, and the flour and baking powder. Bake in a steady oven, greasing the muffin tins well, so that the batter may not stick to them.

PICKLED BEANS.—String a quarter of a peck of tender green beans, throw them into a kettle of boiling water, add a teaspoonful of salt and boil 25 minutes. When done, drain in a colander, let stand until cold; then put into glass or stone jars, sprinkle lightly with cayenne, add a tablespoonful of whole mustard, a tablespoonful of chopped horseradish, and cover the whole with good, strong cider vinegar.

STUFFED EGGS.—These will be found very good for picnic or traveling lunch. Remove the shells from eggs that have been boiled hard, cut them lengthwise, take out the yolks, rub them fine with a little dry mustard, pepper and salt, and add a few drops of melted butter for each egg. Then put the stuffing back in the white of the eggs and put the halves together. The yolks should be removed very carefully, so that the traces will not be left on the white part.

CHOCOLATE-COCOANUT CAKE.—For the cake, one cup of sugar, one tablespoonful of butter, one-half cup of milk, two eggs, 1½ cups flour, one teaspoonful of baking powder. Bake in jelly tins. This will make two thick layers. For the filling, melt one-third of a cake of chocolate, add half a cup of sugar, three tablespoonfuls of milk and a half-teaspoonful of vanilla. Mix these ingredients until smooth, then add one-half a grated cocoanut to the chocolate and spread between the layers and on top.

TAPIOCA PUDDING.—Soak one-half cupful of tapioca for three or four hours in just enough water to cover it, then stir the tapioca in a pint of boiling milk. Beat the yolks of three eggs with two-thirds of a cupful of sugar and a bit of salt, then add this to the milk and tapioca. Take from the fire, and beat in gradually—a spoonful at a time—the whites of the eggs beaten very light, and set to cool; or the whites may be spread on top, and the pudding set in the oven till of a light, delicate brown.

SUMMER PUDDING.—Butter a plain charlotte mold and line it with neat slices of bread; then fill it up with any kind of stewed fruit (currants and raspberries, plums and apples, or apples and blackberries, etc.). Lay a piece of crumb of bread on the top, cutting it to fit exactly (all crust must be removed from the bread used for this pudding), and stand the mold in a cool place till next day; then turn it out, and serve with custard or cream poured over it. Choose juicy, well-colored fruit, so as to completely saturate and color the bread.

LITTLE SPONGE CAKES.—Break into separate bowls the whites and yolks of six eggs. Add six ounces of sugar to the yolks of the eggs and the juice of one lemon. Beat the yolks, sugar and lemon juice together till the mass breaks into bubbles; then add the whites of the eggs, which have been beaten to a stiff froth. The whites of the eggs must be stirred in carefully, so as not to break the mass down, and six ounces of flour must be added. The moment the sponge cake is mixed it must be poured into the small forms intended for it, which should be well greased, and just before they are set in the oven dredged with powdered sugar. Bake sponge cake in a steady but moderately heated oven.

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SAN FRANCISCO:

Saturday, September 27, 1890.

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Business Announcements.

{NEW THIS ISSUE.}

Irrigation Machinery—Pacific Manufacturing Company.
Dry Goods, Etc.—Hale Bros. & Co., Sacramento.
Special Auction Sale of Trotting Horses—Killip & Co.
Joint Auction Sale of Trotting Horses—Killip & Co.
Rooted Grape Vines—R. Watts, Elk Grove.
The Democratic State Ticket
Trees, Plants and Vines—W. P. Hammon, Oakland.
Harness—W. Davis & Son.
Poultry—Clover Valley Poultry Farm, Whitewater, Wis.

See Advertising Columns.

The Week.

As we go to press on Wednesday, telegraphs announce light rains over a considerable area of the State, including the Southern Coast regions and portions of the San Joaquin valley. Enough rain has not yet fallen to materially injure the large amounts of raisins still exposed, but there is of course apprehension concerning the continuation of the rains and of the cool, foggy air which is noted in the grape valleys north of the bay. Prophets have for some time predicted early rains this fall, and they have come; but whether they will be in amount to work injury, prophets do not commit themselves. The producer has nothing to do but trust in Providence and keep his stuff dry.

The beet sugarie at Watsonville starts up this week and is crushing at the rate of 300 tons a day. It is thought there will be beets enough for over two months' run, and the output may be something like 4000 tons of crude sugar, or about twice as much as last year. The growth of this promising industry is slow, but we trust it may go forward more rapidly in the future.

Is is announced from Chicago that the World's Fair site muddle is satisfactorily settled by the selection of a single tract of land, which will give an undivided exhibition. This result will be received with general approval.

April Barley.

H. C. Stanton of Norman, Colusa county, exhibited at the recent State Fair a sample of a variety of barley which he originated and developed by selection, which seems to be worthy of a much wider trial than has been given it. We call attention to this variety in this prominent manner, not alone to suggest trial of a sort which apparently has peculiar characteristics which may make it very desirable in some localities, but also for the purpose of emphasizing the advantage which many an observing farmer can secure by keeping his eyes open and his hand ready to catch and preserve new forms or traits of vegetable growth as they appear. Chance seedlings, chance hybrids, bud variations and the like are of frequent occurrence, and to them our agriculture and horticulture owes much of its progress. Such things, however, appear in vain upon the land of the unobserving or indolent man. It takes a quick eye to detect a tendency to variation, a patient effort to differentiate and preserve it, and a complacent behavior when the supposed excellence is not found permanent. The story of Mr. Stanton's experience with his April barley, illustrates the method by which promising things are multiplied and perpetuated. He gives his experience as follows:

In the year 1885, in the last days of February, as I passed by a piece of my barley, which at that time was not more than six inches high, I discovered a few heads of barley fully headed out and standing two feet high. On looking more closely, I found scattered along for about three yards some 60 or 65 heads. Watched it, and on the 10th of April it was ripe, and I pulled it and put it away. I sowed that fall on summer-fallow land. It was out again in head in February, 1886, and ripe by the 10th of April, as before. I pulled it this year and got two quarts; I sowed it again in the fall on summer-fallow; it was ripe again by the 10th of April, 1887, and I pulled it again this year; I got one bag. I sowed it again on summer-fallow, and when it was ripe I harvested it on the 15th of April, 1888, and got 30 bags; this I sowed again on summer-fallow, and it was ripe by the 15th of April, 1889; this year I got 554 bags. Then I thought I would try winter sowing, intending to sow all my seed, but the winter was so very wet that I did not get in more than half of my seed, and what I did get in was put in the mud. I finished sowing the last of February, and the barley was ready to harvest by the 10th of May, 1890. I raised 2413 bags this year.

This barley sown in the fall will be ready for hay or feed by the 1st of April and ready for harvest by the 15th. This barley is a light-colored growth until it heads out, after that there is no perceivable difference between it and our ordinary barley; its yield is about the same. It is a good feed barley; as a brewing barley, has not been tried; it is from a month to six weeks earlier than ordinary barley.

It is true, of course, that all varieties thus secured do not prove of lasting value, but the presumption is that the extra earliness or short-season maturity of Mr. Stanton's will render his variety of much account. Such seems to be the opinion of his fellow-farmers in Colusa county, and much will be sown there this year. A good winter growth for feed is of vast importance in many places, and in others such a growth for plowing under green manuring of orchard land would be esteemed.

We shall be glad to hear next spring of the success of other growers of the April barley.

TULARE IRRIGATION DISTRICT.—We called on Mr. Flynn, the engineer, at the office of E. Oakford, at Tulare, last Saturday. From maps in the office, the latest route of reservoirs and canals adopted by the district was shown us. We found Mr. Mackie and others employed in the enterprise very active and full of faith that the work will be speedily and well accomplished. We consider this improvement the greatest and most important that has been undertaken in Tulare county since its first settlement. The entire body of citizens of the county, it seems to us, should use their best and unfaltering efforts to bring the plans to an early and successful completion.

A SYNDICATE has bought 100 acres near Corvallis, Or., which will be planted to prune trees.

Value of a Man.

What is the value of a man in money, financially, mathematically, as he stands in the world of commerce as a thing of value? Can we count it in dollars and cents? Even so; count it to a cent. Of course we leave out all the poetry, all the heart, all the man, except his money value.

Take what a man can earn in a year, say $500, $1000, $5000 or $10,000, as it may be. Let us take $1000. Then we deduct his necessary personal expenses to enable him to do his work, say $500. Then he produces $500 a year net. Now $10,000 at interest at five per cent will bring that sum, and is as valuable as the man. Yes, more so. The man will die, and the money will not. It will go on working forever. How will you fix that difference?

Easily. Insure the life of the man for about his value, so that when he dies the money will yet remain. Suppose this will cost $100 a year to insure for $8000. Then the $8000 is the true value of the man.

On this basis, what is a Chinaman worth in China and in the United States? In China, wages, one year, $60; personal expenses, $50; net product, $10. Then $200 is the value. It will earn the $10 in interest. When he is insured at the same rate as above, the premium will be $2 50 a year on $160, which is the value of John. When he comes to California and earns $300 a year and spends $75, he earns $225 net. Let him insure for $4000, on a premium of $50 a year, and John is worth about $6000. His savings will pay the insurance and the interest on that sum.

This shows the value of John in this State, and explains the eagerness to send him here and get him in on any terms. There is a clear gain of $6000 to his owner.

In this way, any man can reckon himself up and figure out his cash value to his wife, children, or heirs. And we may see at a glance that the capital of the United States is worth far more than all the people. It will bring more interest than they can earn wages, over expenses.

Rapid Propagation of Pears.

We have received a circular from the Huntsville, Alabama, nurseries, which contains an interesting statement of the rapidity with which a new variety can be multiplied by skillful propagators. They started with 100 trees of a new variety, which has been largely advertised. These trees were one year old from the bud, four to five feet high, more or less branched. They cut them down to near the bud, and preserved the wood in a dormant state until spring, when they were inserted as "spring buds" in strong pear stocks, one year transplanted. This wood produced 3251 buds, of which 3019 grew. They pinched back the growing buds to the hight of eight inches, which induced them to branch freely. From these young trees they cut and inserted over 65,000 buds, which are now well taken and promise to make handsome trees three to five feet high for the fall of 1891. This experience may be suggestive to some of our amateur propagators who desire to get a large stock quickly from a small start.

PORTLAND'S GREAT EXPOSITION.—We take pleasure in acknowledging an invitation from the Special Committee to be present in Portland on Friday of this week, 26th inst—set apart as "Press Day" of the North Pacific Industrial Exposition—and to attend the grand banquet tendered to the press by the citizens of Portland on that evening.

THE Madera *Mercury* says that a Colusa man named Reid has bought 17,000 acres of land from the Nevada Bank, six miles west of Berenda, which will be cut up into small farms.

SIXTY FOUR carloads of raisins, dried fruit and grapes, were shipped East by rail from Fresno last week. This shipment was three times larger than that for the same time last year.

SULTANAS A SHORT CROP.—The latest reports received in New York indicate that the crop of Sultana raisins will be only half that of last year.

THERE is a boom in ostrich feathers in New York, and prices have doubled since June.

Overland Fruit Shipments.

The daily papers are authority for the statement that Southern Pacific freight records show that East-bound fresh fruit shipments from May 1st to September 1st this year exceeded those of last season by over 8,500,000 pounds, or over 4000 tons. The aggregate for the four months, May to August, inclusive, was 28,483,580 lbs. in 1889, and 37,141,130 in 1890.

During the four months preceding September 1st, Sacramento shipped East, according to the railway records, 29,012,860 pounds of fresh fruit; San Jose, 4,402,770 pounds; Stockton, 2,331,060 pounds; Marysville, 819,000 pounds; San Francisco and Oakland, 555,340 pounds. Sacramento's best monthly record thus far was 14,848,120 pounds during August—over 5,000,000 pounds more than during the same month last year. The records of shipments by the Atchison system from the southern counties are not at hand. They are all kept at Albuquerque.

Dried fruit shipments began late this season, but have been going on steadily. Southern Pacific records show a gain in East-bound shipments for the two months of July and August of 2,445,800 pounds over the corresponding period of last year. During July this year shipments aggregated 2,959,140 pounds; during August, 5,410,850 pounds. The September records will doubtless show shipments double that amount, and raisin shipments also are now in progress and will go forward steadily during October.

California Peach Pits.

California peach pits are in about as sharp demand as California dried peaches, and the price at which they are being resold at the East and South will seem immense to the California grower who has used them for fuel or road-making. We find the following in a Southern nursery circular:

"A trip to California this summer resulted in arrangements with a responsible seed house to supply us with peach pits for our own planting. The peach trees of California are free from disease and we believe the seeds will produce healthy seedlings. We do not consider these pits equal in value with Southern Natural pits; but there are no Southern or Eastern pits to be had this year, and California pits are very scarce. We offer a limited surplus at $3 per bushel f. o. b., cash with the order."

Selling peach pits at such a price makes them two or three times as valuable as is the same weight of peaches in ordinary years. If our Eastern friends will only give us contracts for a term of years, we will bury them in peach pits for a fraction of the price at which Eastern re-handlers place them. However, we suppose this year they are cheap at any price.

FAIRS ARE PLENTIFUL nowadays on the Pacific Coast. The California and Oregon State Fairs, about which we will have more to say anon, are just over. This week, besides the Mechanics' Institute in this city, the Nevada State at Reno, and the N. P. I. at Portland, district fairs are in progress at Stockton, Rohnerville, Quincy, Lakeport, Nevada City, Independence, Concord and Redding, and next week are to come Salinas, Fresno, Escondido, Yreka and Watsonville, as well as the opening of the great Northwestern Show, which is to run all through October at Spokane Falls.

PEELED PEACHES AND NECTARINES.—We have seen a sample of about 10½ tons of these fruits prepared this year at the Buhach farm, near Atwater, Merced county. Lye-peeling was practiced, but it was done with abundance of running water and apparently in a most perfect manner. The fruit sold at a high price and was a very creditable product.

THE Hanford Vineyard Co. has incorporated, to deal in all kinds of farm products, with $125,000 capital stock, of which $25,000 has been subscribed. Directors—J. W. Barbour and E. E. Bush of Hanford, Wm. E. Bridge and Chas. T. Bridge of San Francisco and M. W. Upton of Oakland.

THE CHARLOTTE RAISIN VINEYARD CO. has incorporated to cultivate land in Tulare county, with $64,000 capital, all subscribed. Directors—Isaac H. Morse, Geo. A. Fisher, Wm. Drake, Henry L. Davis and Geo. W. Turner of S. F.

THE vineyards of Kern county have been damaged a great deal by jackrabbits.

FLORIST AND GARDENER.

Hardy Bulbs.

EDITORS PRESS:—Among all our brilliant cultivated flowers, the hardy bulbs are, perhaps, as satisfactory to the home florist as any. They claim attention at a season of the year when many others are faded or are dormant, and are, therefore, more welcomed and appreciated.

Of the old-fashioned sorts, we recognize the narcissus, hyacinth, crocus, the tulip and the tiny lily of the valley. Most of these are considered beautiful and showy flowers, and many of them are rich with perfume.

They are sometimes spoken of as Dutch bulbs on account of their being grown in quantities in Holland, where the climate is well suited to their development.

Perhaps one reason of their popularity is their easy culture, as are all bulbous plants, and their fitness for both indoor and outdoor growing.

Among cut flowers, the lily of the valley has been very popular in most Eastern cities during the last few winter seasons, and it has been said that in New York City alone over $75,000 have been spent for its delicate sprays in a single season.

The double hyacinth has always been a favorite for indoor culture, and the Chinese sacred lily, a variety of narcissus, is becoming better known for the same purpose.

The seedsmen's new catalogues of these hardy bulbs for fall planting and winter blooming are being sent out now. They tell about some brilliant novelties, and the anemones, the Arabian Star of Bethlehem, the giant snowdrop and the freesias. The gorgeous Bermuda Easter lily is spoken of as wonderfully beautiful and expressive, with its white trumpet flowers and delicious perfume; and among all these and many others, we find our own modest little wild calochortus and brodiaea.

WILL C. AIKEN.

St. Helena, Napa Co., Cal

An Orchid Collection in Massachusetts.

Mrs. Flora M. Kimball of National City gives the following description of a visit to the grounds of Fred Ames at North Easton, Mass.: One of the most interesting sights to be seen, if one delights in flowers, is Mr. Ames' collection of orchids and tropical plants. Entering the grounds by way of a broad drive shaded by trees of many varieties, and through an archway of masonry composed of huge bowlders and red sandstone, we were ushered into an opening of many acres covered with trees, lawns, shrubbery, lakes and the fine residences, stables and hothouses of Gov. and Fred Ames. The entrance to the hothouses is a reception-room of stone, 25 feet square and furnished with seats where visitors may rest if weary. The woodwork, seats, chairs and tables are of Georgia pine brightly polished; the floor of brown tiling, walls of blue tiling highly ornamented, a huge red sandstone fireplace with a chimney breast of carved granite, and plenty of odd-shaped windows that would please the eye of an artist. Whichever way we turn our eyes, the view is one of picturesque beauty. Broad lawns running down to the edge of shaded woods on one side, a lake rivaling in clearness Yosemite's Mirror lake, and fringed with trees and plants, their foliage reflected in its transparent surface on another; flowers of every hue singly and in clumps; and broad spreading trees scattered about in natural profusion are objects pleasant enough to reward the visitor for his pains in coming hither. But these outward attractions are eclipsed in rambling through the various buildings by 1400 kinds of orchids, a larger collection than that of Mrs. Morgan of New York and valued at $100,000. A little Madagascar plant, very rare and very scrubby-looking, was secured at a cost of $500. Fifteen hundred was paid for another. No description could convey to the mind of one not acquainted with orchids a faint idea of their singular beauty—a beauty that is enhanced by each new member of the prolific family. They have a strange fascination for those who love them, but only the rich can indulge in the luxury of an extensive collection.

Los Angeles Floral Society.

According to the *Express*, about 75 people interested in floral culture met in Los Angeles last week to adopt a constitution and elect permanent officers for a floral society. The first meeting, held some three weeks ago, was a very enthusiastic one and warranted the establishment of such a society. A constitution and by-laws have been adopted and the following officers elected: President, Eli Snyder; vice-president, C. E. Brydges; secretary, H. W. Kruckeberg; recording secretary, John Franklin; treasurer, J. C. Harvey. An Executive Committee, consisting of the following gentlemen, was also chosen: Messrs. J. H. Denham. J. H. Tomlinson and J. G. Mosley.

Wm. Heaver and wife were present. Mr. Heaver was the organizer of the first floral society in Cincinnati, and has been engaged in floriculture all his life. To-day, at the age of 87, he is just as enthusiastic as ever.

C. H. Hovey of Pasadena, a son of Mr. Hovey, the great florist in Boston, who for years had the most noted flower and seed establishment in the country, was also present and pledged his support to the organization. The Chamber of Commerce has generously offered the free use of a room for holding the monthly or semi-monthly meetings of the society.

It is proposed to give a magnificent flower show early in November, the favorite flower in the exhibit to be the chrysanthemum.



SCENE IN A CALIFORNIA FRUIT VALLEY SHOWING YOUNG ORCHARD AND VINEYARD.

In a Fruit Valley.

The engraving on this page presents features which may be seen in many of our smaller fruit valleys, and it may serve to enlighten the distant reader somewhat upon the characteristic topography of portions of our fruit regions. The valley is filled from side to side with well-cultivated orchard and vineyard, while the surrounding hills are still allowed to remain for pasture, or are employed for the growth of hay. In other valleys both the floor of the valley and the lower hills adjacent may be planted with trees and vines. Most of the growths shown are young, and the fruit wagon shown in the lower corner is probably little worn. But our tree and vine growth is so rapid that the features of the landscape change rapidly, and in a few years the camera would catch the yellow hills rising above a sea of foliage.

THE VETERINARIAN.

The Bureau of Animal Industry.

At the last meeting of the San Francisco Microscopical Society, Dr. Cooper Curtice of the Bureau of Animal Industry delivered, by invitation, an address upon the branch of the Government service in which he is employed. He said the first special work undertaken was in 1869, and the researches at that time into the diseases or plagues with which cattle were afflicted revealed some fungi, but little progress was made until 1878, when the Department of Agriculture employed several veterinarians to prepare reports, and the swine plague was pretty thoroughly investigated. In 1880 a similar report was made and the investigators reported the discovery of bacteria, which was supposed to cause the swine plague, or hog cholera, as it is more popularly known.

In 1883 the Bureau of Animal Industry was organized as a branch of the Department of Agriculture, with D. E. Salmon as chief and Dr. Theobald Smith as assistant. Dr. Curtice paid a very high compliment to these gentlemen, and said it should be a matter of congratulation to all persons interested in the work, however remotely, that such efficient and conscientious gentlemen had been called to the task.

The work of the Bureau, as its name implies, includes the study of all domestic animals, their maladies and the conditions under which they are contracted and developed. The economic feature of animal industry has not yet been touched on, so much work having been demanded by the physical conditions; but it is the intention of the Bureau to devote itself to the problems of production, transportation and consumption at an early day.

One of the principal objects of the Bureau is the protection of stock from infectious disease communicated by imported animals. When its work was first begun, pleuro pneumonia had been communicated from cattle imported from England or Holland into this country at Baltimore and Philadelphia and in Kentucky. A general Act of Congress, with the co-operation of the several States interested, enabled the representatives of the Bureau to stamp out the disease in these localities. This could only be accomplished by a rigid quarantine and immediate slaughter of cattle known to be infected. The Government has made an annual appropriation of $500,000 for the Bureau, and Dr. Curtice said the greater part of this sum was employed in attacking the disease where it had appeared, and only a very small portion remained for original investigation. Against this small appropriation it is reported that the disease has cost the English Government $10,000,000 each year for several years past.

The investigations of the Bureau into the Texas cattle fever were begun last year, and are now in progress. Mapping the country, and indicating the northern limit where this fever has been epidemic, a line through Virginia, Northern Tennessee and Missouri, corresponding to the 2000 foot level, would mark its course. From the western borders of Missouri the line bears to the southwest, passing through Indian Territory and into Texas. The infectious feature of the disease disappears with frost, although infected cattle may communicate it after a hard frost and during a warm season, which frequently occurs in the fall of the year.

During the progress of the investigation last year, Dr. Smith discovered what he believed to be the germ of the Texas fever. In examining fresh blood, he noted small masses of amœboid form moving in the red corpuscles. On examining the fresh blood from the infected animal from day to day, these amœba-like masses were found to have increased in number and the red corpuscles to have visibly diminished. Dr. Smith's investigations were arrested by the appearance of cold weather last fall, and consequent checking of the disease; but he is now pursuing it, and hopes to have results which will enable him to certainly diagnose the disease and experiment with remedies.

The work of the Bureau of Animal Industry, in the various diseases of cattle, swine and poultry, and the differentiations noted, have been accepted by European workers, and will stand. Besides the blood diseases, the Bureau is now investigating glanders and tuberculosis at Washington, and material has been abundant, as an Act of Congress permitted the killing of any animal in the District of Columbia afflicted with these diseases.

After the close of Dr. Curtice's address, general discussion and questions and answers followed, and many other points were elucidated. The doctor's special study has been animal parasites, concerning which he has made observations during his visit to California.

Dr. Curtice has recently prepared an excellent illustrated report on the parasites affecting sheep which should be in the hands of every flock-owner. It can be had free by applying to Hon. J. M. Rusk, Secretary of Agriculture, Washington, D. C.

Veterinary Morsels

Thrush.

EDITORS PRESS:—There are several horses in this place owned by readers of the RURAL PRESS which are troubled with thrush. Will Dr. Buzard please give us a treatment?—MANY READERS.

Thrush is ulceration of the sensitive frog. Remove the shoes, pare away all the rags and diseased frog so as to expose every part of the ulcerated surface to the air; then after cleaning all parts by scraping with a blunt knife, insert calomel freely into all clefts and crevices. Keep the feet dry, and repeat this next day, which will probably be sufficient; then dress with tar and oakum. Examine them after a month and see if they are all right; if not, repeat the whole process.

Lotion for Sprain.

EDITORS PRESS:—Please give me a recipe for a cooling lotion for a recent very bad sprain, and oblige—L. H. F., *Napa.*

Take of chloride of ammonium, in powder, and nitrate of potash, in powder, each 2½ ounces; add them to one pint of water, and, directly they are dissolved, apply to the leg with bandages.

Pulses, Equine and Canine.

EDITORS PRESS:—I would like Dr. Buzard to give me the number of beats of a healthy pulse in the horse and dog.—A. S., *Chico.*

Horse, 35 to 42, quickest in young animals. Dog, 80 to 100. A dog's pulse is intermittent.

A. E. BUZARD, M. R. C. V. S. L.
11 Seventh St. S. F.

Steam Plowing at the State Fair.

[Written for the PACIFIC RURAL PRESS.]

The exhibition of traction engines at the State Fair this year attracted great attention and was one of the leading features of the mechanical department. Two of them were shown each evening under steam in the pavilion, and were nearly always surrounded by a crowd of solid-looking men from all parts of the coast, who examined them with the closest scrutiny. An exhibition of their capacity for plowing was given at Coyle's ranch, about three miles from town, on the forenoons of Tuesday, Wednesday and Thursday of the last week of the fair. Notwithstanding the distance from town and the lack of public conveyance, there were hundreds present each day and the interest manifested showed a realization of the fact that steam is about to supplant animal-power to a large extent for farming and freighting on this coast in the near future.

The machines that took part in the exhibition of plowing were the following:

1st. The "Pathfinder," weight 13 tons, pulling 12 ten-inch plows divided into three gangs of four plows each, the gangs being attached to the machine by three chains supported by a sort of cart.

2d. The "Native Son," weight seven tons, pulling eight ten-inch plows (two gangs of four plows) attached to the engine by chains like those on the Pathfinder.

Both the above were made and exhibited by Daniel Best of San Leandro.

3d. The Jacob Price field locomotive, made by Jacob Price of San Leandro, Cal., and Racine, Wisconsin; weight, 8½ tons, pulling twelve 11 inch plows which were attached to a light triangular platform from which the gang levers were operated. The 12 plows were divided into four gangs of three plows each.

4th. The Baker & Hamilton engine made by the Benicia Agricultural Works; weight, 13 tons, carrying twelve 12-inch plows attached

to a very elaborate and powerful frame having a device for raising and lowering the plows by steam.

The ground selected was a sort of yellow cement very hard and dry, having had no rain or other moisture upon it for nearly four months. The universal opinion before operations commenced was that no plowing could be done because of the hardness of the ground; but all the machines set to work at once, and by putting men on the gangs, made them take hold, ripping the ground up in great lumpy billows instead of furrows. Each machine went a round or so in a sort of go-as-you-please manner, but doing the work successfully; and one o'clock having arrived, the crowd left for town, thus ending the first day.

The second day the machines were required by the committee to go three rounds each (about 2¼ miles) without stopping and to maintain, if possible, their steam pressure and to have as much water in the boiler at the end of the three rounds as when starting.

This was successfully done by the Best and Price machines, and would probably have been done by the Baker & Hamilton machine but for an accident that disabled it.

The third day was devoted to a further trial with the Baker & Hamilton machine, which again became disabled, and wound up with a sort of foot-race between the Pathfinder and the Price machines, the latter making a round of nearly a mile, with its 12 plows, in 10½ minutes. The Pathfinder tore away from the starting-point with a speed that would have taken it around in even less time had a plow not broken from its fastenings and plunged into the ground so deeply the whole outfit was brought to a standstill when about three-fourths of the trip was made.

This ended the exhibition, which was pronounced by all as being simply wonderful, one enthusiastic committeeman saying that if he could have his way he would give each machine a gold medal as big as a dinner plate, for showing so conclusively that steam plowing is practicable.

The farmers present estimated that it would have required from 50 to 75 good horses to have pulled, even slowly, either system of 12 plows that were so rapidly and easily drawn by the different engines. The contest between the Price machine and the larger one of Best's was very close, as will be seen from the following

Report of the Committee:

We, your Committee on Traction Engines, respectfully report as follows: After a careful examination of the several traction engines, we award the premium to the one called "The Pathfinder," manufactured by Daniel Best of San Leandro.

The engine manufactured and exhibited by Jacob Price of San Leandro deserves special mention, being a close rival to the Pathfinder. So nearly equal are the two engines that the committee had great difficulty in deciding which was the better. In evidence of which, the committee on the final ballot stood three for the Price and four for the Best ("The Pathfinder").

The Benicia Engine, manufactured by the Benicia Agricultural Works, is also entitled to great praise. It possesses many fine features, and for heavy work, simplicity of construction and economy of fuel, was the peer of any in the contest; but, unfortunately, it became disabled early in the contest, which virtually precluded it from further competition.

J. J. SKINNER, S. L. GAINES,
JOS. ENRIGHT, D. C. MATTISON,
WM KELLY, S. B. ADAMS,
C. C. AGEE, Committee.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

VOLUNTEER HAY.—Livermore *Herald*, Sept. 16: Martin Mendenhall has a 26-acre field at the east end of his ranch, half a mile west of this place, which yielded this season 104 two-horse wagon-loads of volunteer hay—an average of four loads to the acre. Mr. Mendenhall says that the loads would average a ton each.

Butte.

ALMOND HARVEST.—Chico *Enterprise*, Sept 20: The almond crop on Rancho Chico is now being gathered and the yield is large, averaging about 300 pounds to the tree, and there are 40 acres of this fruit, with 2800 trees. The plan adopted for gathering the almonds is to place canvas sheets on the ground and shake the tree; then the sheets are emptied in boxes and the almonds are hulled by the Indians and made ready for the scorching process, after which they are sacked and ready for shipment.

FRUIT INDUSTRY.—Chico *Enterprise*, Sept. 18: Butte once stood in the foretront as an agricultural county. Now a vast change has come over it and we are climbing very near the top as a fruit-yielding county. There are millions of fruit trees and vines in the county, and the number is steadily increasing each year.

SUMMER FALLOWING.—Chico *Chronicle-Record*, Sept. 19: On all the summer-fallowed lands the teams are at work dragging immense harrows and preparing the soil for the seed. In all that vast grain country around Nelson, Biggs and Gridley, the fields are alive with six and eight-horse teams. The farmers of Butte are getting ready for the most extensive seeding ever known in the county, and there is every prospect that the crop of 1891 will be superabundant and command a good price.

Colusa.

LEVEE-BUILDING.—Butte City, Sept. 20: The farmers to the south are busy discussing and building levees for protection the coming winter.

Fresno.

WHEAT YIELD.—Fresno, Sept. 19: The yield of the county for the year is estimated at from 150,000 to 250,000 tons. Mr. Callahan places the product at 150 000 tons. Capt. Muller places it at from 200,000 to 220,000 tons. Mr. Burleigh thinks it will go to 250,000 tons.

BARLEY YIELD.—Fresno, Sept. 19: For the first time in many years, if not for the first time in the history of Fresno, barley is this year being shipped out, and singularly enough to the points from whence this section formerly drew its supply—Sacramento, Marysville and Stockton. The barley yield of the county will probably be about 20,000 tons. Mr. Callahan places it at 25,000 tons, Capt. Muller at from 20,000 to 25,000 tons, while Mr. Burleigh places it at hardly 20,000 tons.

DRIED-FRUIT INDUSTRY.—Fresno *Republican*, Sept. 19: Fresno is the undisputed center of the raisin industry of the United States. The value of the product this year will, it is estimated, be about $1 500,000. The value of dried grapes and dried fruits, including peaches, apricots, pears, figs and nectarines, is estimated by conservative fruit-buyers to be not less than $1,500,000, and may possibly reach $2 000,000. The raisin pack will probably reach 1,000,000 boxes. The number of cars of dried fruit shipped is not obtainable, but it is very large and will be largely increased. The industry is second only to the wheat product of the San Joaquin valley in bulk and value. The raisin business alone keeps seven large packing establishments busy, employing from 1500 to 2500 people and disbursing more than $2,000,000 annually.

RAISIN SHIPMENTS.—Fresno, Sept. 20: The first train of 20 cars of raisins left for the East this morning via the Central and Union Pacific railroads. The total shipments to date are about 60 carloads. The cool weather delays drying materially.

Humboldt.

BARBERRIES.—Arcata *Union*, Sept. 20: Barberries is a fruit almost unknown in Humboldt, but all New England people are acquainted with it, as it grows wild on the North Atlantic Coast. The berries grow on a bush somewhat resembling the crabapple, the berry being tart and used for preserves. It is larger than the cranberry and has a similar taste. D. D. Averell brought out some seed of the barberry from Massachusetts some years ago, from which he has grown trees that are now prolific producers.

Lassen.

CROP NOTES.—Taylorsville, Sept. 15: The grain crop on some of the farms will be excellent; others, in consequence of the high water during the spring, were not planted until very late, and on some of these ranches the yield will not be quite as large as usual. Hay seems to be plentiful, and is selling at $10 per ton. The quality of hay raised in this section is unexcelled anywhere.

Mendocino.

LARGE TOMATOES.—Mendocino *Beacon*, Sept. 20: A sample of the productiveness of the soil of Anderson valley was given to us on Thursday by Geo. Studebaker of Christine in the shape of beautiful large tomatoes, measuring 13½x11½ inches, known as the $1600 tomato. George imported the seed from Philadelphia, and is more than pleased with the result; and well he might be, for they are beauties. It is claimed that the seed originally cost $1600 per pound—hence their name.

Napa.

FINE STOCK FOR WASHINGTON.—Napa *Register*, Sept. 19: T. B. Elington of Rutherford ships to-day from Napa to Colfax, Wash., four stallions—Black Boy, Odd Fellow, Glaucus and another whose name we failed to get—with the expectation of finding ready purchasers for them in that new State. These horses are Hambletonian stock, being sons of Whippleton.

THE VINTAGE.—Napa, Sept. 19: The vintage is now well under way in this end of the valley. In the upper valley, where the grapes ripen a little earlier, crushing began a week ago. At all the cellars in town the usual large forces of men are on hand. Prices, generally speaking, range from $10 to $15 per ton. Mr Carpy is adhering to the prices already published for red grapes. For white grapes no positive figure has been fixed. Great difficulty is being experienced by vineyardists in getting help to pick grapes. More Chinamen are finding employment than ever before. In Sonoma valley, prices are ruling higher than here. A representative of one of the leading wine firms of San Francisco was through that valley Tuesday offering $16 per ton for Zinfandel wine grapes, but found no takers. Vineyardists are holding off for $20 per ton for common varieties.

Orange.

NO IRRIGATION BONDS SOLD.—Anaheim *Gazette*, Sept. 18: On Saturday afternoon the Board of Directors of the irrigation district proceeded to open bids for the purchase of their bonds. The bond issue is $600,000, half of which it was determined to sell. The response from capitalists, however, was not so favorable as had been expected. Only three bids for the purchase of bonds were received. The Bank of Anaheim offered 90.5 cents on the dollar for the first $10,000 issued, and 90 cents for the second $10,000. Mr. Zugo offered to buy $5000 of the issue, in bonds of $500 each, for 90 1 cents on the dollar. As the directors considered the proposals too low, the bids were rejected, and the sale will be readvertised.

FRUIT PRICES.—Placentia, Sept. 18: Agents for commission-houses are scouring the country for dried peaches, apricots and prunes, and are also buying winter and fall apples for the New York market at from 1¼ to 1½ cents per pound; also offering 9½ cents for hardshell English walnuts. Dried prunes, undipped, are bringing 9½ cents; apricots, 16 cents; and peaches, 16 to 18 cents a pound. Corn is $1.15 per cwt., and hay $11 50 a ton.

SECOND CROP VEGETABLES.—Placentia, Sept. 18: Quite a good many potatoes (second crop) have been planted, and acres of cabbage will be set out in October, all for the Eastern market.

CORN HARVESTING.—Fullerton, Sept. 18: This is a very busy time just at present in this vicinity, most of the farmers hereabout being engaged in husking corn and getting it ready for the market. Al Smith and Wm. Jenks shipped the first two carloads of corn from here last Saturday. It was bought by the Capitol Milling Co. of Los Angeles and delivered there for $1.10.

Los Angeles.

YOUNG ORANGE TREES DYING.—Pomona *Progress*, Sept. 18: The disease which has afflicted young orange trees in the seed-bed during the summer has very materially reduced the number of young seedling trees in the country. Throughout the Azusa valley, in this valley and in portions of San Bernardino valley, the loss has, in many cases, reached as high as 70 per cent. Messrs. Burritt and Lathrop, who had extensive beds on Mr. Burritt's place, lost heavily, and have not yet been able to ascertain the nature of the disease. They think now, however, that they have checked the further progress of the disease by the liberal use of a spray made of sulphur with a little lime dissolved. They inform us that since they began the use of this remedy the small trees have stopped dying and have put on a healthy, vigorous growth.

TWO CROPS.—Santa Monica *Outlook*, Sept. 17: Some of the farmers in the vicinity of Florence have harvested a fine crop of barley this season, and have now on the same land an immense crop of corn.

APPLE CROP.—Downey, Sept. 20: The apple crop in this neighborhood is said to be very fine. We hear of trees that have from 1000 to 1500 pounds each.

HOW TO CURE LEMONS.—Downey *Champion*, Sept. 20: C. E. Smith of Downey gives us his method of curing lemons, which he has practiced with success. He says: "Clip the lemons when maturing, leaving just a little of the stem—don't let them remain too long on the tree. Have plenty of dry sand; put a layer of sand in a box; then set in your lemons without touching, stem end down, fill in and cover with sand, then lemons and so on until the box is filled; store boxes in a dry place. The sand must be perfectly dry and the fruit picked when first matured, as they are then the size most desirable for market. Lemons cured this way are perfectly sound 12 months after packing."

Sacramento.

HIGH PRICE FOR TOKAY GRAPES.—Folsom, Sept. 20: It is stated that by reason of the superior coloring properties of the Flame Tokay grapes grown upon Orangevale soil, a leading firm of Sacramento has agreed to take the entire crop at $55 per ton, net—the purchasers doing their own packing and shipping. This is the highest price yet paid on the ground for grapes.

San Bernardino.

SAN BERNARDINO, Sept. 19: This city is erecting a large pavilion for fairs and public meetings. It will be the largest in Southern California, and will be completed in time for the Twenty-eighth District Fair, which opens Oct. 21st. The next State Citrus Fair for Southern California will probably be held in this pavilion.

San Diego.

RAISIN PICKING.—San Diego *Union*, Sept. 18: W. H. Somers, who was in the city yesterday from El Cajon, says that the weather is exceedingly favorable for raisins, the crop being about half dry. By another ten days they will be secured and in sweat-boxes, providing there is no rain. The pack will not only be better than last year, but very much larger, or about 125 carloads to 73 in 1889. The berries seem to be superior, and the fact that prices have advanced from 3½ and 4 to 5 and 5½ cents a pound makes ranchers correspondingly cheerful. The crop, too, has turned out heavier than was expected, many more trays than any one anticipated being needed, and in some instances more pickers are employed. There have been about 800 persons at the picking, and some are now leaving the valley. Packing will begin in about two weeks.

LARGE SWEET POTATOES.—Otay *Press*, Sept. 18: P. E. Cornet sent to the Chamber of Commerce, on Monday, a sweet potato that weighed 26½ pounds, dug from a hill yielding 54 pounds, on the ranch of H. G. Davis, near Oneonta.

San Joaquin.

IMPROVED BROODING-HOUSE.—Lodi *Review*, Sept. 18: Don Ray of Galt is having an immense brooding-house erected at his poultry-yards south of town. The new brooding establishment, intended particularly for winter use, will be heated by steam, pipes being introduced through the several compartments.

LARGE YIELD OF POTATOES.—Stockton *Independent*, Sept. 16: Councilman Clark has returned from Lockeford, where, in partnership with Frank Madden, he has 50 acres of land rented and planted in potatoes. The yield promises to be a big one, and the tubers are of the finest in quality. Mr. Clark expects that in some portions of the tract the yield will be 250 sacks to the acre.

San Luis Obispo.

BEAN CROP.—Arroyo Grande *Herald*, Sept. 13: The bean crop is maturing nicely and some big yields will be reported.

Santa Barbara.

EDITORS PRESS:—We are having considerable dark, foggy weather now; there is a dark cloud in the north, and I hear distant thunder at this moment; many are predicting early rains, but I must confess my skepticism as to all weather predictions for more than a few days in advance. Our knowledge of the laws which govern the currents of electricity, currents of magnetism, currents of air, hot and cold waves, humidity and dryness of the air, etc., is as yet too limited. There is so much moisture deep in the ground from last winter's rain, that a very light supply of rain—especially if continued well into the spring, and if we do well our part by keeping the surface well pulverized—will probably produce good crops next year. Corn is being cut, which is considerably earlier than usual.—S. P. SNOW, *Santa Barbara Co., Sept. 18th.*

ATTENTION TO FRUIT TREES PAYS.—Santa Maria *Times*, Sept. 20: There was on exhibition at the fair a small branch cut from an apple tree in Mr. Fugler's orchard. This branch contained over 200 apples, of course not very large—as they had not room to grow. Near by sat a plate of apples of the same variety, but plucked from a tree where the fruit had been thinned out when quite young. They were treble in size, and of flavor so widely different that one would not recognize them as the same variety of apples. This plainly illustrates that fruit when setting on trees too thick should be thinned out, which will add size and flavor to that remaining.

BEAN CROP.—Santa Maria, Sept. 20: The bean crop through the valley promises a heavy yield. Some that have been already cut and thrashed have run as high as 1400 pounds per acre.

PEACH PITS FOR THE EAST.—Lompoc *Record*, Sept. 20: An application for cars to take 60 tons of peach pits from Southern California East has been made to the general freight agent of the Southern Pacific Co. This is made necessary by reason of the total destruction of the peach orchards in many portions of the States east of the Rocky mountains. This being true, the present will not be the only good fruit season we may hope to have while the new trees are coming into bearing.

Solano.

A PROFITABLE ANIMAL.—Vacaville *Reporter*, Sept. 18: Most of the farmers keep hogs on their ranches. They have found that it pays. There is no kind of stock that multiplies so rapidly nor that matures for market so quickly as the hog. It eats up all the refuse and swill and picks up much in the fields that other animals would let go to waste. Therefore it is the most profitable of animals to keep, furnishing bacon for the year's consumption and occasional fresh meat for use, and bringing in a nice little sum for current expenses every fall. Many of the farmers are turning on to market from 10 to 60 head, and think the hog business pays.

Sonoma.

MULBERRIES.—D. B. Wier in Petaluma *Courier*, Sept. 17: On invitation we visited a neighbor's well-kept garden to see and sample some mulberries. He has twe fine trees loaded with choice fruit. The trees themselves are quite ornamental. Few handsomer trees for a lawn or garden can be found in this State; large, dark green, handsome leaves, and very dense. The fruit is the size of blackberries and very fine, raw or cooked, most excellent for pies, "short cake," dumplings and canning. The trees are loaded with fruit for fully three months. Like the fig, the fruit ripens from July to October and falls from the tree as soon as dead ripe. The trees here as yet have no insect enemies and are clean and handsome every way.

GRAPE YIELD.—Santa Rosa *Democrat*, Sept. 18: It is estimated that the grape crop of Sonoma county will amount to 50,000 tons, and at the estimate of $10 per ton will place $500,000 into the pockets of the grape-growers.

GRAPE PRICES.—Santa Rosa, Sept. 18: Lovaggi & Barbieni of San Francisco have bought the crop of several vineyards in the vicinity of Carriger station, and are paying $18 a ton delivered at that point. Boxes are also furnished and returned free of charge.

HOPS.—Santa Rosa, Sept. 18: Capt. Grosse, president of the Sonoma County Hop-Growers' Association, says that at least two-thirds of the hop crop in this county has already been sold, and that the present ruling price is between 35 and 40 cents.

MUST CONDENSER.—Healdsburg *Tribune*, Sept. 18: The must condenser of Geyserville will commence operations next Tuesday. The concern will consume about 1500 tons of grapes this year.

Stanislaus.

LARGE WHEAT FARM.—Modesto *Herald*, Sept. 18: The thrashing machine of Coffee & Wooten performed big work this month on the farm of H. Hugheon, east of Ceres. An aver-

(*Continued on page 276.*)



LADIES' TOILETTE.

Ladies' Toilette.

This toilette is represented developed in plain and fancy-striped dress-goods and plain velvet. The foundation skirt, which is fashioned in the accepted four-gored style and may be worn with or without a bustle, is wholly concealed beneath a drapery that is straight at the center of the front and arranged with scanty fullness over the gores, thus producing the clinging effect so much admired; and over the hips a desirable fulness results from shallow, forward turning plaits at each side. At the back the edges of the drapery are bias and are prevented from sagging by a tape included in the seam; the seam is concealed by the gracefully rounding folds which result from gathers at the top, and the stylish adjustment of the folds is secured beyond possibility of disarrangement by tackings to an elastic strap. A full, box-plaited ruching of velvet trims the edge of the drapery at the front and may, if desired, be extended across the back.

The elegant adjustment of the basque is accomplished by the usual number of darts and gores, and a well curved center seam, which, with the side-back seams, is discontinued a trifle below the waist-line to form shapely tabs. The effect of contrasting fronts is achieved by bands of the fancy-striped goods applied diagonally to the left front. The lower outline of the basque curves high over the hips and describes a well defined point below the closing.

FOR INFORMATION, our readers are referred to H. A. Deming, No. 124 Post street, S. F., a leading and well-established house, for paper patterns of plates illustrated in our present issue.

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That a fact PROVEN is evidence indisputable? We prove our claim that

Wm RADAM'S MICROBE KILLER

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Cures the sick BY CURING THEM, and furnish the proof in

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For the special treatment of Abdominal and Pelvic Diseases of women and men. Patients at a distance who cannot obtain the comforts and care so essential to success in connection with judicious and proper treatment may communicate with

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236 Taylor Street, San Francisco, Cal.

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CHAS. R. STORY, Sec'y, R. H. MAGILL, Gen. Ag't.

Home Mutual Insurance Company,
216 Sansome Street, San Francisco.
INCORPORATED A. D. 1864.

Losses Paid Since Organization	$3,033,420 31
Assets, January 1, 1890	821,517 09
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	244,384 14

READY TO MAIL.

OUR FALL AND WINTER CATALOGUE

Is now ready for distribution and will be mailed FREE of charge upon application. It is a large book—over 120 pages—and is profusely illustrated, faithfully picturing thousands of articles of merchandise in our great establishment. It is the ideal shopping guide, and, by a perusal of its pages, the reader has as great a command over our prices and assortments as though personally at our counters. It is a mirror of fashion, all the latest styles in various lines of merchandise being shown by illustration as well as by description. Send for it, and secure the benefits of the lowest prices on the Pacific Coast.

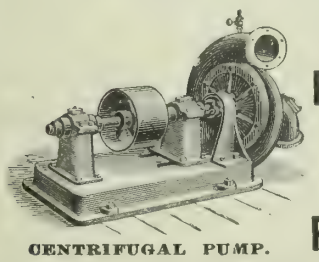
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DEALERS IN

Dry Goods, Cloaks, Clothing, Shoes, and all kinds of Wearing Apparel and Household Supplies,

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SAN FRANCISCO TOOL CO.,
MANUFACTURERS OF
IRRIGATING PUMPS
AND
Machinery of all Kinds.



CENTRIFUGAL PUMP.

—PACIFIC COAST AGENTS—
BABCOCK & WILCOX
Patent Water Tube Steam Boilers.
Estimates Furnished on Application.
Send for Catalogues.
WORKS:
FIRST and STEVENSON STS., S. F.

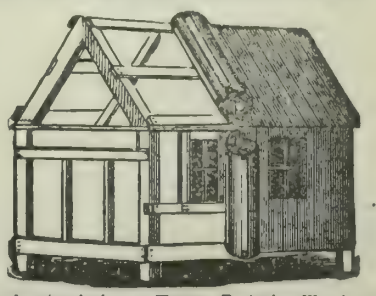
HORSE OWNERS!
TRY GOMBAULT'S
CAUSTIC BALSAM.



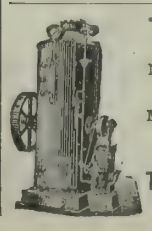
A Safe, Speedy and Positive Cure for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, all Skin Diseases or Parasites, Thrush, Diphtheria, Pinkeye, all Lameness from Spavin, Ringbone or other Bony Tumors. Removes all Bunches or Blemishes from Horses and Cattle.
Supersedes all Cautery or Firing.
Impossible to Produce any Scar or Blemish.
Every bottle sold is warranted to give satisfaction. Price $1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. Address
LAWRENCE, WILLIAMS & CO., Cleveland, O.

UNION IRON WORKS,
SACRAMENTO, CAL.
ROOT, NEILSON & CO.,
MANUFACTURERS OF
Steam Engines, Boilers,
AND ALL KINDS OF
MACHINERY FOR MINING PURPOSES.
Flouring Mills, Saw Mills and Quartz Mills Machinery constructed, fitted up and repaired.
Front St., bet. N & O Sts., Sacramento, Cal.

FAY'S WATER-PROOF MANILLA ROOFING,
SIDING, CEILING, SHEATHING, &c.



Used extensively on Houses, Factories, Warehouses, Etc. Absolutely Water-proof. Send 2c for Illustrated Catalogues and Samples.
J. F. WYMAN,
AGENT FOR PACIFIC COAST,
304 MARKET STREET, SAN FRANCISCO.



THE KRIEBEL ENGINE
And Plain Vertical Boiler.
Mounted on a Combined Base.
A very Cheap and Economical Engine.
Made of the very best material.
2 & 3 HORSE POWER.
Write for Prices.
TRUMAN, HOOKER & CO.,
SAN FRANCISCO.

Agricultural Notes.

(*Concluded from page 274.*)

age of 1430 sacks per day was made for ten days. This not only speaks well for the machine, but inasmuch as another outfit thrashed 3000 sacks on the same farm, it indicates that wheat-raising isn't a failure with Mr. Hughson. Seventeen thousand three hundred sacks of wheat are not to be sneezed at these dull times.

Sutter.

TOBACCO GROWING.—Sutter City *Enterprise*, Sept. 16: Tobacco is being successfully grown in considerable quantities by J. M. Hering of this town. Mr. Hering thoroughly understands the art of curing tobacco, and being an inveterate consumer, uses only the article which he grows himself. He has several acres planted out to tobacco and indigo, both of which have made a marvelous growth. A gardener employed at the residence of P. D. Gardemeyer also has a plat of ground planted to tobacco. He is an authority on such matters and claims that his plants equal the best he has ever seen grown, which proves conclusively that the soil of Sutter county, especially at the southern slope of the Buttes, will grow various kinds of semi-tropical products to the entire satisfaction of the experimenter.

BIG RETURNS FROM PEACHES.—Marysville *Appeal*, Sept. 18: From a gentleman prominently connected with the fruit interests of Sutter county, an *Appeal* reporter has received the following statement of the income of a small peach orchard of four acres in that county, which is six years old:

No. trees—4 acres	480
Peaches, green, pounds	59,590
Gross revenue at $65 per ton	$1,283 75
Expense—picking, hauling, cultivating, pruning and taxes	213 25
Net profit	$1,070 50
Net profit per acre	[illegible]

What can be more remunerative to the land owner than the raising of peaches? When four acres properly cultivated will support a family, what more could be desired? Ten acres cultivated in the same manner would at that rate make each year a very handsome income. Many will say it is the high price that has helped this year; and yet should the price drop off one-third, there would be a good round net income from ten acres.

LEVEE WORK.—Marysville *Democrat*, Sept. 18: The Commissioners of Levee District No. 1, Sutter county, have completed the work of putting in piling at the mouth of the Yuba river, and have a levee camp ten miles below Yuba City. Sixty teams were put to work this morning. It will take some time to complete the task, as the levee will have to be raised from 18 inches to 2 feet at this point, known as "Starrbend." Messrs. Kerns, Abbott, Ashford, Wilson, Kelly, Lask, Humphreys and the Widow Boston have large tracts of land in this district. There are no gopher-holes to be met along this levee.

Tu'are

HORSES AND FOXTAIL.—Porterville *Tidings*, Sept. 19: Lots of people consult a veterinary surgeon or some of their neighbors as to what they suppose is the matter with their horses. A farm hand who was riding on the stage with us a few days ago, where one of the horses was giving out (and which the stable hostler said had glanders), got out, and opening the horse's mouth, pulled out two or three great wads of foxtail. The matter with the horse was, he had not been able to eat in several days, was drooling at the mouth and swelling under the throat.

WHEAT GIVING PLACE TO DIVERSIFIED FARMING.—Traver *Advocate*, Sept. 18: The reign of King Wheat is nearly over in this locality, and the orchard and vineyard, apiary and poultry farm are swiftly and surely usurping his domain.

Yolo

WORK IN THE VINEYARD.—Woodland *Mail*, Sept. 20: Many of our readers are not aware of the amount of employment that is furnished in the vineyards and orchards of this county. The number now engaged in the harvesting and shipping of this season's fruit crop greatly exceeds that of previous years. In every vineyard of any importance, at least 10 or 20 men are employed, and it is estimated that to-day 1000 men, women and children are laboring in the fruit-fields of this county. Besides, about 500 Mongolians are also at work, making a total of 1500 hands, and one vineyardist remarked to a *Mail* reporter that 200 more men could secure work at once. One hundred are engaged alone in packing Tokay grapes, around Woodland.

NEVADA.

A GOOD MOVE.—Reno *Gazette*, Sept. 18: Between Lake Tahoe and Sierra valley there are summer dairies which keep about 4000 cows for five months in the year that are driven to Folsom as winter approaches. The Board of Trade has a committee consisting of L. D. Folsom, James Mayberry, W. H. Gould, T. V. Julien, C. H. Markham, A. G. Fletcher and Wm. Thompson at work on a proposition to erect a creamery in this valley, which will induce the dairymen to drive to Reno instead of to Folsom, thus making a market for the surplus hay, as well as furnishing employment for several hundred men at a time when it is very much needed.

California's Stallions.

I beg to announce that, with a view of perpetuating the forms and characteristics of the leading stallions of California, I am issuing a series of lithographic likenesses. Each portrait issued will be an acknowledged likeness, the result of a close study of the horse and an artistic treatment of the subject. In order to secure for the series an immense advertising value, from a breeder's point of view, 4000 copies, at least, of each portrait will be issued.

Terms, $100 for first issue of 100 copies. In quantity, for advertising purposes, copies will be furnished at low rates.

H. BOYD, Artist.

208 Golden Gate Ave., San Francisco.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

DR. T. J. FRAZER, Dentist, Room 54, Flood Building, Market and Fourth Streets, San Francisco, Cal.

Dewey & Co.'s Scientific Press Patent Agency.



OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library, containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most *reliable* advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free.

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Manufacturers of
Sheet Iron and Steel
PIPE!
ALL SIZES.
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Iron cut, punched and formed, for making pipe on ground. All kinds of Tools supplied for making Pipe Estimates given. Are prepared for coating all sizes of Pipe with a composition of Coal Tar and Asphaltum.

IT STANDS AT THE HEAD!
"DOMESTIC"
THE LIGHT RUNNING
DO NOT FAIL to SEE THE "DOMESTIC"
Before Buying a Sewing Machine.
It is the lead in practical progress. Send for price list
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ALMOND HULLERS FOR SALE
By A. O. RIX,
IRVINGTON, ALAMEDA COUNTY, CAL.

The Whole Country Needs Fertilization

ADMONITION TO FARMERS!

GUAYMAS, MEXICO, September 9, 1890.

R. B. CUNNINGHAM, ESQ., Agent Mexican Phosphate and Sulphur Company—DEAR SIR: In answer to your inquiries as to the value of phosphates for worn-out lands, I will state that it is my opinion the lands of the older settled portions of California afford a good field for the use of phosphates. These lands have been cropped for years without any restoration of the chemical constituents necessary for an abundant crop. They therefore show plainly that they need assistance artificially to produce crops good in quantity and quality, let the crop be whatever it may.

Take, for instance, San Joaquin and Santa Clara valleys, and what do you see? Many crops that are so imperfect in quantity and quality that the eye at once detects the defect. The only relief that can be resorted to must be infused into the soil to replace the chemical properties that have been extracted by previous crops, and the writer is of the opinion that a liberal supply of phosphates will accomplish this.

The attention of the cultivators of the soil is sharply turned to rotation of crops, hoping thereby to get wealth out of their lands without fertilization. Some have turned their attention to beet cultivation in soil worn out by other crops. Beet or other seeds will not grow successfully unless the soil will nourish them.

This summer I saw several crops of beets on excessively cropped lands, the majority of which showed that there was something wanting to complete the plants to ample size and in quantity that should be expected of sugar beets under favorable circumstances. If a good crop is not obtained, there is deficiency in profit. It costs as much to cultivate soil deficient in chemical properties as it does if ample nutrition was in the soil. Under the former condition a deficient crop is certain, while under the latter condition he may reasonably expect an ample crop with profit.

Fields often are allowed to go to weeds, supposing thereby to enrich the soil. This is an uncertain method and not profitable. Your weeds have grown up and seeded; the dead stems can only add a limited addition to fertilize the soil, while the seeds of the same will cause much expense to exterminate them from the future crops. Besides, while thus only weeds as a crop, no profit was realized, while if a supply of phosphates had been applied to the soil, a profitable crop of beets or corn would be had. Besides, the weeds would have been exterminated during the cultivation of the said crop. I am, Sir, your obedient servant,

EDWARD PALMER, M. D.

THE MEXICAN PHOSPHATE SULPHUR CO.

Manufacture three grades of this Superior Fertilizer of the following analyses:

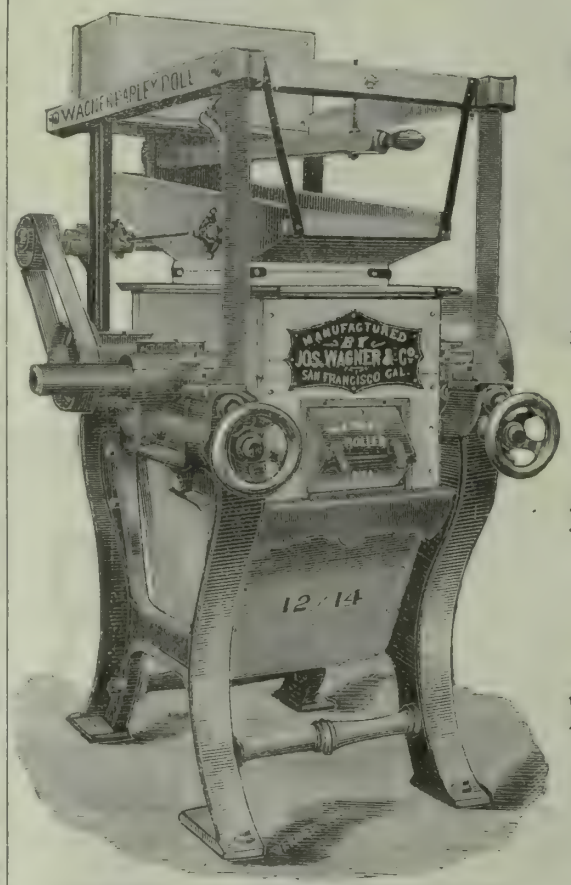
GUARANTEED ANALYSIS.	Brand [A] for Sugar Cane, Sugar Beets, Etc.	Brand [B] for Grain, Gardens, Lawns, etc.	Brand [C] for Fruits, Vineyards, Etc.
Phosphoric Acid	10 to 11 per cent.	15 per cent.	12 per cent.
Potash	9 to 10 "	2 "	5 to 6 "
Ammonia	3 to 4 "	2 "	3 to 4 "

And will sell in lots to suit.

PARTICULARS AND CIRCULARS MAY BE HAD OF THE UNDERSIGNED.

H. M. NEWHALL & CO.,
AGENTS.
309 & 311 SANSOME STREET, SAN FRANCISCO, CAL.

JOS. WAGNER MFG. CO.,



BARLEY, MALT AND FEED ROLLER MILL.

MANUFACTURERS OF
FLOUR, FEED, CORN
— AND —
MEAL MACHINERY,
ELEVATING
— AND —
CONVEYING
MACHINERY,
SHAFTING,
PULLEYS, BOXES,
HANGERS, ETC.
Leather,
Rubber
and Cotton
BELTING.
MILL AND ELEVATOR
MACHINERY
— AND —
SUPPLIES.

134 AND 136 MAIN STREET, SAN FRANCISCO, CAL.
BRANCH: 26 NORTH FRONT STREET, PORTLAND, OREGON.

WOOL
ESTABLISHED 1856.
SHERMAN HALL & CO.
COMMISSION MERCHANTS,
122 MICHIGAN ST., CHICAGO, ILL.
Warehouse, Nos. 122 to 128 Michigan St., Nos. 45 to 53 La Salle Avenue.

Commissions one cent per pound, which includes all charges after wool is received in store until sold. Sacks furnished free to shippers. Cash advances arranged for when desired. Write for circulars. Information furnished promptly by mail or telegraph when desired.

State Fair Notes.

[Written for the RURAL PRESS by F. S. C.]

Starting Right with Jerseys.

Mr. L. F. Eaton of Florin showed a young herd of Jerseys carefully selected from the best families of the breed. The individuals were fine specimens of the breed and show the personal care of an owner with whom every one is a pet. Bob Mercury 24202 stands at the head of the herd. He is descended from Alphadran 16460 and Alphea Pearl 33523. In this family the famous Eurotas made a record of 778 lbs. 1 oz. in 11 months, to be beaten in her own family by the wonderful Eurotissima with 945 lbs. 9 oz. in 1 year. The four heifers are from the Coomassie and Frankie 17th families. They are Flossie Baker 58390, her full sister Frankie Baker 64057, Xariffa Baker 64056, and Lily Carson 64513.

In the Coomassie family, the founder herself took first prize over all Jerseys for five successive years. Her descendant, Princess Second, made a record of 46 lbs. 12 oz. butter in one week, Oxford Kate a record of 39 lbs. 12 oz. in same time, and Ethel Second another of 30 lbs. 15 oz.

In the Frankie Seventeenth family, Lady Nel Second made 183 pounds in 61 days, and Jersey Cream made 77 pounds in 30 days. Couche's Lily made 70 pounds in 31 days.

From acquaintance with Mr. Eaton, I am convinced that he will use the care necessary to put his cows upon record and do something substantial toward building up the now depressed Jersey interest in California.

We think other breeders would do well to emulate his care and zeal and see that reliable tests are made of quality as well as quantity of milk, and such tests of butter production as are entitled to go upon record. The test is the life of the Jersey interest. It must be demonstrated that they are the cattle for butter, or the buyer will seek larger cattle.

Mineral Waters at the State Fair.

In the pavilion were several very attractive exhibits of mineral waters. These were liberally dispensed to the thirsty visitors. They were there for advertising, not expecting premiums, but the authorities thought such attractions deserved premiums and so appointed a committee of award. Bartlett and Shasta were in the lead, so the gentlemen of the committee secured a bottle of each, and after carefully tasting concluded that Shasta water tasted a little the sharpest and so gave it the premium. Now the value of a mineral water consists in its medicinal qualities, and this method of testing had no possible bearing upon the question. In such matters a committee should consist of competent chemists or physicians, who should deal with the main question at issue.

BURBANK'S GLADIOLUSES.—We have had the pleasure of growing a small collection of Mr. Burbank's new gladioluses on our lawn this summer, and they have been the admiration of all visitors for their size, hues and delicate markings. We understand that Mr. Burbank is proceeding with his development of this grand flower, and that some of the newer lot of seedlings are very much finer than any in the old set; but it will take four years yet to get a stock of them. Every seedling lot shows very much improvement over the last before, but the seed of any variety never produces any like its parent. They vary surprisingly when grown from seed. Mr. Burbank has gone East on a flying trip, but will be back again at his work in Santa Rosa by the middle of October.

POULTRY.—We desire to call special attention to the advertisement made in this issue by the Clover Valley Poultry Farm of Whitewater, Wis. As will be seen, the proprietors of this farm breed all the leading varieties of land and water fowls.

Booming Bellamy—Co-operative Canvassing.

The Pacific Bellamy Club wants to circulate upon this coast 150,000 copies of Bellamy's famous book, "Looking Backward," the prophetic gospel of the Nationalists, 350,000 copies of which have been sold already, including 20,000 in California.

The club has made arrangements whereby the book can be bought for about half-price. There are thousands of people in this State who have not yet read "Looking Backward," and will not do so for a long time, unless it be brought to their notice by some acquaintance who can say: "Here, take this book and give me 30 cents to buy another for some one who wants something good to read."

Their plan is to give every one willing to aid in the work a card bearing his or her name, and certifying: "You are hereby appointed Solicitor of Funds from your *personal acquaintances only*, for Bellamy Club, No. —, of —. Said funds, together with the dues of five cents per month from each member, shall be used in the purchase of the book, 'Looking Backward,' which is to be given away or loaned by your club free of charge. Membership to exist six months." No one is expected to "make a business" of this good work, but merely to cooperate in it according to leisure and opportunity. Canvassing cards and further information will be furnished free of charge on application to S. Stetson, 1024 Capp street, S. F.

Parties ordering books should address—"Cooper's bookstore, 746 Market street, S. F., Cal." The Bellamy Club has made arrangements to have them furnished at 30 cents each—postage extra.

As to Carisa.

EDITORS PRESS:—I notice an item in Sept. 13th PRESS from Livermore, Alameda county, advising farmers to plant carisa in wet places. I have been wishing to get a forage plant which will grow in a wet, sandy river-bottom, and would like to know the nature of the carisa, where it may be obtained, the best time to plant, whether it will stand heavy pasturing, etc. H. M. PETERS.

Full Brook, Cal., Sept. 18, 1890.

An Echo from the Hills.

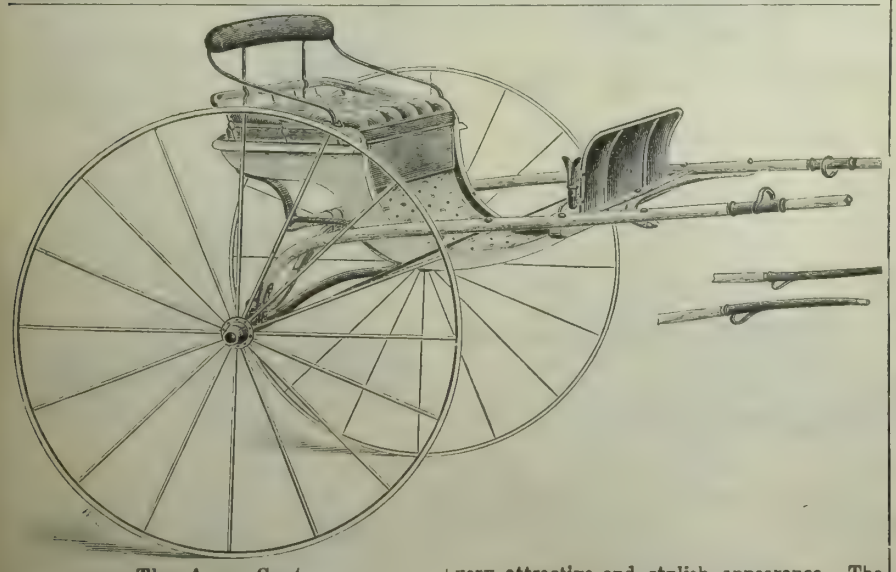
The Downieville *Mountain Messenger* says: "The State Fair edition—32 pages—of the PACIFIC RURAL PRESS, published by Dewey & Co., San Francisco, is most valuable for the farmers, and highly creditable to the energetic and wide-awake publishers who always keep abreast of the times. Every farmer should subscribe for this instructive and popular organ of the Grangers."

Simple, Substantial, Satisfactory.

The College City Steam Pump exhibited at the State Fair, has long held its own as one of the most simple and economically working premium pumps ever invented. It is manufactured by its proprietors, Root, Neilson & Co., at their own establishment, the Union Iron Works, Sacramento. Parties interested in steam-pumping apparatus should send for their circular.

ROOTED VINES.—The Fruto Land and Improvement Co. have a large lot of rooted grape vines for sale at Rancho Fruto. They were grown 800 feet above sea level and are stocky vines, free from insects and not waterlogged. Send in your orders early. See advertisement in another column.

GLENWOOD NURSERIES.—The Wm. H. Moon Co., Morrisville, Bucks county, Pa., have issued their semi-annual trade-list for the autumn of 1890. It embraces fruit and ornamental trees, both deciduous and evergreen, shrubs, vines, bulbs, etc., making a *brochure* of 14 pages.



The Acme Cart.

The demand for something new in the way of Road Carts has brought out another candidate for public favor in the Acme, an illustration of which is given above. Its patent-leather dash, stick seat and graceful body certainly give it a very attractive and stylish appearance. The seat has a lazy-back and corduroy cushion, and the cart is finished in either natural wood, Brewster green, red or black. The wheels are Sarven patent and the body is securely braced and ironed. The Acme is meeting with a ready demand and is handled by Frank Bros., San Francisco.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING SEPT. 16, 1890.

436,623.—APPARATUS FOR MAKING EXTRACTS—Geo. S. Andres, S. F.

436,624.—APPARATUS FOR MAKING EXTRACTS—Geo. S. Andres, S. F.

436,556.—HARNESS LOOP—A. W. Bennett, Portland, Ogn.

436,594.—WAGON JACK—A. T. & A. W. Brann, Dayton, Nev.

436,699.—ROTARY VALVE—P. N. Dellinger, Whatcom, Wash.

436,653.—SUSPENDER CATCH—J. O. Folsom, Canyon City, Ogn.

436,629.—FRUIT PITTER—J. T. Ish, S. F.

436,481.—KITCHEN CABINET—B. H James, No. Yakima, Wash.

436,459.—LATHE CHUCK—F. McClure, Stockton, Cal.

436,610.—RUNNING GEAR—S. McGarvin, San Jose, Cal.

436,741.—HAY RICKER—D. F. Oliver, S. F.

436,634.—FENCE POST—H. A. Peabody, Ukiah, Cal.

436,642.—DESK—C. B. Towle, Vallejo, Cal.

436,643.—ANIMAL TRAP—White & Murphy, Pomona, Cal.

The following brief list by telegraph, for Sept. 23, will appear more complete on receipt of mail advices:

California—Daniel Best, San Leandro, traction engine; Daniel Best, San Leandro, injector; Daniel Best, San Leandro, boiler; John Dihrberg, Visalia, water-closet indicator; John W. Eisenhuth, assignor to Electric Vapor Engine Company, San Francisco, explosive engine; Silas Harris, San Francisco, axle machine; John F. Kirby, San Francisco, governor; Nicholas Kramer, Sacramento, car-coupling; John A. Rueger, San Francisco, block puzzle; Thomas Scheen, St. Helena, lawn-sprinkler; Andrew T. Sherwood, San Francisco, uterine supporter; Wm. Shipley, San Luis Obispo, door check; Matthew S. Tarkington, Tulare, wire-fence stay; Auguste Wagniere, Los Angeles, electric arc lamp; John H. Watson, Selina, hame hook; Hugh Wilson, Duncan's Mills, lifting-jack. Oregon—John B. Kelly, Pleasant Home, pneumatic railway; William A. Miller, Wapinitaia, circular saw; Zatique Penard, Portland, sash-fastener. Washington—Jasper Howe, Tacoma, shipping-receipt books; William W. Shearer, Port Angeles, wire-drawing drum.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

The Stockton Fair.

As we go to press the San Joaquin Valley Fair at Stockton is opening well, and promises to surpass earlier efforts of this leading District Association of the State. During the closing days of this week the pavilion display will get into good shape, and all next week both at pavilion and park the exhibition will be in full blast with a full list of interesting features. All who desire to study the resources and adaptations of that vast empire, the San Joaquin valley, should begin with the Stockton Fair, and then proceed southward through the varied agricultural regions and flourishing towns from tide-water in the San Joaquin to the head of the valley at Tehachipi. Stockton will be a good place to visit from Sept. 23d to Oct. 4th.

THE overland fruit shipments from San Jose last week amounted to 4,100,790 pounds.

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For Lieutenant-Governor,
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For Chief Justice,
JOHN A. STANLEY of Alameda.

For Associate Justices,
JACKSON HATCH of Santa Clara (Short Term).
JAMES V. COFFEY of San Francisco.
GEORGE H. SMITH of Los Angeles.

For Secretary of State,
W. C. HENDRICKS of Butte.

For Controller,
JOHN P. DUNN of San Francisco.

For Treasurer,
ADAM HEROLD of Placer.

For Attorney-General,
WALKER C. GRAVES of San Francisco.

For Surveyor-General,
STANLEY C. BOOM of Humboldt.

For Superintendent of Public Instruction,
H. C. HALL of San Mateo.

For Clerk of Supreme Court,
J. D. SPENCER of Stanislaus.

Congressmen,
First District—THOMAS J. GEARY of Sonoma.
Second District—A. CAMINETTI of Amador.
Third District—JOHN P. IRISH of Alameda.
Fourth District—.....
Fifth District—THOMAS J. CLUNIE of San Francisco
Sixth District—W. J. CURTIS of San Bernardino.

Board of Equalization,
First District—.....
Second District—JAMES BRADY of Alameda.
Third District—RICHARD H. BEAMER of Yolo.
Fourth District—JOHN T. GAFFEY of Los Angeles.

Railroad Commission,
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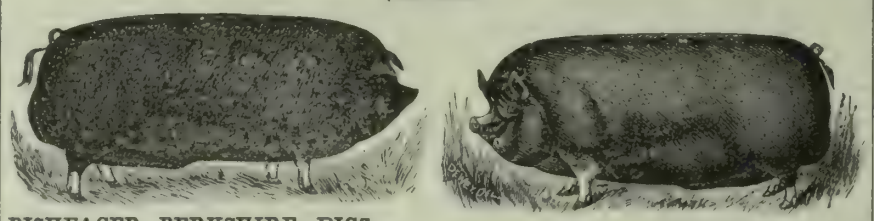
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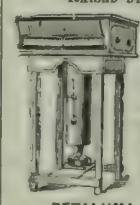
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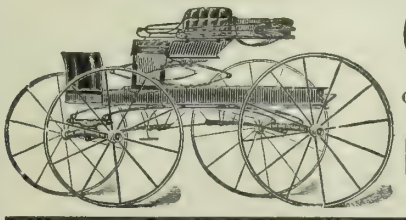
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Sept. 24, 1890.

Trading the past week in farm products has been fairly active outside of cereals, which have ruled dull, owing to buyers' offishness. To the decline in silver (falling from $1.20¾ an ounce to $1.12¾ an ounce) is largely due the weak and lower markets abroad for wheat. The following is to-day's London cable:

LIVERPOOL, Sept. 24.—Wheat weaker. California spot lots, 7s 1½d to 7s 4d; cargoes off coast, 37s 3d@37s 6d; just shipped, 37s 6d; nearly due, 37s 6d; cargoes off coast, not much demand; on passage, inactive; Mark Lane wheat, quiet; English country markets, turn dearer; wheat and flour in Paris, steady.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Sept.	Oct.	Nov.	Dec.	Jan.
Thursday	7s4½d	7s4½d	7s5½d	7s6d	7s5½d
Friday	7s3½d	7s4d	7s5d	7s5½d	7s5d
Saturday	7s3½d	7s4d	7s5d	7s5½d	7s5½d
Monday	7s3½d	7s4½d	7s5½d	7s5½d	7s5½d
Tuesday	7s4d	7s4½d	7s5½d	7s6d	7s6d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	37s3d	37s6d	37s6d	Quiet.
Friday	37s3d	37s6d	37s6d	Quieter.
Saturday	37s3d	37s6d	37s6d	Slow.
Monday	37s3d	37s6d	37s6d	Quiet.
Tuesday	37s3d	37s6d	37s6d	Quiet.

Eastern Grain Markets.

The following shows the closing prices of wheat New York for the past week:

Day.	Sept.	Oct.	Nov.	Dec.	May.	June.
Thursday	102½	103½	105½	106½	111	...
Friday	101½	102	....	105½	109¾	...
Saturday	101¾	102	....	104¾	109¼	...
Monday	102½	103½	104½	105½	110¼	...
Tuesday	101¾	102¼	....	104¾	109½	...

The closing prices for wheat have been as follows at Chicago for the past week:

Day.	Oct.	Dec.	May.	June.
Thursday	....	102¾	107¾	....
Friday	98¼	101½	106	....
Saturday	98¼	101	105¾	....
Monday	99¼	102	106½	....
Tuesday	98½	100½	105	....

NEW YORK, Sept. 24.—$1.02¾ for cash, $1.01¾ for October, $1.03¾ for December and $1.07⅞ for May.

CHICAGO, Sept. 24.—Wheat—99⅝c for December and $1.04⅜ for May.

Eastern Wool Markets.

PHILADELPHIA, Sept. 19.—Wool is firm; Montana, 16@24c; Territory, 15@20c.

BOSTON, Sept. 19.—Territory wools are most active and large lines are being sold on a scoured basis at 58@60c; fine medium, 55@58c; medium, 52@55c. California and Oregon wools are comparatively quiet.

NEW YORK, Sept. 19.—*Bradstreet's* says: The wool market continues to improve. Reports from all large centers are very encouraging. Manufacturers are inclined to buy more heavy, especially Territory wools. The market for Australian wool is comparatively quiet. Dealers are firm in their demands and prices are well held. There is but light demand for Carpet wools. Pulled wools are stronger and sales in this line are increasing. Ohio and Michigan are meeting with only a light demand. While dealers refuse to urge sales in the presence of the strong demands which are being made by worsted mills, it is a clear indication that higher prices are expected and that they will be received. The London sales have opened with a large attendance of buyers and animated bidding. Prices rule as high as at the end of the last series. Comparatively little wool suitable for this country is included in the offerings.

Hops.

CHICAGO, Sept. 21.—The hop market is unusually steady. A few hops are being received, but the quantity is yet small; trade is light. Brewers are holding back on account of the high prices, but holders are firm. The feeling in the hop-growing sections, both in the East and all the western coast, is firm. Old hops are about all gone. Pacific Coast, 40@44c ₱ lb.

NEW YORK, Sept. 21.—No animation in hops; operators await the collections of the crop. New Pacific stands well. Quotations compared with the best State. Rates for all this season's growth are the same as last week.

Beans.

CHICAGO, Sept. 21.—Beans are dull and buyers holding off. Ideas of value differ considerably and the tendency is downward. The quality of the beans left varies a good deal, with little or no straight hand-picked stock left. Prices just now are uncertain, for there is very little doing and no one cares to operate; the feeling is certainly heavy. Hand-picked, but the variety not named, are bought at $2 laid down here. California Lima beans, choice, 5c ₱ lb, common, 2@3c.

Honey.

NEW YORK, Sept. 21.—California honey is higher. Light Amber, 7¼c; Standard White, 7½c; Druggist's pure white, 8c; ordinary Amber, 7c; Dark, 6½c.

Canadian Wheat.

OTTAWA (Ontario), Sept. 19.—Advices here by the Government to-day state that, notwithstanding contradictory reports, the damage to the wheat of the Northwest is much more serious than is generally known. The crop has not only been injured by frost, but rain and snow have damaged it to a very considerable extent. Where it was believed a short time ago that 10,000,000 bushels would rank No. 1 hard wheat it is now calculated that only 1,000,000 bushels will reach that grade. The yield will be large, but the bulk of it will only grade 3 and 4.

Local Markets.

BAGS—The market is dull and heavy at 6½@7½c for standard sizes.

BARLEY—The sample market has held weak throughout the week. The weakness is due more to strong bear influences than to any other cause. The crop is short, while the demand is active. In futures, trading has been quiet. The following are the reported sales made on to-day's Call:

Morning Session: No sales. Afternoon Session: Buyer 1890—200 tons, $1.37½; 100, $1.37¾; 100, $1.37⅞ ₱ ctl.

BARLEY

	Buyer Season. H.	Buyer Season. L.	Seller 1890. H.	Seller 1890. L.	Buyer 1890. H.	Buyer 1890. L.
Thursday	148	147½	...	...	139½	138⅞
Friday	143⅝	142⅛	...	...	138	138⅛
Saturday	146	145⅝	...	...	137⅝	137⅛
Monday	145	142½	...	...	138⅜	137⅝
Tuesday	144⅜	144½	...	...	139	138½

BUTTER—The market has a weaker tone under free receipts and fears of an early winter. Fair to good grades are being shaded, but gilt-edge holds its own. Pickled is moving off fairly free, as is solid.

CHEESE—The market is reported barely steady. Stocks do not show any increase, but reported free supplies are against the selling interests.

EGGS—The market is not quite so firm. This is due to more liberal offerings of Eastern, with not so many poor received.

FLOUR—The market has a weaker tone, with concessions obtained.

WHEAT—Exporters are still bearing the market, but farmers are not offering freely, which keeps the market from dropping too low. The fall in silver is against the market. In futures, trading has been light. The following are the reported sales made on to-day's Call:

Morning Session: Buyer 1890—400 tons, $1.37½; 100, $1.37⅜; 300, $1.37¾. Buyer season—100 tons, $1.45⅝; 100, $1.45⅞; 100. $1.46 ₱ ctl. Afternoon Session: Buyer 1890—800 tons, $1.37¼; 300, $1.37⅝. Buyer season—200 tons, $1.45⅜; 200, $1.45⅝ ₱ ctl.

WHEAT.

		S. S.	Nov.	B. '90.	B S.	S. '90.
Thursday	h.	138	....	139	114½	....
	l.	138	....	138⅝	147⅛	....
Friday	h.	....	....	138	147½	....
	l.	....	....	137⅝	146	....
Saturday	h.	....	....	137½	148⅜	....
	l.	....	....	137	143⅜	....
Monday	h.	....	....	139½	147½	....
	l.	....	....	138⅛	146⅜	....
Tuesday	h.	137	....	138⅜	147	....
	l.	137	....	138¼	146½	....

[COMMUNICATED.]

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Sept. 23d, were as follows:

Flour, qr. sks	83,141	Middlings, sks	1,427
Wheat, ctls	223,294	Alfalfa, "	....
Barley, "	28,846	Chicory, bbls	25
Rye, "	1,400	Broomcorn, bdls	54
Oats, "	19,719	Hops, bls	687
Corn, "	1,860	Wool, "	2,275
*Butter, "	1,489	Hay, tons	4,544
do bxs	492	Straw, "	59
do bbls	116	Wine, gals	193,970
do kegs	305	Brandy, "	9,540
do ½ do	117	Raisins, bxs	1,105
†Cheese, ctls	632	Honey, cs	251
do bxs	113	Walnuts, sks	10
Eggs, doz	18,000	Flaxseed, sks	1,701
do " Eastern	80,370	Mustard, sks	1,240
Beans, ctls	10,721	Almonds, sks	10
Potatoes, sks	29,741	Peanuts, sks	64
Onions, "	2,816	Popcorn sks	83
Bran, sks	7,677	Beet sugar, bbls	339
Buckwheat, sks	36		

*Overland 90 ctls. †Overland 223 ctls.

Cereals.

In the local wheat market, trading the past week was extremely dull with buyers bidding down. Owing to fears of the rainy season setting in early, farmers are warehousing their grain, and while this is going on buyers never bid up, but, on the contrary, are after bargains. After the grain is warehoused, then sellers are more independent. The foreign and Eastern markets have ruled weak under liberal sales by European farmers and also free imports of Russian wheat contracted for previous to the advance in roubles. The exports of wheat and flour since July 1, 1890, are only about 15,000 tons less than for the like time in 1889, while the tonnage in port and to arrive is about 60,000 registered tons (nearly 100,000 tons capacity) in excess of the like date in 1889. As the surplus wheat, including carryover, is considerably less than last season, it is quite reasonable to look for lower charters before the end of the year. The tonnage on the way to northern ports and available for Oregon and Washington wheat, has a carrying capacity of nearly 26,000 tons in excess of the tonnage on the way at the like time in 1889. It will be seen by this that Oregon and Washington will be quite well provided with tonnage.

Barley held to weak prices up to Monday afternoon, when a steadier, firmer tone set in. There is no question but the crop is light; this is confirmed by the Department of Agriculture report of August 18, which is as follows: "Respecting barley, the average condition in California has declined during the past month. The quality of the grain was good, but the yield was inferior."

Oats continue to come to hand quite freely, causing a weaker market. Sellers are not forcing the market. Sales are only made at buyers' lower views to save expenses. The demand is quite fair.

Corn has a weaker tone under advices of a good yield where harvesting is under way. It is thought that present prices will draw in more sellers, and it is to this that the weaker tone is due.

Rye is reported unchanged. The general tone is reported barely steady.

The New York *Mail and Express* of Sept. 17th says: There was a good deal of surprise expressed at the foreign buying on account of the French estimate of 119,500,000 hectolitres or 338,100,000 bushels for the crop, but Beerbohm cabled that this estimate was much too high and the *Bulletin des Halles* estimates the French crop at 286,000,000 bushels. The official estimate looked like the bid of a buyer who wanted to make out that he was really well supplied. In the face of this estimate the foreign buying was fair, and the reports from Russia by private cable were that there was a good deal of damage to the crop. In regard to the wheat situation the London *Financial Times* in an exhaustive review of the world's wheat crops comes to the conclusion that, compared with 1889, Europe and Egypt will give an increased yield of 80,000,000 bushels. From this it proceeds as follows: "To this 80,000,000 bushels may be added 5,000,000 bushels to cover any possible increased production in Canada, Australasia and the Plate, making a total of 85,000,000 bushels more wheat harvested in 1890 than in 1889, outside of the United States and India. In these two countries the crop is at least 95,000,000 bushels less than last year (the last official report of the Department of Agriculture places the United States crop at 91,000,000 bushels less than in 1889, which added to India's shortage gives a lessened yield by these two countries of over 110,000,000 bushels. Besides this, the United States corn crop is about 400,000,000 bushels less than in 1889.—Commercial Editor RURAL PRESS.) so that the wheat crop of the world is this year 10,000,000 bushels below the production of 1889. But in 1889 the production was not equal to the demand, and reserves throughout the world were seriously reduced.

Feedstuff.

Ground feed has an easier tone, due largely to the threatening character of the weather. The Hawaiian islands are taking large quantities of rolled barley.

The receipts of hay are quite large, and so is the demand. Choice grades are relatively scarce, which causes the market to retain its strength for those kinds. Poor to fair grades are in oversupply, and to make quick sales it is, at times, necessary to make concessions.

Fruits.

The berry crop is fast going out, which causes quotations to be more or less nominal.

Apples are in better demand, but as receipts are large the market for the time is kept steady. The quantity being dried is largely in excess of former seasons. So far as we are able to learn, the crop is freer from worms than reported for years past. The Oregon crop is reported as being larger than in 1889.

Peaches are going out, or at least valley peaches are getting scarce. There is still a good showing of mountain peaches. The market is firm. Quotations for Bartlett pears are withdrawn. Good-keeping varieties are firm. Plums are going out.

Cool weather and heavy receipts are against the market tor melons.

Table grapes under heavy supplies have ruled in buyers' favor. The cool weather is against liberal consumptive demand. Some dealers have suggested to consignors to keep consignments back, that is, not to ship too heavily. At the close, choice good keeping are doing slightly better. A daily paper truthfully remarks as follows: The wine men made an onslaught on the market yesterday. It appeared to dealers as if they were making an agreed-upon effort to smash prices. Of course, if the San Francisco wine-grape market can be beaten down two or three dollars a ton, the city newspapers will scatter the quotations all over the State, and the country markets may be thus weakened just so much. Some of the wheat operators have played this game successfully for a number of years. However, the California grape-growers are more independent of the wine men than heretofore, and if they choose to dry their grapes instead of sacrificing them on a cheap and demoralized San Francisco market, the wine men may have to pay even high prices yet.

Heavy shipments of dried fruits overland are still in order. The offerings from first hands are light, a large majority of driers being out of stock. The local market shows a slight increase in the demand.

Raisins are beginning to be shipped quite freely to Eastern points. The drift of opinion is that choice selected will command better prices, yet large packers do not appear disposed to hold, but are meeting the market.

Live-stock.

The market for bullocks and mutton sheep does not show any material change. As the weather grows cooler the consumption increases. Some dealers look for better prices in the former at an early date. Hogs are easier under liberal offering. Milch cows are firm. Medium-sized work horses are easier under freer selling.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4@4½c ₱ lb; dressed, 7@8c ₱ lb.; heavy, 3½@3¾c ₱ lb.; dressed, 6@7c ₱ lb. Stock hogs, 3¼@3½c ₱ lb.

BEEF—Stall fed, 6½@—c ₱ lb.; grass fed, extra, 6@—c ₱ lb.; first quality, 5¼@5½c ₱ lb.; second quality 4¼@5c ₱ lb.; third quality, 4c@— ₱ lb.; bulls and thin cows, 2@3c ₱ lb.

VEAL—Small, 6@8c ₱ lb.; large, 4@6c.

MUTTON—Wethers, 7½@8c ₱ lb.; ewes, 7@7½c ₱ lb.; lamb, spring, 9@10c.

Vegetables.

Garden truck does not show any material change.

Root vegetables and cabbage are fairly firm.

Onions have held to firm prices. Receipts are freer, but this is measurably offset by a freer local and shipping inquiry.

Potatoes have an easier tone. The crop of the State is quite large, as is that of Oregon, but the overland demand keeps prices from shading off. Nevada is sending its liberal surplus largely to the East. Digging is very general. Last year's early rains caused heavy losses, which creates among potato-growers more caution this year.

Miscellaneous.

Poultry is in liberal receipt, but prices do not shade off owing to a free consumptive demand.

Wild ducks are in better supply. Quails are in free receipt.

Honey is coming in quite freely, but it is moving off with equal freedom, which causes a firm tone.

Colored beans are easy, but white varieties are firm.

Hops are reported easy. Fully nine-tenths of the Pacific Coast 1890 crop has been placed.

Wool shows increasing firmness under a freer demand from the East. For the more desirable grades a slight advance has been established. Fine grades of merino are in better demand.

Exports by sea the past week aggregate as follows: Wheat, ctls, Sharpness, 123,642; Cork, 53,567; Plymouth, 65,765. Flour, bbls, Honolulu, 200; Belfast, 20,579; Guayquil, 3250; Central America, 4131; Panama, 500; South America, 580; China, 11,226; Japan, 2187. Dried fruits, lbs, Sydney, 10,310; Auckland, 500; Dunedin, 500; Central America, 2156; China, 1150. Wine, gals, New York, 61,481; Pennsylvania, 5070; Hamburg, 7486; Japan, 4560; Central America, 1313; Mexico, 500. Honey, cs, Sydney, 45; Hamburg, 1181. Barley, rolled, Honolulu, 1025 sks and 60,897 lbs. Mustard seed, lbs, Hamburg, 197,049. Beans, lbs, Honolulu, 4720; Central America, 21,366; China, 5546. Broomcorn, bbls, Auckland, 4435. Canned fruits, cs, Auckland, 140; Brisbane, 200; Wellington, 156; Bremen, 385. Hay, bls, Honolulu, 444. Hops, lbs, Brisbane, 3000; Japan, 1142. Potatoes, sks, Honolulu, 246. Onions, lbs, Honolulu, 103.

From the *Commercial News* of Sept. 22d the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	290,762	237,047
On the way to neighboring ports	23,624	16,622
In port, disengaged	7,136	17,286
In port, engaged for wheat	42,794	63,648
Totals	364,316	334,603

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Sept. 17, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	2,193,187	2,426,090
Flour, bbls	238,321	240,334
Barley	58,150	313,529

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS.			
Bayo, ctl	3 00	@	3 60
Butter	2 00	@	2 30
Pea	2 75	@	3 25
Red	2 [illegible]	@	2 35
Pink	2 10	@	2 30
Large White	—	@	—
Small White	2 75	@	3 25
Lima	—	@	—
Fld Peas, Nkreye	1 60	@	1 75
do green	1 25	@	2 00
do NLes	1 35	@	1 55
Split	[illegible]	@	—
BROOM CORN.			
Choice to Extra	00	@	$5 00
Fair to Good	65 00	@	70 00
Poor	45 00	@	60 00
CHICORY.			
California	6	@	6½
German	6½	@	7
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair, ₱ lb	15	@	22½
do good to choice	25	@	32½
do Gilt edged	35	@	36
do pickled	18	@	22½
do in kegs	17	@	20
do Creamery in rolls	36	@	37
Eastern do	22½	@	30
do do, in tubs	20	@	23
CHEESE.			
Cal. choice mild	9½	@	11
do fair to good	7	@	8½
Young America	10	@	11
N. York Cream	9	@	12
Western	8	@	10
EGGS.			
Cal. ranch, doz	32½	@	34
do do sel'cted	35	@	36
do. store	27½	@	—
Est'n, cld st'rage	—	@	—
do fresh	17½	@	25
do selected	27½	@	—
do to arrive	—	@	—
FEED			
Bran, ton	17 00	@	19 00
Feedmeal	28 00	@	29 00
Gr'd Barley	29 00	@	30 00
Middlings	25 00	@	26 00
Oil Cake Meal	25 00	@	27 00
Manhattan Food Per 100 lbs	7 50	@	—
HAY.			
Compressed	12 00	@	16 00
Wheat, per ton	10 50	@	14 50
do choice	15 00	@	16 00
Wheat and Oats	10 50	@	15 00
Wild Oats	8 00	@	12 00
Tame do	8 00	@	12 00
Clover	8 00	@	11 00
do ch'ce red top	—	@	—
Barley	9 00	@	11 50
Barley and Oats	8 00	@	11 50
Alfalfa, c'mpr'sd	—	@	—
Straw bale	45	@	55
FLOUR			
Extra, City Mills	4 25	@	4 50
do Co'try Mills	4 25	@	4 50
Superfine	3 25	@	4 00
GRAIN, ETC			
Barley, feed, ctl	1 27½	@	1 32½
do Choice	1 33¾	@	—
do Brewing	1 37½	@	1 42½
do do Choice	1 45	@	1 47½
do do gilt edg'd	1 50	@	—
Chevalier choice	1 50	@	1 52½
do com to good	1 32½	@	1 45
Buckwheat	1 75	@	2 00
Corn, White	1 30	@	1 33½
Yellow, large	1 27½	@	1 36½
do, small	1 30	@	1 33½
Oats, milling	1 62½	@	1 70
Surprise	1 67½	@	1 72½
Choice feed	1 60	@	—
do good	1 55	@	1 57½
do fair	1 50	@	—
do Gray	1 45	@	1 55
do Black	1 55	@	1 70
Rye	1 20	@	1 32½
Wheat, milling.			
Gilt edged	1 42½	@	—
do Choice	1 40	@	—
do fair to good	1 37½	@	—
Shipping, cho'ce	1 35	@	—
do good	1 32½	@	—
do fair	1 30	@	—
Sonora	1 30	@	1 33½
HIDES.			
Dry light to h'vy	10	@	11
Salted	6	@	8½
HOPS.			
Oregon, 1890	32½	@	37½

WEDNESDAY, Sept. 24, 1890

Cal 1890 Choice	35	@	37½
do Fair to G'd	32½	@	—
ONIONS			
Silver Skin	2 00	@	2 40
NUTS - JOBBING.			
Walnuts, Cal. ₱	9	@	10
do Ch'ice	11	@	12
Almonds, hd sbl.	5	@	6½
Softshell	12	@	14½
Paper shell	16	@	—
Brazil	11½	@	13
Pecans	9	@	11
Peanuts	7	@	9
Filberts	11½	@	12½
Hickory	6	@	8
Chestnuts	14	@	—
Pine nuts	7	@	8
POTATOES.			
Early Rose, sks.	60	@	75
Chile	75	@	95
Peerless	90	@	80
River Reds	—	@	—
Humboldt	—	@	—
Petaluma	—	@	—
Burbanks	50	@	1 20
Sweet	1	@	1½
POULTRY AND GAME.			
Hens, doz	5 00	@	7 50
Roosters, old	5 00	@	6 00
do young	4 50	@	6 50
Broilers, small	2 50	@	3 50
do large	4 00	@	—
Fryers	4 50	@	—
Ducks, tame	3 50	@	4 50
do large	5 50	@	7 00
Geese, pair	1 25	@	2 00
Turkeys, Gob'r.	16	@	20
Turkeys, Hens	15	@	17
Pigeons	1 75	@	2 50
Rabbits, doz	75	@	1 25
Hare	1 00	@	1 50
Venison	9	@	13
Dove	75	@	—
EGG FOOD.			
Manhattan, ₱ lb	12	@	—
PROVISIONS.			
Cal. Bacon.			
Heavy, lb	10½	@	11
Medium	12	@	—
Light	13	@	13½
Extra Light	—	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11	@	12
Hams, Cal	13	@	14
do Eastern	14	@	15
SEEDS.			
Alfalfa	8	@	8½
Canary	3	@	4
Clover, Red	11½	@	11½
White	17½	@	20
Cotton	20	@	—
Flaxseed	2	@	3
Hemp	4	@	5
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German	5	@	6½
do Common	5	@	6
Mustard, yellow	1½	@	2
do Brown	2½	@	3
Rape	1½	@	2
Ky. Blue Grass	14	@	16
3d quality	13	@	14
Sweet V. Grass	75	@	—
Orchard	12	@	14
Hungarian	7½	@	8
Lawn	27½	@	40
Mesquit	6	@	7
Timothy	6	@	7
TALLOW.			
Crude, lb	3	@	5
Refined	6	@	
WOOL, ETC.			
SPRING—1890.			
Humboldt and Mendocino	19	@	24
Sac'to valley	15	@	22
Free Mountain	18	@	24
S Joaquin valley	12½	@	17
do mountain	17	@	22
Calis'a & F'th'll	15	@	24
Oregon Eastern	13	@	22
do valley	20	@	25
So'n Coast, def	10	@	14
So'n Coast, free	12½	@	19
FALL 1890.			
North'n, choice	15	@	17
do defective	12	@	14
Mountain Free	11½	@	14
San Jo quin defective	[illegible]	@	11
Southern do	8	@	11

Rope.

Baling, Duplex, lb	12
" Manilla, lb	14
Twine, for hops, balls, tarred, lb, Manilla	16
" " grape vine, balls, lb "	16½
" " " coils, lb "	16½
" spring, lb "	18
" binder (650 ft. to lb), lb	15½

Duplex twine 3c per lb less.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, *or beyond the time he intends to pay for it*, let him not fail to write us *direct* to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Sept. 24, 1890.

Bananas, bunch	1 00	@	3 00	Plums, lb	3	@	3½
Cranberries	10 00	@	11 00	Green Gages lb	3	@	3½
Limes, Mex	4 00	@	5 00	Waterm'l'ns	100 4 00	@	8 00
Lemons, Cal., bx.	2 00	@	4 00	Cantaloupes crt	50	@	1 00
do Sicily, bx.	8 00	@	9 00	Nutmeg melons	25	@	50
do Malaga	8 00	@	9 00	Crabapples, box	75	@	1 00
Pineapples, doz.	3 00	@	5 00	Quinces, box	40	@	60
Strawberries				**VEGETABLES.**			
fair, chest	5 00	@	7 00	Okra, dry, lb	6	@	10
Bl'kberries, do	4 00	@	5 50	do green bx.	25	@	50
Huckleberries lb	7	@	8	Parsnips, ctl.	1 25	@	—
Figs, box, black.	30	@	50	Peppers, dry, lb	12	@	—
do white	25	@	45	do green, bx.	25	@	40
do Smyrna	—	@	—	do Bell	40	@	65
Pears, bx.	50	@	1 00	Turnips, ctl.	75	@	—
Peaches box	40	@	75	Beets, sk.	—	@	1 00
do choice	1 00	@	1 50	Cabbage, 100 lbs	75	@	—
do canning, lb	4	@	6	Carrots, sk.	40	@	65
Apples com box	40	@	1 00	Cucumbers box	20	@	40
do choice	1 00	@	1 75	do for p'ckling	70	@	50
Grapes, box	15	@	40	Tomatoes, bx.	25	@	60
do Muscats	20	@	50	Peas, lb	2	@	3
do Rose of Peru	20	@	40	String Beans	2	@	2½
do Tokay	25	@	65	Lima do	2	@	3
do Blk Hamb'rg	25	@	50	Squash, summer, bx	25	@	50
do Isabella	50	@	75	Marrowfat, ton	15 00	@	—
do Malvoise	20	@	35	Garlic, lb	8	@	10
do Cornichon	50	@	75	Green corn ch'ce	20	@	22½
do wine Zinfandel	16 00	@	18 00	do do com sk	60	@	1 25
do other wine				Egg Plant, bx.	40	@	1 50
black kinds	14 00	@	16 00	Cauliflower doz	40	@	60

California Fruits East.

CHICAGO, Sept. 20.—The market for California dried fruit ruled quiet with only moderate offerings. Stocks are very steadily held, but buyers are not disposed to purchase beyond their immediate requirements; dealers do not feel like stocking up at present prices, and yet holders are firm, for it does not look as though there would be any surplus. Apricots, ₰ lb, 16½@17c; peaches, unpeeled, 18½@20c; peeled, 30@32c; nectarines, red, 17@18½c; white, 19@20c; dried grapes, 5½@5¾c; prunes, 50 to 60 to the pound, 12½c; 60 to 70, 12@12¾c; 70 to 80, 11½@11¾c; 80 to 100, 10½@11c.

CHICAGO, Sept. 22.—The Porter Bros. Co. sold eight carloads of California fruit to-day at the following prices: Cling peaches, $1.50@1.75; Salway peaches, $1.25@1.60; Tokay grapes, $2.80@3.40 per full crate; $1.25@2.60 per half-crate; Cornichon grapes; $1.50; Muscat grapes, $3 55 per full crate; $1.45@1.70 per half-crate; German prunes, $2.50 per half-crate; $1.50 per box; Golden Drop plums, $1.50@1.55; Beurre Hardy pears, $3 85@3 90; Beurre Clairgeau pears, $3.10; Comice pears, $3.80 @4; Duchess pears, $2.75@2.90; Vicar pears, $2.25; White Doyenne pears, $2.65@2.95; Beurre Bosc pears, $4; Beurre d'Anjou pears, $3@3.10; Sheldon pears, $3@3.70.

The Earl Fruit Co. sold to-day California fruit as follows: Ripe Bartlett pears, $3.50; Winter Nelis pears, $2.25@2.50; Keifer pears, $3.50@3.60; Seckel pears, $3.50; Howell pears, $2.55; Easter Beurre pears, $2.25; Duchess pears, $2.25; Strawberry peaches, $1.35@1.40; Salway peaches, $1.40@1.50; Cling peaches, $1.35@1.45; White Malaga grapes, $2.10. The weather is fine and cool.

CHICAGO, Sept. 18.—Porter Bros. sold six carloads of California fruit to-day as follows: Pears, White Doyenne, $2.75; Beurre Bosc, $4; Bell, $3.20; Block's Acme, $3.85; Onondaga, $3.25@3.30; Comice, $3.40@3.7 ; Beurre Clairgeau, $2.90@3.05; Duchess, $2.80@3 05; Vicar, $2.40; Beurre Diel, $2.75@2.85; Beurre d'Anjou, $2.85@3; Quinces, $1.85; Golden Drop plums, $1.40; German prunes, $1.40; Kelsey Japan plums, hf crates, $2.05; grapes, Tokay, full crates, $2.50@2.70; hf crates, $1.10@1.35; Cornichon, double crates, $2.45; single crates, $1.25; Lawrence pears, $2.95; Beurre Gris, $3 25; peaches, $1.35@$1.55.

CHICAGO, Sept. 18.—The Earl Fruit Co. sold California fruit to-day as follows: Pears, Duchess, $3.25; White Doyenne, $3.20; Glout Morceau, $2.90; Vicar, $2.40; Comice, $3.20; Quinces, $1.90. Weather fine and cool.

NEW YORK, Sept. 18.—Sgobel & Day, agents of the California Fruit Uuion, auctioned one carload of California fruit to-day at the following prices: Grapes, Tokay, $1.55@2.80; Morocco, $2@2.05; Malvoise, $1.30@1.35; Rose de Peru, 90c@$1.20; Muscat, 95c@$1.50. Fruit is generally in good condition. The receipts of grapes in New York are rather free.

CHICAGO, Sept. 19.—The Earl Fruit Co. sold California fruit to-day as follows: Winter Nelis pears, $2.50@2.70; Salway peaches, $1.40@1.45; Strawberry peaches, $1.50; Cling peaches, $1.45; Seckel pears, $3.70.

CHICAGO, Sept. 19.—Porter Bros. sold seven carloads of California fruits to-day as follows: Grapes, full crates, Tokay, $2.95@3.50; hf crates, $1.25@1.45; Muscat, full crates, $2.80@3.10; hf crates, $1.05@1.40; Blue Malvoise, $1.45; Purple Damascus, $1.75; Cornichon, full crates, $2.95; hf crates $1.40; German prunes, $2; Silver $1.55; Livey Cling peaches, $1.75; peaches, $1.45@1.55; Quinces, $1.95. The weather is fine and cool and the markets are improving.

NEW YORK, Sept. 19.—The second lot of the new crop of imported raisins has arrived here from Denia; the amount is 98,000 boxes. Another cargo of 71,000 boxes is on the way. Private cables say French prunes continue to be sold at the old figure at Bordeaux. Turkish prunes on the spot are held steadily.

The total receipts from June 1 to date for California fruit in this city are estimated by the *Commercial Bulletin* at $650,000. Of this amount $200,000 had to come out for freight charges.

CHICAGO, Sept. 20.—The Earl Fruit Co. sold California fruit to-day as follows: Grapes, hf crates, Tokay, $1.35@1.50; Muscat, $1.20@1.30; Cornichon, $1.45; Emperor, $1.45; full crates, Tokay, $2.90; Muscat, $2.60@2.80; Emperor, $2.95; Salway peaches, small, $1.25@1.40; Heath, $1.30. The weather is fine and cool.

CHICAGO, Sept. 20.—Porter Bros. sold three carloads of California fruit to-day as follows: Cling peaches, $1.60@2; Salway $1.50@1.55; Cornichon grapes, $1.45; full crates, $2 95; White Cornichons, hf crates, $3.05; Tokay, full crates, $3; hf crates, $1.40@1.50; Muscat, full crates, $3; hf crates $1.45; pears—Beurre Hardy, $3.85@3.90; Beurre Bosc, 3.90@4.15; Block's Superb, $3.25@3.30; Howell, $3.90; Beurre Clairgeau, $3 30; Duchess, $3.90; Onondaga, $3.25; Silver prunes, $1.50; Golden Drop plums, $1.60; Kelsey Japan plums, $2.30@2.40.

NEW YORK, Sept. 20.—Rossiter & Skidmore, dealers in California products, report an arrival of Lion brand raisins, new crop, yesterday. They also say the trade is taking no interest in Malagas. There have been no arrivals of Malagas yet. California has now the field for Muscatel raisins.

CHICAGO, Sept. 24.—California green fruits are ruling steady. There is a fair demand with offerings moderate, with prices ranging as below: Peaches, 20-lb boxes—Crawford, $2; Orange Cling, $1.75@2; Strawberry Clings, $1.75@2; pears—Duchess, $3 25@3.50; Beurre Clairgeau, $3@3.25; Beurre Hardy, $4@4.25; Howell, $3.75@4.25; Beurre Bosc, $3.25@3.50; Beurre Diel, $3.25@3.50; quinces, $1.80 @1.90; plums, Fellenburg, $1.50; Egg, $1.75; grapes—Muscat, hf cases of 4 baskets, $1.50@1.75.

CHICAGO, Sept. 24.—The Earl Fruit Co. sold California fruit to-day as follows: Pears—Beurre Bosc, $3.95; Comice, $3.85; Beurre Diel, $2.40; Beurre d'Anjou, $2.60; Vicar, $2.15; Winter Nelis, $2.15@2.25; quinces, $1.70@1.85; peaches—Salway, $1.35@1.55; Strawberry, $1.65@1.70; grapes, Tokay hf crates, $1.25@1.55; Muscat, $1.35. About 15 cars of fruit are sold here daily.

NEW YORK, Sept. 24.—According to the *Commercial Bulletin*, which is closely watching the raisin market, the sales of California raisins for future delivery have been larger thus far than during the corresponding period last year. In the East, orders are scattered over a wide territory. The Western trade has ordered very liberally. Jobbers have resold to a considerable extent, thus the early receipts will pass almost directly into the retailers' hands.

Dried Fruits, Etc.

The quotations given below are for average prices paid. Choice to extra choice fetch an advance on the highest quotations while poor sells slightly below the lowest quotations

Prices named, unless otherwise specified, are for fruit in sacks. Add for 50-lb. boxes ¼c per lb., and for 25-lb boxes ½c to 1c per lb.

Apples, sun-dried, quarters, common	7	@	7½
" " " prime	8	@	8½
" " " choice	9	@	9½
" " sliced, common	9	@	9½
" " " prime	9½	@	9¾
" " " choice	10	@	10¼
" Evap. bleached, ring, 50-lb boxes	14	@	14
Apricots, sun-dried, unbleached, common	10	@	12
" " " prime	12½	@	13
" " " choice	13½	@	14
" " bleached, prime	15	@	16½
" " " choice	16½	@	17½
" " " fancy	17½	@	18½
" Evap. choice, in boxes	17½	@	18
" " fancy, "	18½	@	—
Figs, sun-dried, black	2	@	3
" " white	—	@	—
" " " washed		@	
" " " fancy	8	@	10
" " " pressed	5	@	6
" " " unpressed	2	@	3
" Smyrna boxes	14	@	16
" do sacks	10	@	12
Grapes, sun-dried, stemless	3½	@	4
" " unstemmed	2	@	3
Nectarines, Red, sun-dried	10	@	13
" evaporated, in boxes	13½	@	14
" white, sun-dried	12	@	15
" evaporated	16	@	18½
Peaches, sun-dried, unpeeled, common, bleached	15	@	17
" " " prime, "	1 ¾	@	1¾
" " " choice, "	19	@	21
" " " fancy	22	@	22½
" evaporated " choice	20	@	21
" " " fancy	22	@	23
" sun-dried, peeled, prime, bleached	2¼	@	26
" " " choice	27	@	27½
" " " fancy	28	@	29
" evaporated, " in boxes, choice	27	@	27½
" " " fancy	28	@	30
Pears, sun-dried, quarters	8½	@	9¼
" " sliced	9½	@	10
" evaporated, " in boxes	10¼	@	10¾
" " ring "	11	@	1
Plums, pitted, sun-dried	8¼	@	10¼
" " evap. in boxes, choice	10½	@	11½
" " " fancy	11½	@	12¾
" unpitted,	5	@	8
Prunes, Cal. French, ungraded sizes	10	@	1
" " " graded " 90 to 100	9½	@	9¾
" " " " " 80 to 90	9¾	@	10¼
" " " " " 70 to 80	10¼	@	10¾
" " " " " 60 to 70	10¾	@	11¼
" " " " " 50 to 60	11¼	@	1
" " " " " 40 to 50	12¼	@	13½

Fancy sell for more money.

RAISINS.

Halves, quarters and eighths, 25, 50 and 75 cents higher respectively than whole box prices.

London Layers, choice ₰ bx	$1 80	@	2 10
" fancy, "	2 25	@	2 50
Layers, ₰ bx	1 50	@	2 00
Loose Muscatels, common, ₰ bx	1 15	@	1 35
" choice, "	1 50	@	1 75
" fancy, "	1 80	@	1 90
Unstemmed " in sacks, ₰ lb	4	@	6
Stemmed " " "	4	@	7
Seedless " " "	6	@	7
" ₰ 20-lb bx	1 15	@	1 25
" Sultanas, unbleached, in bxs	1 15	@	1 25
" " bleached "	1 25	@	1 30

CALIFORNIA HONEY.

Comb, dark, 2-lb. frames, 60-lb. cases, ₰ lb	4	@	5
" amber, " " cs. new	4½	@	5½
" white " " " "	9	@	12
Extracted, dark, 5-gal. cans, 2 cans to case, ₰ lb.	4	@	4½
" amber, " " "	4½	@	5½
" white, " " "	5½	@	6
Comb, 2-tins, 2 doz. to case, ₰ doz	—	@	—
Extracted, " "	—	@	—
" 4-lb. tins, 1 doz. "	—	@	—
Beeswax, per pound	21	@	24

HARNESS!

Take care of your **HORSE**. Civilized Man advances rapidly and the Horse will "Keep up with the Band" if well cared for. Horse Boots, Robes, Blankets, etc. Saddles, $5 to $75 each. Harness, $8 to $250 per set. American and English Saddlery Goods.

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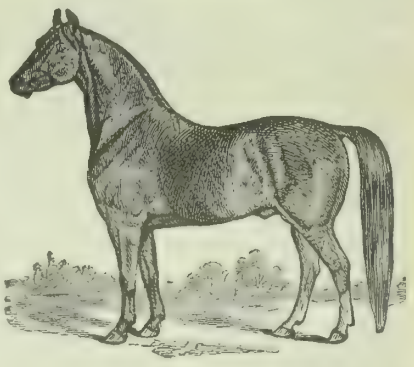
PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE. September 17-23	Olympia. Rain	Temp.	Wind.	Weather.	Portland. Rain	Temp.	Wind	Weather.	Eureka. Rain	Temp.	Wind	Weather.	Red Bluff. Rain	Temp.	Wind	Weather.	Sacramento. Rain	Temp	Wind	Weather.	S. Francisco. Rain	Temp	Wind	Weather.	Fresno. Rain	Temp	Wind	Weather.	Keeler. Rain	Temp	Wind	Weather.	Los Angeles. Rain	Temp	Wind	Weather.	San Diego. Rain	Temp	Wind	Weather.
W.	.02	48	W	Cy.	.00	62	N	Cy.	.00	50	SW	Cy.	.00	58	0	Cl.	.00	54	SE	Cl	00	54	W	Cl.	.00	56	W	Cl	.00	66	NE	Cl.	.00	64	E	Cy.	.00	66	SW	Cy
T.	.00	52	N	Cy.	.00	52	N	Cy.	....	....	....	....	.00	60	Nw	Cl	00	54	SE	Cl	.00	54	W	Cl.	.00	56	W	Cl	.00	60	E	Cl.	00	58	NE	Cy.	.10	64	Nw	Cy.
F.	.00	54	SW	Cy.	.00	52	SE	Cy.	.00	50	W	Fy.	.00	58	Nw	Cl	00	54	S	Cl.	00	56	S	Cy.	.00	66	Nw	Cl	....	....	....	....	00	62	N	Cl.	00	66	NE	Cl
S.	.00	44	SW	Fy.	.00	44	0	Fy.	....	....	....	....	.00	60	N	Cl.	.00	52	SW	Cl	00	54	W	Fy	...	....	....	....	.00	66	NE	Cl	.00	66	0	Cl.				
S.	.00	42	S	Fy.	.00	52	0	Cl.	00	48	SW	Fy.	.00	62	Nw	Cl	00	52	0	Cl	00	52	W	Fy	.00	62	Nw	Cl	....	....	....	....	00	66	0	Cl.	.00	66	0	Cl.
M.	....	....	....	....	.00	56	N	Cy.	.04	48	SE	Ry.	.00	66	Nw	Cl.	.00	56	S	Cl.	.00	54	W	Cy.	.00	64	Nw	Cl	....	....	....	....	.00	60	E	Cy.	.00	66	Nw	Cy.
T.	0	44	N	Cl.	.00	50	N	Cy.	....	....	....	....	.00	62	SE	Cl.	.00	66	SE	Cl.	00	60	W	Cl	.00	60	Nw	Cl.	....	....	....	....	T	62	S	Cy.	.00	66	0	Cy.
	.02	....	....	....	.00	....	....	....	.04	....	....	....	.00	....	....	....	.00	..	....	....	.00	....	....	....	.00	....	....	....	.00	....	....	....	.00	....	....	....	.10	....	....	....

EXPLANATION.—Cl. for clear; Cy, cloudy; Fr., fair; Cm., calm; — indicates too small to measure. Temperature, wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

SPECIAL AUCTION SALE
— OF —
High-Bred Standard Trotting Stallions,
Fillies and Brood Mares,
— BY DIRECTION OF —
WILFRED PAGE, ESQ., Cotate Ranch, Penn's Grove, Sonoma County,
— At 10 A. M. on —
THURSDAY, OCT. 17 and FRIDAY, OCT. 18
(During Meeting of Trotting Breeders' Association),
At FAIR GROUNDS, NAPA CITY.



The offering will consist of over 40 head. There are Stallions by Alexander 490, Le Grande 2868, Admont 5349, and Stallion Colts by Mortimer 5346 and Eclectic 11,321, standard sons of Electioneer. The Mares offered are by Elector, Arthurton, Mohawk Chief, Satellite, Alexander, Ethan Clay, Sportsmen, &c., &c. The Fillies are out of these Mares by Admont (son of Piedmont), Mortimer and Eclectic. The mares have been bred this year to these horses and are believed to be with foal. We have Mr. Page's assurance that every animal offered will be sold absolutely, without limit or reserve, thus placing the sale entirely in the hands of purchasers.

Catalogues are being prepared giving full description and pedigrees, together with details regarding each animal. They will be sent only on application.

KILLIP & CO., Live Stock Auctioneers,
22 MONTGOMERY STREET, SAN FRANCISCO.

JOINT AUCTION SALE
— OF —
STANDARD AND WELL-BRED

Trotting & Roadster Horses

— PROPERTY OF —
D. J. MURPHY OF SAN JOSE and HON. HARRY I. THORNTON OF SAN FRANCISCO.
— TO TAKE PLACE ON —
THURSDAY, OCTOBER 23, 1890, at 11 A. M., at SAN FRANCISCO.
(Location to be hereafter announced.)

The sale will comprise about 50 head of Stallions, Mares, Colts and Fillies. The get of Electioneer, Soudan, Alexander, Whipple's Hambletonian, Geo. M. Patchen Jr., Director and most of the Noted Stallions in the State will be represented. Catalogues will be issued in a few days, giving full description and pedigrees. Apply to

KILLIP & CO., Auctioneers,
22 MONTGOMERY STREET, SAN FRANCISCO.

TREES, PLANTS AND VINES
For the Season of 1890-91.

Having decided to re-establish the GENERAL NURSERY BUSINESS at Oakland, Cal., I have purchased the ENTIRE NURSERY STOCK grown by Mr. James Shinn at Niles, Cal., embracing a most complete assortment of unusually fine stock, grown without irrigation, that I am offering at reasonable prices.

All the Leading Varieties of APPLE, PEAR, CHERRY, PLUM, PRUNE, APRICOT, NECTARINE and ALMOND.

Fine Stock of ORANGES, LEMONS, OLIVES, NUT TREES and FIGS.

The Only Stock of PERSIAN WALNUTS (Kaghazi) on the Pacific Coast.

300,000 GRAPE VINES (Strong Roots). Small Fruits, Berry Bushes, Etc., Etc., in Large Quantities.

ORNAMENTAL and SHADE TREES, Roses, Standard Roses, Clematis, Trailing Vines, Plants, Etc., Etc., in Great Variety.

Packing Grounds at Niles, Cal., Unsurpassed Facilities for Shipping. Correspondence solicited.

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Business Office, 960 Broadway, OAKLAND, CAL.

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AUGUST 26th, 1890.
WINNERS OF FORTY FIRST PRIZES!
A MAGNIFICENT COLLECTION, NEVER BEFORE EQUALED!
380 Typical Percherons
Largely Brilliant Blood.
106 FRENCH COACHERS.
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Railway Employes in the United States and in England.

There have been many and varying estimates as to the number of persons employed in the railway service in the United States, and some of them have been very wide of the mark; Poor's Manual, for instance, in 1889 estimating the number at more than 936,000, or an average of six persons per mile. The census of 1880 made the average 4 8 men to the mile, and from an examination of the various State railroad reports and numerous company reports the *Railway Age* some years later came to the conclusion that the railway employes in this country average in number about five to the mile, an estimate which is pretty well supported by a table by the statistician of the Interstate Commerce Commission, just published, showing the number of employes by classes. From this it appears that the average at the date of report, June 30, 1889, was 4.59 per mile of road, and that the number of workers aggregated 704,743. To this estimate it is added that "the railway industry of the United States provides a living for 3,000,000 persons, or about one in 22 of the total population of the country," this of course not including railway stockholders, who in many cases obtain their support largely from the earnings of the roads.

The document quoted from proceeds to compare the number of employes on American and on English railways, showing a very much greater number of men to the mile on English roads than on ours; a fact which seems to furnish some presumptive evidence of the superior efficiency of American railway men, although the vastly greater traffic to the mile on English roads than on our own must be considered in making a just estimate. English railways in 1888 employed 346,426 men on 19,820 miles of railway, or 1748 men per 100 miles of lines; that is, nearly four times as many to the mile as on our roads. The fact that while with eight times as many miles of main line our railways employ only 2½ times as many engine-drivers as those of Great Britain is of itself an indication that the traffic of English lines is so much greater per mile than that of ours as to prevent satisfactory comparison from the data here given. The very rapid construction of railways in thinly settled portions of this country has reduced the average number of men employed per mile, but the tendency now is constantly toward an increase of the average working force as a result of the increase of traffic on new and old lines also, so that at the present time five men per mile of road is probably not far from a correct basis for estimate; and as the railway mileage of the United States is fully 164,000 miles, we may say that in round numbers the railway employes of the United States now aggregate about 800,000 persons.

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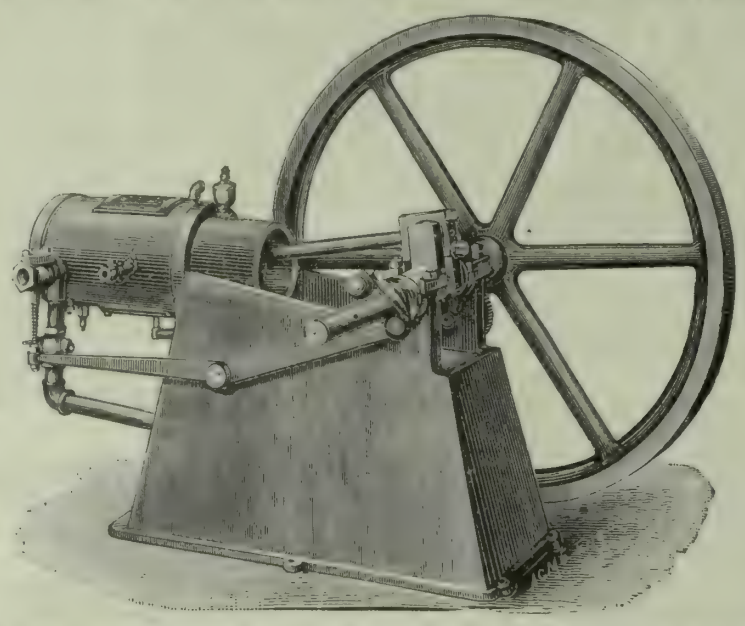
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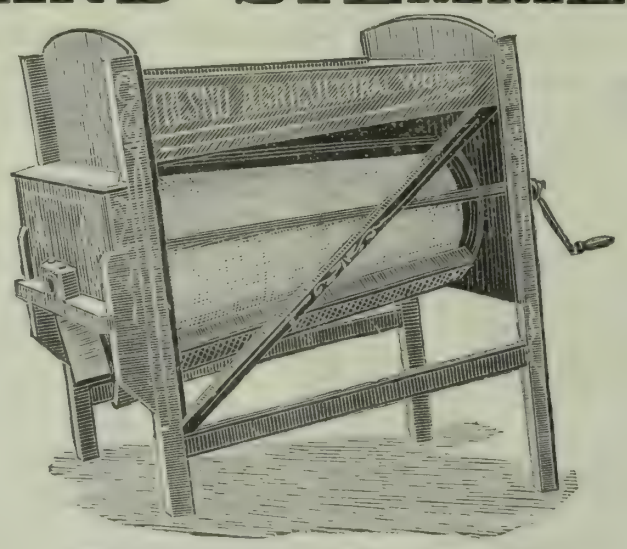
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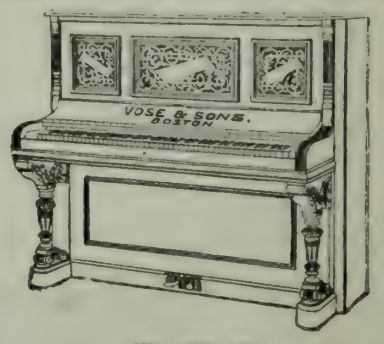
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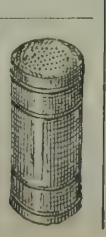
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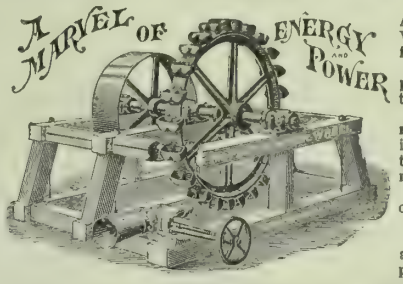
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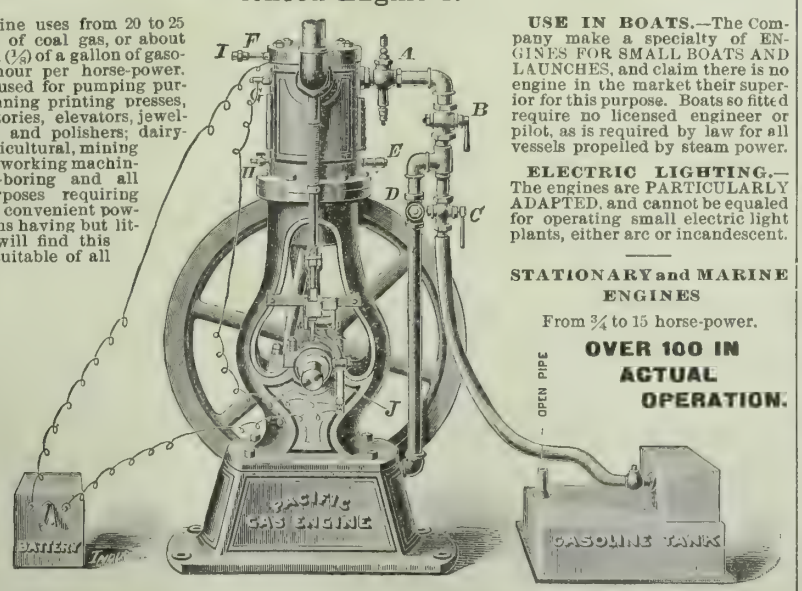
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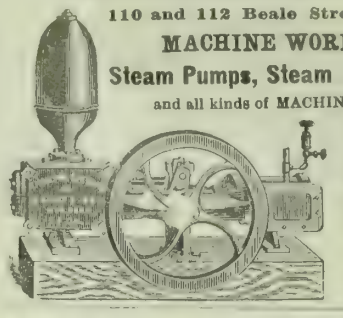
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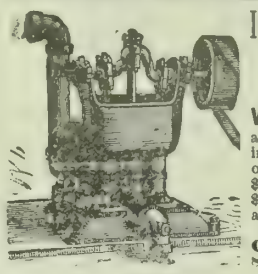
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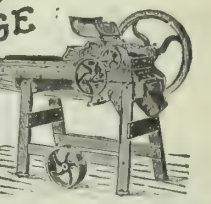
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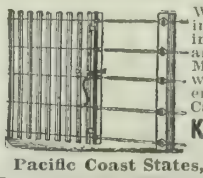
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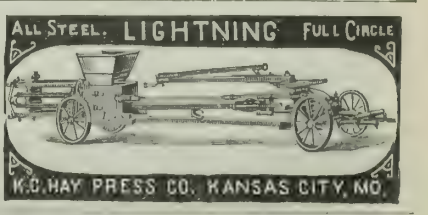
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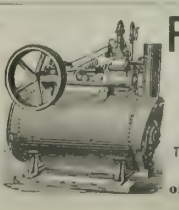
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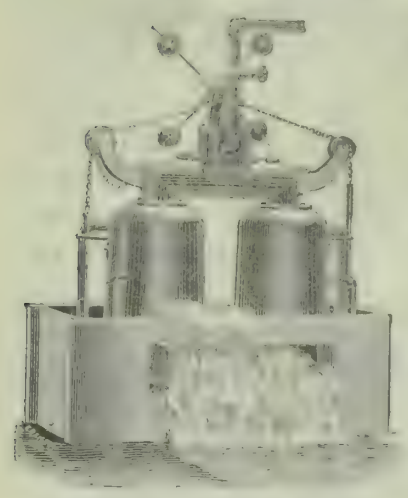
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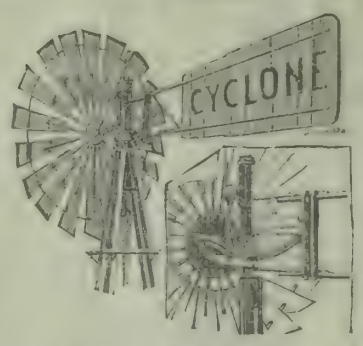
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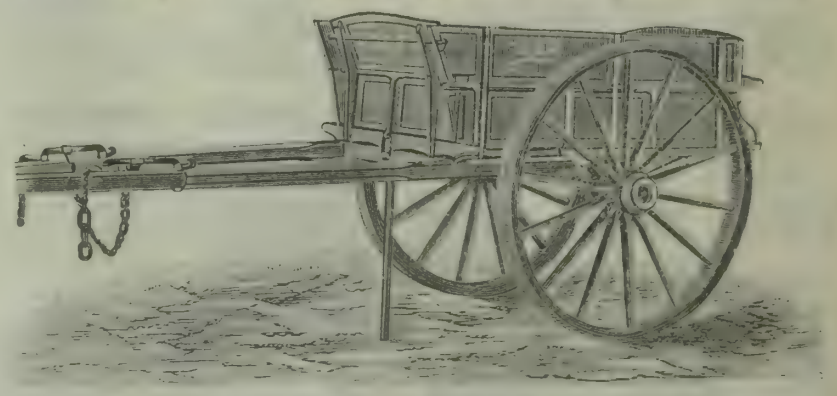


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PACIFIC RURAL PRESS

STATE GRANGE EDITION—TWENTY-SIX PAGES.

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Patrons and Trees.

To many of our readers the engraving on this page will suggest an appropriate connection or association involved. It represents two sections—a section of the National Grange, the grandest farmers' association in existence, and a section of a big tree, the grandest known specimen of vegetable growth. It is fitting, too, that these two sections should come together in California—a country of big things and proper appreciation of them. The connection of these two great bodies may suggest many telling periods to our orators and many stirring lines to our poets. The Grange progress in the United States may be likened to the growth of a tree, starting in both cases from small seed and proceeding, both with firm rootings and magnificent ærial extension, until one stands among our social and industrial organizations as the other does among our forest growths. There may be also a prophecy involved in the picture, for as the Grange section is composed of living active beings while the big tree section is but a hollow ruin, it does not need a seer to draw the conclusion that long after the big trees have fallen and gone to decay the Grange will be a power among mankind.

But the narrow columns on this page do not give room for oration, epic or prophecy. Each reader must construct these for himself from the suggestive material which the engraving affords. The most we can do under the circumstances is to drop gracefully down to facts. It will be remembered that the National Grange, after its formal session in Sacramento last November, swung around the circle of California town and country, receiving a cordial welcome everywhere. One of the towns visited was Visalia, and during the stay of the visitors there a section of a big tree which was on exhibition naturally attracted much attention. The ubiquitous camera man was on hand, and our engraving is a photoplate from a photograph taken by E. M. Davidson. The irregular circle on which some are standing, and beneath which others are grouped, is formed by sections of the bark of a sequoia, so taken off that they could be fitted together, thus showing the periphery of the giant of the forest in vertical position rather than horizontal. The photograph shows also some of the framework employed to sustain the great ring of bark. The strip of bark was about four feet in width, and judging by the hight of the men standing on the ground close to it, the tree from which it was taken must have been about 20 feet by 23 feet in its diameters. Of course there are much larger trees; one which has been prepared this year for exhibition at the Chicago World's Fair is reported to be almost 100 feet in circumference.

The picture presents recognizable portraits of many of the visiting and California Grangers, and the use of a magnifier will bring out the features of others so that they can be recognized by friends. The central figure of lofty stature under the arch is Worthy Master J. H. Brigham of the National Grange, and on his right is Past Worthy Master J. J. Woodman. Young America, from Connecticut and other States, appears as usual "on top." The picture it seems to us is suggestive in many ways and is therefore specially appropriate for this issue of the RURAL, which is largely devoted to the occasion of the assembling of California Patrons in annual session in Watsonville, of which full particulars are given on other pages.



NATIONAL GRANGE VISITORS IN SECTION OF BIG TREE AT VISALIA.

PREPARING FOR SNOW.—A new steam rotary snowplow has just arrived from the East and will be used on the railroad between Blue Canyon and Truckee. There are two of these rotaries on the C. P., two steam plows of another class and ten push plows. The cyclone snowplow has been put on the Shasta division.

CORRESPONDENCE

Correspondents are alone responsible for their opinions.

From Humboldt County.

NUMBER II.

EDITORS PRESS:—My last left us at Mr. F. H. McKee's place, at the junction of the coast route and Garberville wagon-roads.

Mr. McKee has a very productive orchard and vineyard which furnish a very excellent quality of fruit, and it may not be uninteresting that he never prunes nor cultivates his grapevines, his theory in defense of this seeming negligence being that the soil contains much moisture, and by allowing the vines to grow they absorb the excess of water and produce better grapes than if pruned. Mr. McKee says also that the better grapes grow near the ground. Almond trees grow finely here, but do not produce well every season, sometimes failing entirely, which may be due to isolation, as he has but few trees.

Leaving Mr. McKee's by the Garberville road, we wind our way "this way and that" up a well-kept and easy grade, passing numerous heaps of tanbark and through a forest of spruce, madrone and tanbark, which bears evidence of the bark man's industry by fallen and peeled timber, sled roads, etc., and one mile finds us at the summit of a ridge higher than the ridge beyond Mr. McKee's, over which we catch glimpses of "old ocean" and before us to the eastward and north and south of us we behold an "ocean of mountains," here covered by a heavy growth of spruce tanbark, madrone and laurel, with occasional bodies of redwood of greater or less extent. There the fine sheep ranges of Elk Ridge, Bear Buttes, Spruce Grove, Center Station, Belle Springs, Blue Rock and the Blocksburg section of country; beyond these the high mountain ranges of Trinity county and to the southeast the high ranges of Mendocino county—all apparently as wild and tenantless as though civilization had never set foot therein.

The Tanbark Industry

Here is fast assuming gigantic proportions. There is a very large area of tanbark forest extending far into Mendocino county. Only that portion adjacent to wagon-roads or shipping-points has been located, and thousands of acres of the best tanbark lands on earth are yet owned by "Uncle Sam." The tanbark of this coast is far superior to the product of any other country, and a large portion of these lands, after they are denuded of timber, cannot be excelled in the production of fruit. There is some excellent *unsurveyed* tanbark and redwood lands in Township 5 South, Range 4 East, Humboldt Meridian, and in Township 24 North, Range 17 West, Mount Diablo Meridian. These lands are partly in Humboldt and partly in Mendocino counties. Mr. James E. Weedman and Turner Bros. have some fine timber-lands adjoining the unsurveyed land, and Mr. Weedman's and Percy's orchards and vineyards bear testimony to the excellence of the land in the production of fruit. These lands are only nine miles (direct) from a shipping port at Bear Harbor. Several localities present great natural inducements for the construction of plants for the purpose of extracting the tannin from the bark, and I understand that a company proposes to construct one for that purpose near Briceland, 18 miles east of Shelter Cove.

From the summit of the range, near F. H. McKee's, we have a five-mile down-grade journey through a continuous body of tanbark, etc., to D. A. McKee's place in White Thorn valley at the junction of the White Thorn and Garberville and Shelter Cove roads. White Thorn valley is a succession of valleys, here on one side of the Upper Mattole river and there on the other, and is owned by D. A. McKee, Cruickshank Bros., C. B. James, Geo. Gibson and Michael Stienbaum. These gentlemen are extensively engaged in the tanbark business, and the farm land is especially noted for the production of excellent potatoes. Small grain and fruits do well.

We continue our journey via the Garberville road, and seven miles more of heavily timbered country finds us at Briceland, where we find a store and postoffice, hotel, feed-stable (by Briceland & Wood) and quite an area of open range owned by J. C. Briceland, T. B. L. Sieur, T. B. Marshall, Ferdinand Grothe and others. Mr. Grothe and Mr. Briceland are engaged principally in wool-growing; others turn their attention to hogs and cattle. Here we find fat hogs all the year round without being fed. During the winter season hogs are killed from the range and converted into excellent bacon, being fatted on acorns. Mr. Grothe has the only vineyard here and ships grapes via stage to the Mendocino coast.

Leaving Briceland and the wagon-road, we mount our mustang and spend a few days to the northward with the sheep ranchers of Elk Ridge and Bear Buttes, who produce some of the best wools afforded by California producers. We spend a very pleasant evening with J. W. Hill, just under the brow of the Buttes, from whose door is afforded a view of the surrounding country to the westward, the north and south, covering an area of perhaps 1000 square miles of as picturesque and wild scenery as the country affords.

From there we pass through one of the very best ranges in the county, belonging to Mr. Jos. Smithenbank, whose farm, orchard and vineyard adjoining on the west bank of the South Fork of Eel river cannot be excelled for productiveness in this portion of the county. Nightfall finds us in Garberville, situated on a plateau on the east bank of the South Fork and in the midst of extensive sheep ranges, and a section of country which cannot be excelled in fruit production or in the production of small grain. There are several fine farms in this vicinity, some on the west side of the river and some on the east side.

The town has about 100 inhabitants, has two general merchandise stores, two hotels, two stables, two saloons, one blacksmith shop and one variety and confectionery store.

Briceland, Cal., Sept. 17, 1890. T. B. L.

Minnesota State Fair.

[From Our Special Representative.]

The annual exhibition of Minnesota products was opened to the public Sept. 8th and continued throughout the week. The grounds are advantageously located at Hamline, midway between the twin cities, Minneapolis and St. Paul, and the arrangements are such as to invite exhibitors from all over the United States. In the live-stock department, many of the most extensive and prominent studs and herds were well represented. Messrs. Springer & Willard of Oskaloosa, Iowa, made a very fine showing of French draft horses and were fortunate in carrying off a goodly number of first prizes. This firm is one of the largest importers of French draft horses in the United States, and they have gained a wide reputation for fair and liberal dealing with their patrons. They now can show as fine a lot as one would wish to see. Mr. Springer has recently returned with a large, as well as a select, importation. From personal acquaintance, we can assure RURAL PRESS readers that, should they require anything in French draft or coach horses, Messrs. Springer & Willard will cheerfully give any information wanted and will royally entertain any one desiring to inspect their establishment.

The importing firm of Wm. M. Field & Bro., Cedar Falls, Iowa, was represented by a superb lot of English Shires and Cleveland Bays. Messrs. Field never lack in prizes when in the show-yard, and they have won many first ribbons already this season. They are showing an unusually fine lot this year.

Mr. N. P. Clarke, St. Cloud, Minn, made a fine showing of Clydesdales, as well as a good show of the reds and roans.

All the various breeds of both beef and dairy cattle were well represented. The implement dealers were out in full force, and the agricultural hall was virtually filled with the fruits of the land.

The dairy hall was something truly marvelous. Besides the fine display of goods, almost every modern invention was in order for operation—the De Laval separator; the U. S. butter-extracting machine, into which the warm milk is poured, and in a short time the butter is extracted and ready for the worker. In all, this was one of the best displays of dairy goods and products that I have ever seen.

In the poultry department, Messrs. Warner, Fero & Co. made a very creditable showing of nearly a carload of all the leading varieties. These gentlemen own Clover Valley Poultry Farm, Whitewater, Wis.

A vast deal of practical information was gained by those who attended the "Farmers' Institute's" meetings. Lectures were delivered upon timely topics by specialists, and the sessions were indeed a school for the general farmer. L. C. B.

From Sierra Valley.

EDITORS PRESS:—If there is any suggestiveness in the haze which pervades our mountain world these many days, it would seem to indicate quiet and restfulness; but such is not the state of farm-life with us. Yet notwithstanding the unusual activity and bustle of our late harvest season, we cannot do other than recognize the softened beauty of the landscape. We no longer see the sharp angles and hard outlines of objects; the haziness of the air permeates everything to the farthest line of our vision. The golden stacks are piled higher and higher with the days; mountain and meadow assume new tints "from the misty kindness that dwells in the magic air." We find ourselves thinking of winter bouquets, of the bright berries of the wild rose and Virginia creeper. The fruit is fast ripening on the trees, for this is one of the years when even this valley, perched high in the Sierras, finds her few orchards well laden. Some of our door-yard plants and mountain shrubs are taking on bright colorings, reminding us that "leaves would be counted flowers if earth had none."

It seems right and proper that our lives should have both a practical and an ideal side; that while we are working (and worrying, if needs must be,) we should see the delicate tints and bright colorings around us. The practical side of our natures make us in great haste to be ready for thrashing and marketing our grain before another Alpine winter is upon us; but the artistic in Nature makes us conscious in the midst of our work, and plannings and depression, of the landscape beauties around us, and it is right that we should take note of these things; yes, and make mention of them, too, in the same breath in which we speak of the outlook for crops. There are a good many things in life which it is well to sandwich in together besides bread and boiled ham.

As for the matter of the outlook in Sierra valley, our grain will not be equal to that of average years. A heavy hailstorm occurring about a month ago, injured the grain on some ranches exceedingly, while in others the late-sown grain suffered serious injury from unusual summer frosts, much of that sown in some cases having to be cut for hay, while the lack of summer showers has been a serious drawback to our grain crop. Fine crops of hay are usually the result of our heavy winters, but the great snowfall of the winter months is almost invariably followed by a scarcity of summer showers and a light yield of grain.

The hay crop this season was remarkably fine on most ranches, as well-filled barns and many large stacks testify. The covering of the latter will make a good home market for common lumber, which market has been greatly reduced lately, owing to the extensive use of barbed wire in fencing.

The Fairs

In this section are attracting the usual crowds, while Plumas Grange Fair, which will take place Oct. 1st, 2d and 3d, causes the Patrons of Husbandry in this part of Sierra valley to feel more than usual interest in its success—it being the only fair in all this region in which horse-racing is not the principal feature. A successful fair continued from year to year, or every succeeding year, for so long a period and in so small a village as Beckwith, in the midst of so thinly settled a community, is something we, as a Grange, may well be proud of. Only twice in all these years since our fair started has it been held elsewhere than at Beckwith. On those two occasions, Plumas Grange, out of courtesy, gave way to Sierra Valley Grange, and the fair was held at Sierraville; but the entire interest there seemed to center on horse-racing, and the name of agricultural fair was a misnomer. MARY P. ARMS.

Beckwith, Cal., Sept 24, 1890.

HORTICULTURE.

Remove the Labels.

EDITORS PRESS:—In Prof. Wickson's treatise on "California Fruits and How to Grow Them" (a book, by the way, that every California orchardist ought to possess and study and profit by), on page 145 he cautions the fruit-grower, when setting out a young orchard, not to use labels attached to the trees by a wire. I read the paragraph, but when setting out a small assorted fruit orchard this spring neglected to profit by it. Small credit to me. I left such labels on the trees, but left the wires—as I thought—loose enough to accommodate two years' growth. Then after the trees began to leaf out, the foliage hid the labels from view, and the result proved the truth of the old adage, "Out of sight, out of mind." Though all through the summer I have been working around the trees and with them, time and time again, I never noticed the concealed labels and of course never thought of them. To-day, however, my attention was accidentally called to one when I found the wire completely bedded in the bark which had grown over it. On examination I found this the case with most of the trees, so much greater had been their growth than I supposed it would be.

In one or two cases the tree was *more than half* cut through. The consequences I have yet to learn, but it seems certain that the growth would have been much greater if I had not been gradually strangling the trees.

So from my experience as a beginner I can surely offer the safe advice, *Don't label your trees at all*, but make such a map or chart as Prof. Wickson recommends and describes on page 145 of the book referred to. Don't even leave the labels on an hour with the intention of removing them later (as was my intention), or you will probably make the same serious blunder that I made. MIRAMONTE.

Miramonte, Kern Co.

Mr. Denicke's Figs Again.

EDITORS PRESS:—I read your opinion in your issue of September 6th concerning my sulphured figs with great pleasure. Now you will see my reason for not sulphuring my figs in 1888–9 nor 1890. Sulphur detracts flavor from *anybody's* fruit, unless used to a *very slight* degree, and *no sulphur at all* is still better *unless* fruit is to be prepared for the sake of its light color only.

I send you two more drums. Will you also do me the great favor to give me your opinion on them in your next issue? M. DENICKE.

Fresno.

[We find both these samples better flavored than the one of which we complained in our issue of September 6th. We must, however, do better than either of these to compete with the imported Smyrna fig. The lighter-colored sample (of the two mentioned by Mr. Denicke) is too tough in the skin and too hard in the pulp to be pleasant eating, and the dark-colored sample, although softer and more readily masticated, has a heavy sweetness or syrupy character which obscures the characteristic fig flavor. How much of this is due to variety or locality or to method of preparation, we cannot say. To compete with the best imported we must have a tender fruit with delightful flavor and with a delicate sweetness which does not cloy the taste. Who will produce such?—EDS. PRESS.]

EASTERN STRAWBERRY GROWING.—We have received from A. I. Root, Medina, Ohio, a copy of his neat 150 page publication in pliable covers entitled "A B C of Strawberry Culture." The little treatise is written by T. B. Terry and A. I. Root and is well illustrated. It gives a most interesting account of strawberry growing on large and small scale, with the smallest details of practice. It gives, of course, Eastern practice and will not serve as a direct guide for California practice, but its methods are suggestive and many of them can be readily adapted to our conditions. Every strawberry grower will read it from end to end with much interest.

FRUIT PRESERVATION.

Sulphuring Fruit a Mistake

EDITORS PRESS:—A recent number of the PACIFIC RURAL PRESS kindly sent me, shows how general is the sulphuring of even most of the sun-dried fruits of California. The practice at the East has been like some diseases, "catching," but here only with the evaporator men, and it is now hoped that investigation and good sense have already prepared the way for a reaction of public sentiment. So our Pacific Slope friends had better go slow in trying to please us at the East by practically spoiling if not in actually poisoning what would otherwise prove such a blessing to California and the world, its varied and abundant fruits, and which in that climate can be so easily dried.

I think I was the first or among the first to object through the press to the bleaching of fruit, as "sulphuring" was first called; the use of such fruit in the family convincing us that at least the natural fruit flavor was thereby seriously impaired, and also probably its food value. Neither could the difference between that from good and inferior fruit be distinguished as it could be with unsulphured fruit.

At that time it was not known that all evaporated fruits dried on zinc-covered trays, as most of it was, were poisonous, owing to the presence of sulphate of zinc, white vitriol, though I then strongly suspected the presence of some injurious substance by the lack of flavor and the instinctive aversion to dried fruits which soon took place with many intelligent consumers of bleached fruits. Since that experience I have persistently though rather ineffectually opposed the sulphuring craze and all other sophistications of fruit for foods as the true and only safe course for the people.

Fruit can be sulphured without zinc-poisoning. I hope California evaporators do not use zinc trays to hold the fruit, but is not even sulphuring objectionable by the loss of flavor? If it keeps insects away, as it does to some extent, so would the addition of a minute quantity of most poisons and even other objectionable substances. Wholesome fruit is what is wanted. It is far safer and better to go back to natural-colored and honestly prepared fruit. That will doubtless be the verdict of all intelligent people who prefer health and safety to looks. Any other course will be a permanent injury to the fruit interest.

The yellowish-brown color of fruit dried in the sun or by artificial heat is no objection. It is rather an evidence of ripeness, good quality and honest drying. The color is lighter when dried rapidly. High temperature, at least for a time at the finish of drying, tends to prevent fermentation. Sun-dried fruit so treated, if at once closely packed or excluded from the air, will keep well for years in most climates, as known by experience and observation.

When sulphured fruits sell for 20 to 50 per cent higher prices than other fruit, it is a strong temptation to do it. A lie may travel its thousand miles while Truth is putting on her boots, but this is an age of enlightenment. Public health associations are numerous and increasing in numbers and influence. The tampering with any article of food will be more strictly dealt with in future by National and State legislation.

In some climates fruits are best dried rapidly in evaporators. This may not be so in California atmosphere, but the fruit interest should be encouraged and guarded as one of the great interests of that great State. To do that on a permanent basis, all tricks of trade and temporary yielding to dangerous fashions, like sulphuring fruits, must be avoided.

JOEL W. SMITH, M. D.

Charles City, Iowa.

POPULATION OF CHINA.—Recent very trustworthy calculations of the population of the Chinese Empire by Russian authorities reckon it at 382 000,000, and the annual increase at 4,000,000. Not one in 10,000 ever heard of the religion of Jesus Christ.

Entomological

The Hop Louse of Oregon.

F. L. Washburn, Entomologist of the Oregon Experiment Station, furnishes the following important statement:

It is a fact beyond dispute that the hop louse, the genuine *Phorodon*, is present in some parts of Oregon. With figures of *Phorodon humuli* before one and a strong pocket lens, or, better still, a dissecting microscope, a careful observer can and will decide for himself that the insect which is now injuring the hop crop in parts of Lane county is *not* any one of the different aphidæ, or green plant lice, found on apple, plum, etc. As further proof of its presence, Stephen Smeed, himself a careful observer and a man who has worked here and in England among hops for nearly 60 years, declares it identical in appearance and work with the hop louse. Mr. Hubbard, a prominent hop-buyer and a former grower of hops in the East, says: "No man who has seen the insect in the East can deny its presence here. I recognized it at once."

The question which now arises is: How shall we combat this pest, which seriously threatens one of the leading industries of Lane, Marion, Polk, Linn and other counties, and the revenue from which amounts yearly in Lane county alone to nearly $500,000?

In connection with this fact it is interesting to review the results of some work done by Prof. C. V. Riley, United States Entomologist. I will briefly describe the life history of *Phorodon humuli*, published by him as the result of work done a few years since, and then respectfully summarize a few observed facts in Lane county, which apparently, to some extent, though they may not wholly, contradict his statement.

Prof. Riley's Account of Life History.

In the late autumn, the glossy small eggs of *Phorodon humuli* are found attached to terminal twigs and round buds in protected crevices of different varieties of prunus, both wild and cultivated. They remain in these branches during the winter and in the spring hatch, producing what is called the "stem mother." This generation produces three generations on prunus, the third being winged and flying to neighboring hop plants. A number of generations are produced on the hop until early autumn, when winged females are again produced and fly back to the plum or other species of prunus. These are soon followed by winged males, which invariably leave the hop plant after the female, and the fertilized eggs are again deposited on the trees of the genus prunus.

This being the case, according to his observations, Prof. Riley recommends the destruction, by burning or otherwise, of all the hop plants immediately after the hops are gathered, thus killing males and a large per cent of the females before migration to plum. (This, by the way, will be an excellent measure here in Oregon, wherever the insect may pass the winter.—F. L. W.)

Prof. Riley advises the spraying of the dormant cultivated species of prunus with strong caustic washes to kill the egg, and also counsels the killing of all wild plum trees in the vicinity of the hop yards. And further to carefully guard against the introduction of eggs on prune or plum scions.

An Apparently Different State of Affairs in Oregon.

Mr. Smeed's hopyard was most carefully examined, and it was found in very many instances that hop plants immediately adjoining plum and prune trees were not touched, while across the yard, and separated from these trees by many intervening untouched hop plants, the hops were badly infected. Now, if there were a migration from the plums, why did not the nearest hops receive the unwelcome guests? These plants were the same size and age and variety as those farther away. Mr. Smeed says, and he is a very careful observer, that he has never seen the insect on the prunes and plums, though he is among these trees almost daily.

What Is to Be Done?

In England, spraying the hop plants with a mixture of strong soapsuds and tobacco-water in summer is resorted to. Another season, in extreme cases it may be well to adopt that measure here. But what is better, let every hop grower make an entomologist of himself during the coming winter, and examine his hopyard and its surroundings most carefully for the eggs of the insects. These once found, it will not be a difficult matter and far less trouble than summer spraying to kill the same by some strong caustic wash or similar means. Let no man interested leave a stone unturned to solve what appears to be, in this State, an unsolved riddle. Call upon a professional entomologist and upon each other for assistance and co-operation, and before next spring be able to take intelligent action.

Identification of the Pest, Its Work, Etc.

The insect is about one-twenty-fifth of an inch long, and its characteristics too small to be seen with the naked eye. With a good lens it is found that they are yellowish-green, with somewhat elongated body (while the apple louse, *Aphis mali*, has a dumpy body). Each of the long antennæ, or "horns," projecting from the front of the head has a prominent bulging joint at its base, and between these two "horns," antennæ or "feelers," projecting from the head and pointing forward are two short prominences. These two prominences or horns between the antennæ are very characteristic, and not seen upon the green louse of the apple. Further, in Phorodon the honey tubes (two horns growing from the posterior part of the back and pointing upward and backward) in most specimens, but not in all, are seen to incline toward each other somewhat.

Lastly, the biblical adage, "By their works shall ye know them," is peculiarly exemplified here. As one stands at or near the end of a row of hops and looks down the line, a plant which looks dark and blighted, or that has an unnatural shimmer or shine on its leaves, merits a closer examination, for the shimmer is caused by the exudation of "honey dew" caused by the attack of hundreds of hop lice, and on the under side of these leaves are found hosts of little green lice sucking away the life-blood of the plant.

General Observations.

One female louse will produce an average of three young a day during the summer. These young at this season are all females, and they, in their turn, begin to reproduce parthenogenitically during the summer when they are about eight days old, and their young do the same. There are several such generations during the summer, so that the progeny from one female during the season will reach the trillions and will work tremendous havoc in a hop-field.

Mr. Hubbard says: "You are always more apt to find the lice in hop-fields which are shut in by woods, where the bright sun and purifying breeze are not allowed sufficient play. Clear away the surrounding wood, let the sun and breeze in, keep the yard clean; and the lice will grow wonderfully less."

The hop louse does not readily migrate from one yard to another.

The early English variety, Mr. Smeed says he finds exempt from their attacks, but of course the market for that early variety is limited.

Mr. S. used a row of willows last season for a windbreak. Where there were gaps in the willows he placed hop poles close together to make the windbreak complete. He subsequently found that the hops next the willows became badly infested, while those next the poles were untouched. He therefore intends this winter to examine neighboring willows carefully for the eggs.

In pruning hopvines this season, after the crop is gathered, it would be well to cut the vines as close to the ground as can be done with safety, thus insuring the killing of more of the lice. A very close observer of insects suggests the use of smudges in the yard on still summer nights. Sawdust and straw impregnated with a mixture of coal-tar and sulphur, and placed in small bushel heaps through the yard, will fill the yard so full of heavy smoke, he thinks, that very many of the insects will perish.

Do not try to make hop-buyers believe you have not got the louse, when you are convinced that you have. Finally, the entomological department of the experiment station will do all in its power in the matter; it must of necessity have the co-operation of the hop-growers. As was said above, the place of hibernation of the Oregon hop louse once found, that is, the place where the winter eggs are laid, we have a most powerful handle by which we can lessen its numbers.

I shall be glad to receive the addresses of hop-growers in this State and in Washington, that any new and advantageous discoveries may be communicated to them. But I also want all intelligent hop-growers to observe and experiment for themselves.

F. L. Washburn,
Entomologist State Experiment Station, Corvallis, Ogn.

The Musical Sense in Animals. — The higher animals can also enjoy themselves, as my house cat shows when she comes at the playing of the piano to sit by the player and sometimes jumps into her lap or on the keyboard of the instrument. I know of a dog, too, in a family in Berlin, which comes in like manner when there is music, often from distant rooms, opening the doors with his paw. I knew of another dog, usually thoroughly domestic, which occasionally played the vagabond for love of music. Whenever the semi-annual mass was celebrated in the city he could not be kept at the house. As soon as the so-called Bergknappen, which was accustomed to play at this time in the streets, appeared, he would run away and follow them from morning till evening. Evidently neither cats nor dogs, nor other animals that listen to human music, were constituted for the appreciation of it, for it is not of the slightest use to them in the struggle for existence. Moreover, they and their organs of hearing were much older than man and his music. Their power of appreciating music is, therefore, an uncontemplated side faculty of a hearing apparatus which has become on other grounds what we find it to be. So it is, I believe, with man. He has not acquired his musical hearing as such, but has received a highly developed organ of hearing by a process of selection, because it was necessary to him in the selective process, and this organ of hearing happens also to be adapted to listening to music.—*Popular Science Monthly.*

Agricultural Science.

Additional Funds for Agricultural Colleges.

President Harrison has approved the following measure, which *Farm and Home* prints verbatim from an official copy. It will be observed that the first appropriation of $15,000 is in the nature of back pay, for the year ended June 30, 1890, while the $16,000 due for the year ending June 30, 1891, is also now due. Thus each agricultural college will receive $31,000 from this source this fall. But unless the Legislature is in session to assent to the Act and prescribe as to what institution the money shall be paid, the Governor has that power. Sec. 3 provides that this money shall be used only for additional instruction in agriculture and the mechanic arts, etc., and shall not be spent for buildings or repairs. It is also to be noted that Section 4 provides a further safeguard for the proper use of this generous appropriation. But the fact remains that the first two appropriations, amounting to $31,000, will in very many of our States and Territories be payable to such institutions as are designated by the Governor of each State.

A bill (S. 3714) to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts established under the provisions of an Act of Congress approved July 2, 1862.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be, and hereby is, annually appropriated out of any money in the treasury not otherwise appropriated, arising from the sale of public lands, to be paid as hereinafter provided, to each State and Territory for the more complete endowment and maintenance of colleges for the benefit of agriculture and the mechanic arts now established, or which may be hereafter established, in accordance with an Act of Congress approved July 2, 1862, the sum of $15,000 for the year ending June 30, 1890, and an annual increase of the amount of such appropriation thereafter for ten years by an additional sum of $1000 over the preceding year, and the annual amount to be paid thereafter to each State and Territory shall be $25,000, to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction.

Provided, That no money shall be paid out under this Act to any State or Territory for the support and maintenance of a college where a distinction of race or color is made in the admission of students, but the establishment and maintenance of such colleges separately for white and colored students shall be held to be a compliance with the provisions of this Act if the funds received in such State or Territory be equitably divided as hereinafter set forth.

Provided, That in any State in which there has been one college established in pursuance of the Act of July 2, 1862, and also in which an educational institution of like character has been established, or may be hereafter established, and is now aided by such State from its own revenue, for the education of colored students in agriculture and the mechanic arts, however named or styled, or whether or not it has received money heretofore under the Act to which this Act is an amendment, the Legislature of such State may propose and report to the Secretary of the Interior a just and equitable division of the fund to be received under this Act between one college for white students and one institution for colored students established as aforesaid, which shall be divided into two parts and paid accordingly, and thereupon such institution for colored students shall be entitled to the benefits of this Act and subject to its provisions as much as it would have been if it had been included under the Act of 1862, and the fulfillment of the foregoing provisions shall be taken as a compliance with the provision in reference to separate colleges for white and colored students.

Sec. 2. That the sums hereby appropriated to the States and Territories for the further endowment and support of colleges shall be annually paid on or before the 31st day of July of each year, by the Secretary of the Treasury, upon the warrant of the Secretary of the Interior, out of the treasury of the United States, to the State or Territorial treasurer, or to such officer as shall be designated by the laws of such State or Territory to receive the same, who shall, upon the order of the trustees of the college or the institution for colored students, immediately pay over said sums to the treasurers of the respective colleges or other institutions entitled to receive the same, and such treasurers shall be required to report to the Secretary of Agriculture and to the Secretary of the Interior, on or before the 1st day of September of each year, a detailed statement of the amount so received and of its disbursement. The grants of moneys authorized by this Act are made subject to the legislative assent of the several States and Territories to the purpose of said grants: *Provided*, That payments of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of the Legislature meeting next after the passage of this Act shall be made upon the assent of the Governor thereof duly certified to the Secretary of the Treasury.

Sec. 3. That if any portion of the moneys received by the designated officer of the State or Territory for the further and more complete endowment, support and maintenance of colleges or of institutions for colored students, as provided in this Act, shall, by any action or contingency, be diminished or lost, or be misapplied, it shall be replaced by the State or Territory to which it belongs, and until so replaced no subsequent appropriation shall be apportioned or paid to such State or Territory; and no portion of said moneys shall be applied directly or indirectly, under any pretense whatever, to the purchase, erection, preservation, or repair of any building or buildings. An annual report by the President of each of said colleges shall be made to the Secretary of Agriculture, as well as to the Secretary of the Interior, regarding the condition and progress of each college, including statistical information in relation to its receipts and expenditures, its library, the number of its students and professors, and also as to any improvements and experiments made under the direction of any experiment stations attached to said colleges, with their cost and results, and such other industrial and economical statistics as may be regarded as useful, one copy of which shall be transmitted by mail free to all other colleges further endowed under this Act.

Sec. 4. That on or before the 1st day of July in each year after the passage of this Act, the Secretary of the Interior shall ascertain and certify to the Secretary of the Treasury as to each State and Territory whether it is entitled to receive its share of the annual appropriation for colleges, or of institutions for colored students, under this Act, and the amount which thereupon each is entitled, respectively, to receive. If the Secretary of the Interior shall withhold a certificate from any State or Territory of its appropriation the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in the treasury until the close of the next Congress, in order that the State or Territory may, if it should so desire, appeal to Congress from the determination of the Secretary of the Interior. If the next Congress shall not direct such sum to be paid, it shall be covered into the treasury. And the Secretary of the Interior is hereby charged with the proper administration of this law.

Sec. 5. That the Secretary of the Interior shall annually report to Congress the disbursements which have been made in all the States and Territories and also whether the appropriation of any State or Territory has been withheld, and if so the reasons therefor.

Sec. 6. Congress may at any time amend, suspend or repeal any or all of the provisions of this Act.

The Irrigator.

Canals Crossing Public Lands.

Legislation to facilitate construction of irrigation ditches or canals in regions where the territory includes Government lands is now in progress at Washington. Following is the text of the bill passed by the Senate Sept. 17:

Section 1. The right of way through the public lands of the United States is hereby granted to any canal or ditch company formed for the purpose of irrigation, duly organized under the laws of any State or Territory, which shall have filed with the Secretary of the Interior a copy of its articles of incorporation and due proofs of its organization under the same, to the extent of the ground occupied by the water of the canal and its laterals and fifty feet on each side of the original limits thereof; also the right to take from public lands adjacent to the line of the canal or ditch the material consisting of earth and stone necessary for the construction of such canal or ditch.

Sec. 2. Any canal or ditch company desiring to secure the benefits of this Act shall, within twelve months after the location of ten miles of its canal, if the same be upon surveyed lands, and if upon unsurveyed land within twelve months after the survey thereof by the United States, file with the Register of the Land Office for the district where such land is located a map of its canal or ditch, and upon approval thereof by the Secretary of the Interior, the same shall be noted on the plats in said office, and thereafter all such lands over which such right of way shall pass shall be disposed of subject to such right of way. Whenever any person or corporation, in the construction of any canal or ditch, injures or damages the possession of any settler on the public domain, the party committing such injury or damage shall be liable to the party injured for such injury or damage.

Sec. 3. The provisions of this Act shall apply to all canals and ditches heretofore or hereafter constructed, whether constructed by corporations, individuals or association of individuals, on the filing of the certificates and maps herein provided for. If such ditch or canal has been or shall be constructed by an individual or association of individuals, it shall be sufficient for such individual or association of individuals to file with the Secretary of the Interior, and Register of the Land Office where said land is located, a map of the line of such canal or ditch, as in the case of a corporation, with the name of the individual owner or owners thereof, together with the articles of association if any there be. Places heretofore filed upon shall have the benefit of this Act from the date of their filing, as though filing after it, provided that if any section of said canal shall be completed within five years after the location of said section, the rights herein granted shall be forfeited as to any uncompleted section of said canal or ditch to the extent that the same is not completed at the date of forfeiture.

Sec. 4. Nothing in this Act shall authorize such canal or ditch company to occupy such right of way except for the purpose of said canal or ditch, and then only so far as may be necessary for the construction and maintenance of such canal or ditch.

The Eyes of Insects are immovable, and many of them seem cut into a multitude of facets, like the facets of a diamond. Each of these facets is supposed to possess the powers of a true eye. Lenentœok counted 3181 of them in the cornea of a beetle, and over 8000 in that of a common horsefly.

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

How to Secure Desirable Legislation.

Let us talk as we may against combinations, they frame our laws, control our institutions, nominate and elect our rulers, and govern our country. It is the organized few who sway the unorganized many, and the lion, knowing not his strength, is bound with a thread. When forbearance ceases to be a virtue, or oppression to be endurable, he throws off the yoke, asserts his power, and often, like Samson, pulls the house down over his own head, and through his inconsiderate rashness is placed upon losing ground to be again bound as unfit to be at large. Mushroom reforms, like flashy resolutions, treading as they do on the toes of many good people and noble institutions, are of short duration. True, extraordinary evils sometimes require special efforts, but without organization the remedy is unstable and fleeting. The people are the source of power in our Republic, but, contrary to Nature's laws, the political streams rise above their sources and impart to us food, drink and raiment at their will, absolutely controlling the springs of life and hope.

Apathy and inattention to public duties on the part of the great middle classes throughout the land have resulted in the enormous demands of the tax-collector and unnumbered other abuses; to inquire into and if possible to correct the evil the people are organizing and consulting together as Patrons of Husbandry, as Farmers' Alliances, as Federated Trades, as labor organizations under various names, all seeking redress for grievances, real or imaginary. How shall our numbers and resolutions be made effective? is the question of the hour. Who will lead so as to insure a following? and who will follow the leaders until our wrongs are redressed? The first movement should be on the next Legislature. No man should be placed there who is not a tax-payer, and all should be pledged to economy and reform. Candidates before election should be asked, "Will you, if elected, combine with the advocates of retrenchment?"

After elections, the successful ones, who are known to be true, should be invited to a conference with other members on the assembling of the Legislature, and these should organize themselves into a "Committee on Retrenchment," or a "Taxpayers' Delegation," but no matter by what name so their objects were the same and they stood by each other until those objects were attained.

To accomplish great good a majority is not necessary—a well-organized minority can nearly always control legislation; a few even in a close compact *may*, and often do, hold the balance of power, and can thus defeat bad laws if they cannot enact good ones. Political issues and questions must be eschewed by such a body because of our love for political freedom and our dislike to dictation. But on all economic questions we may and ought to unite, and being united, present a solid front on all good and friendly legislation, as well as to put down all dangerous and doubtful measures.

The honest and reliable element is always in the Legislature in numbers to be effective were it organized; but going there unorganized and unacquainted, it awaits the orders of the schemers and plotters. They must come together, talk together, reason together, plan together, stand together, and then act together. Such a body, composed only of 10, 20 or 30, would be courted for their votes and influence, and could secure wholesome and friendly legislation for honorable concessions to other interests, which (deny or decry it as we may) remains the moving cause of legislative progress. It is through such representatives that we must act as well as resolve. They must be assisted by advice and counsel; they are nearly always too busy to confer with each other without the aid of third parties. It is for this reason that we hear of the third house and its influence, which is often more potent than are the chief bodies.

Where shall the aid come from? is a question for us to consider. It may come from the Patrons of Husbandry, the Farmers' Alliance, the Knights of Labor, or other Orders; it *ought* to come from all combined, as all are heading in the same direction. Each should have a committee present, or all should unite in one grand movement toward a common object, when success would crown their efforts beyond a doubt.

The plan here outlined is but the method adopted by other interests seeking favors at the hands of legislators, and serves to point the way how to influence legislation for the public good. Above all, let this caution be observed. Let us be temperate in eating, drinking and language. Demanding ultra measures through intemperate zeal and speech, we lose the respect we require and the measures we wish to promote. Good intentions are often destroyed by injurious amendments; so intemperate zeal drives away support. Let us take the little with thanks, and a little more the next time with a bow. We must be welcome to call on those in authority, be welcome to depart, and welcome to return.

It is by deserving consideration that we get it, by granting favors that we are given concessions. Thus equipped, we may in reason and confidence request and receive all the consideration and favors that we have a right to, consistently with the rights of others. G. O.

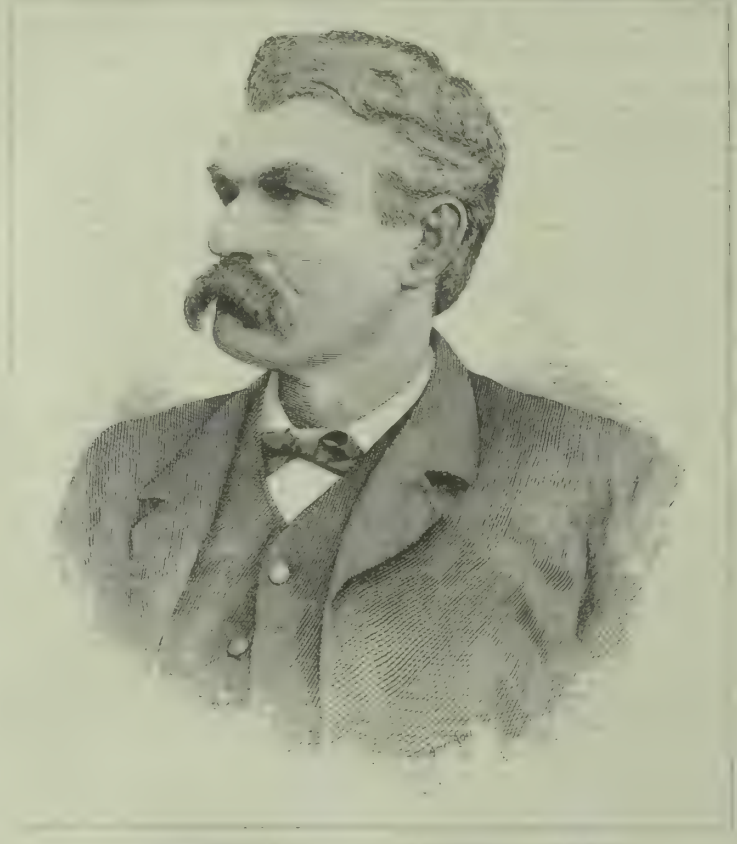
Our Worthy Masters.

The faces which adorn these pages are not unknown to California Patrons, but are portraits of men whom both State and National Granges have delighted to honor.

Bro. James H. Brigham of Delta, Ohio, W. M. of the National Grange, P. of H., became personally known to many of our readers when he visited the Pacific Slope last autumn, and won

Golden opinions from all sorts of people,

By his manliness, eloquence and ability. Himself a practical farmer, he knows what farmers need. He has been chosen Master of the Ohio State Grange, repeatedly, and has also served on the State Board of Agriculture and the Board of Control of the State Experiment Station. His faithful work at Washington, this



J. H. BRIGHAM, W. M. NATIONAL GRANGE.

last year, as Chairman of the Legislative Committee, has often been spoken of in these columns.

Bro. E. W. Davis, W. M. of California State Grange and W. Steward of the National Grange, P. of H., has not only gained the respect and affection of the many who enjoy his personal acquaintance, but endeared himself to many more, who have learned to admire and love him through his regular contributions from "The Master's Desk."

Pomona, No. 3, Will Visit Lockeford.

EDITORS PRESS:—While others abroad among the subordinate Granges are giving you glowing accounts of their stewardship and the large increase of membership occasioned by their visits (which, by the way, I am pleased to hear of), let me also assure you of the augmented membership in San Joaquin county and that her Pomona Grange is a live one.

At the last meeting of this Grange, Sept. 25th, there were 18 new applications for membership and all were accepted.

It was resolved that all the members make Lockeford Grange, in this county, a fraternal visit on Saturday, Oct. 18th, commencing at 10 o'clock A. M. All the members will take due notice. In F. H. and C., with F., fraternally, J D HUFFMAN, Sec'y.

Lodi Cal, Sept 23 1890.

Legislative Bills.

Judge J. H. McKune of the State Grange Legislative Committee, author of one of the bills providing for the organization of a mutual fire insurance company submitted to the last Legislature, has prepared a new bill for the same purpose to submit to the committee and the State Grange. We regret that it is now doubtful if he will be able to attend the State Grange next week. Past Master S. T. Coulter has also prepared a bill on the same subject.

The Grange and the Greasers.

Worthy Master Davis says in the PRESS of Sept. 20th: "There is a whole lot of politics in this State just now." Decidedly so; and sorrow comes to the hindmost in the race. "Attend the primaries; go to your county conventions, and see that proper men are nominated for important offices." This is Grange doctrine, but the trouble is that these doctors disagree, or don't appear at the right time.

The farmer makes but a sorry show at the average primary. He can't spare the time to go to the primary or the county convention; and if he *does* go, the slate is made up before he gets there, consequently he has nothing to do but stand around with his hands in his pockets, voting for the manipulators to grease and start the machine, and at every turn of the monstrosity there pops up a politician or place-seeker, where a farmer should have stood.

Viewing these things as they actually exist, the primary and the county convention are a snare and a delusion, so far as the influence of the farmer is concerned.

There is one remedy for this burlesque of the machine-greasers. Occasionally, by mistake or design, a farmer happens to get an important nomination. In the event of such uncommon occurrences, is it not the duty of all farmers to support such nominee, irrespective of party lines? If farmers generally would come to this understanding, there would be no difficulty in electing all such nominees. A few successes of this kind would set "the powers that be" to thinking. They would soon learn that each farmer represents one independent vote, who is disposed to stand and act unitedly with others for the promotion of his class. While one shrewd political manipulator could accomplish more than a dozen farmers in the work of a convention, it would take just 12 votes of the shrewdest wire-pullers to offset a dozen farmers' votes on election day.

Conscious of this fact, the weaker party would lead in nominating largely of the Granger element because of the certainty of their election. Discovering the inevitable, the drift of all parties would soon be in this direction, when the farmer who hasn't time to do anything but work for somebody else could stay at home and dictate to the manipulators who the party nominees should be.

There are, by accident or design, a number of farmers who have received nominations, intermingled with the prides of the Boss make-ups. Now can we not, for once, stand and vote together for our *own people, irrespective of party predilections?* If even a majority of the farmers will stand up to this "racket," the vocation of the convention-manipulator will be gone. Is it not about time we were trying on a new political suit? It may 'bag' in places, to start with, but it will grow to a fit in a few years! The absurdity of "standing by the grand old party's principles" in voting for county officers is about as ridiculous as the action of the dutiful son, who allowed a lot of hungry curs to eat himself and family out of house and home simply because his father once dined their grandmother. J. V. WEBSTER.

PASO ROBLES GRANGE has unanimously adopted the amendment to the Constitution of the State Grange in regard to demit cards.

The Master's Desk.

E W DAVIS, W M S G OF CALIFORNIA.

The sand of the seashore is composed of many minute particles, yet those tiny little grains, when properly prepared, bind our strongest buildings, unite the brick of the highest walls and furnaces, defy the restless waves of mighty oceans and teach us the flight of Time.

So the Grange, composed of coherent though tiny particles they may seem to be, is uniting in solid phalanx the farmers of the land, is arraying the intelligent and thoughtful agriculturists against their oppressors and is presenting an immovable barrier to fraud, corruption, deception, ignorance, intemperance and vice. Can you, as a loyal citizen, as a helpful husband, as a motherly matron, as a progressive citizen, refuse to lend your aid, presence and influence to such an Order? Will you longer refuse to help a fraternity that stands for Home, for Country and for God? You have a solemn and imperative *duty* to perform in this matter, fellow-farmer! Your neighbor cannot, if he would, do it for you. It is *your* duty to help the Grange and that at once, not next month, not next year, but right away, *now.*

The autumnal harvest is about finished. The dry corn, the parched leaf, the ripened fruit, the full sheaf and groaning granary, the shortened days and lengthened nights, all remind us of another year gone. How well have we improved its passing moments? How many sheaves have *you* garnered, fair reader? How many tears have you dried? How much left undone that you might have done? Ah yes, these are fitting, yet perhaps unwelcome, questions for this season of the year. Verily may we ask ourselves: "What will the harvest be?"

We may soon expect to hear the patter of the rain upon the roof, for autumn will soon be gone and winter is almost here. This reminds us of the seed-time; but not alone of the seeds of wheat, barley, oats or corn, or of the varieties of grass and garden seeds. It suggests that other thought, of seeds of kindness and fraternal amity. These are the seeds the Grange ought also to plant. Let us sow for the coming as well as for the present generation.

Patrons are appreciative people, but from what our Watsonville Patrons are doing, I am afraid they will have so much for us that we won't fully comprehend all they offer. However, Worthy Patrons, go on and we will stay in Watsonville till we are sure you will admit our appreciation.

The Executive Committee will meet at the Mansion House, Watsonville, at 9 A. M. Monday, October 6, 1890. If you have any special matter to bring before that body, be sure to have it in apple-pie order and come along. There is much to be done, and it is hoped that each one having business will be fully prepared to state it in the shortest possible time so that all may be heard.

Can the State Grange devise some plan whereby the standard of our Order may be planted in all sections of California? Where is the man who can lead us on to the highest success with the least amount of money? We want to double our membership during the year ending October 1, 1891. If each member now in good standing will bring but *one* new member to our altar, that will do the work. How easy to find one new member!

Where is the next session of the State Grange to be held? There are a whole lot of fine cities in this State. Which one wants the State Grange?

Reap for the mind as well as for the body. A right healthy mind can hardly be found in a diseased body. Health is wealth, more valuable than gold and much more to be desired.

Stand by your old-time friends. The friend in need is the true one.

Be gentle, be sincere, be true, and though others may oppose, you will always have friends.

Grange Trading.

Referring to this subject in a letter some weeks ago, Bro. Brainard, Sec'y of San Jose Grange, said that they had discussed it considerably, without reaching any definite conclusion. "I think," he remarks, "if there could be a little more positive and direct statements as to the advantages expected, and whether or not the trading-houses would be confined to San Francisco or located at different places, and also some clearer notion given of the amount of reduction which would be made to Grangers, the matter would be more cordially received."

The question will no doubt be largely discussed at the State Grange. We wish all interested to be present and prepared to give as full and reliable data as possible, for the matter is one of great importance.

OUR PORTRAITS.—The several engravings of popular Patrons which appear in this issue, have been thus published without their "knowledge or consent." We have assumed the responsibility of presenting these honored faces at this time, well knowing that many would wish to see the real likenesses of those who are doing so much to promote so worthy a cause.

Exercises Suggested for State Grange,

Eighteenth Session, Opening at Watsonville, Oct. 7, 1890.

TUESDAY.

FORENOON.—Songs of welcome and personal greetings; opening State Grange by E. W. Davis, W. M. at 10 A. M. appointment of committees; report of progress of Committees on Credentials and Order of Business; music, recitations, etc.

AFTERNOON.—Report of Committee on Credentials; Worthy Master's annual address; reports of other officers and Deputies, interspersed with music, recitations and readings; welcome address to Masters of new Granges.

EVENING.—Public reception; address of welcome by Mr. Tinscott, County Supt. of Public Schools, on behalf of citizens of Watsonville. Response by the Senior Past Master, I. C. Steele; short addresses by citizens, brothers and sisters; music, songs, recitations, etc.

WEDNESDAY.

FORENOON —Roll-call of Granges for presenting business; yearly reports of subordinate Granges; reports of Committee on Woman's Work in the Grange and of Legislative and other committees.

AFTERNOON.—Discussion of legislative matters, including Australian Reform Ballot System, Mutual Insurance Companies, Payment of Taxes Semi annually, Re-assessment and Payment of Delinquent R. R. Taxes, and Good of the Order.

AFTERNOON.—Considering reports of officers and committees. Short literary exercises and music. Memorial exercises in fraternal regard and respect for the honored dead. Addresses and songs appropriate to the occasion.

EVENING.—Conference on the best plans for organizing and reorganizing Granges and forwarding the work of the Order in California during the coming year.

THURSDAY.

FORENOON.—Regular order of business.

AFTERNOON.—Roll-call of unfinished business. Addresses on practical agricultural subjects by experienced Patrons and farmers. Literary and musical exercises.

EVENING.—Conferring of fifth degree on representatives and fourth-degree members. Pomona's Feast.

FRIDAY.

MORNING.—Excursion to beet-sugar farm near Salinas. Practical field observations in farm and orchard.

AFTERNOON.—Discussion on Grange co-operation, including the Pennsylvania Trade-Card and other systems. Best plans to secure needed legislation for preventing official and political frauds and abuses by trusts and combinations.

EVENING. — Conferring the sixth degree, Flora, and literary and musical exercises.

SATURDAY.

MORNING.—Address on Education, Home Culture, and Farm and Household Economy.

AFTERNOON. — Roll-call of all unfinished business. Visit to the beet-sugar factory and other places.

EVENING.—Fraternal, social and literary festival, or Grange Love Feast.

On Sunday and Monday, excursion parties can be made up for visiting Hotel Del Monte and Pacific Grove, Monterey, Santa Cruz, or San Jose and the Lick Observatory at Mt. Hamilton.

Drives About Watsonville.

We quote the following information, which may prove interesting to many who will attend State Grange next week.

The drives in and about Watsonville are among the prettiest and most attractive in the State, many of which are lined with ornamental shade trees and sprinkled and kept in excellent order during the months in which no rain descends. The distances from Watsonville are as follows:

To College Lake and Orphan Asylum, by way of Lake avenue, 3 miles. To Green Valley, by Lake avenue, 5 miles. To Pajaro, 1½ miles. To Old Glass House in Monterey county, 4 miles, where may be had a lovely view of Pajaro Valley. To Hudson Landing, 4½ miles. To Vega, 5 miles. To Sand Cut, 7½ miles. To Paper Mills, 6 miles. To Beach and Camp Goodall, 4½ miles. To Corners, 5 miles. To Hill Cemetery, 2 miles. To Corralitos, 6 miles. To Aptos, 13 miles. To Spreckels' Ranch, 12 miles. To Santa Cruz, 20 miles. To Monterey, 40 miles. To Salinas, 20 miles. To San Juan Mission, 15 miles. To Corralitos creek, 6½ miles, where there is some fine trouting. To San Andreas, by Beach road, 6 miles. To Big Trees, 25 miles. To Loma Prieta, 18 miles. To Rider's Mills, 8 miles. To Rathbone Lake, 2½ miles.

Worthy of the Honor.

To Sister E. Z. Roache, well seconded by her noble and patriotic husband, in her efficient work for years in the Grange cause, are we indebted for the location of the present session of the State Grange at Watsonville, with so much promise of profit and pleasure to all concerned.

MORE GOING TO STATE GRANGE.—We are advised that Two Rock will send five representatives to Watsonville next week, Temescal 12, and Hollister probably 25 or 30.

Temescal's Meeting.

EDITORS PRESS:—Not seeing any account last week of Temescal Grange's pleasant time, enjoyed by members and sisters and brothers from Eden Grange at the Harvest Feast held Sept. 20th, I thought, though a week behind time, I would send you a line about it.

Owing to sickness and absence from home, Temescal Grange was not as well represented as it is usually; but the few who were there tried to have a good time for the rest. The first and second degrees were conferred on one candidate, and the third and fourth on two others. Eden Grangers manifested their kind, fraternal feeling by a large attendance.

After refreshments the real feast began in the large hall, where an open meeting was held. Bro. Amos Adams spoke at some length on the objects for which we should strive, particularly on the equalization of assessments. His remarks were good and well received. Sister Adams, after some preliminary words, gave a recitation entitled "Scatter Seeds of Kindness." We are sorry that this worthy couple have decided to make their home in San Jose, as I fear we shall not see them in Temescal Grange as often as we should like.

Sister Chatterton of Maine made a good speech on what the Grange has done for woman of the farm, stating that the knowledge gained in the Grange is fitting her better to fill the high positions of trust which are being placed at her disposal and making her the legal equal of man. She advocated the claims of the positive woman who, though not so politic as her negative sister, is much more to be relied upon.

Sister Anway's reply to Sister Stephens' inquiry, "Why will not farmers organize for self-protection?" that farmers work too much and think too little, is without doubt true and gives food for much reflection.

Bro. Blackwood of Eden Grange, after paying an eloquent and touching tribute to the memory of "Grandma Brooks," spoke earnestly and well on the many evils that encompass the farmer.

Bro. Perkins, in his usual clear and eloquent manner, replied to Sister Chatterton's "what has the Grange done for woman?" He recognized the benefit the Order is to the sisters, who, a few years ago, would scarcely have been able to speak so fearlessly as they have done today.

Bro. Goodenough, the W. M., was, as we have ever found him, "the right man in the right place," full of witty sayings and apt illustrations that enlivened the whole session.

Altogether, we feel that the day was well spent and wish such reunions could be more frequent, as they serve to cement the friendly fraternal feeling with sister Granges.

After Grange had again convened, Bro. A. T. Dewey was elected Alternate to the S. G. Those expecting to attend the S. G. were requested to rise, and the Secretary was instructed to inform the State Grange Overseer that in all probability a round dozen would go from this Grange. Let all go who can, and let us have a rousing good time that will be felt all over the State and result in the reorganizing of dormant and the establishment of many new Granges. Then, sisters and brothers, leave the household and farm cares and hie away to Watsonville. You will do all the better on your return for a week or ten days' recreation.

Fraternally, N. G. B.

MARCH ON!—Bro. W. T. Lam, W. M. of March Grange, writes: We had a pleasant meeting Saturday, and instructed one in the first and second degrees, and have two for the next meeting. I cannot see why March Grange should not prosper. We will confer the third and fourth degrees in the near future, have a Harvest Feast and expect to have a good speaker on that occasion.



E. W. DAVIS, W. M. OF CALIFORNIA STATE GRANGE.

EASILY VICTIMIZED.—It is amazing how people are still caught by "chestnut" swindles. The other day a wealthy Quaker farmer living near Smithfield, Ohio, was tricked out of $5000 by two sharpers. They went to his house and offered to buy his farm. They left with him a satchel filled, as he supposed, with money—about $13,000 they said. A few days later they met the farmer at Smithfield and asked a loan of $5000. Thinking the money in the satchel was ample security, he made the loan and the sharpers disappeared. The satchel was filled with paper and pieces of wood.

A PECULIAR CENSUS.—It is said that for some weeks past the agents of the Society for the Suppression of Vice in this city have been closely watching those who frequent the pool-rooms. A systematic tally is kept which shows the name, age, habits, business, etc., of pool-room patrons. Facts have been gathered from reliable sources showing how young men have stolen money to buy pools, and have been led into dishonest lives by the pernicious effects of betting on horse-races.

The Visit to Tulare Grange.

[Written for the PRESS by J. W. MACKIE.]

Tulare Grange felt honored and was delighted to meet Bros. Cressey and Dewey, and we are all thankful for their cheering words and presence.

Bro. Cressey will long remember this Grange for its criticising manners and queer questions; but if he had had a complete diagnosis of its condition, he would have been, no doubt, better prepared to meet the exigencies of the case.

There is something the matter with the farmer here, and he knows it; but he does not know what ails him nor the remedy needed. One thing he is sure of—he needs more money. What he is not sure of is how it is to be got. Somehow, the Grange looks to the officers of the State Grange to give them a little light in that direction. No doubt this is expecting too much from any quarter, but as the State Grange exists for the purpose of assisting the members of subordinate Granges in their difficulties by advice and suggestions, it is reasonable to expect something. The farmers feel very keenly that while nearly everything they produce is consumed at very high figures, they get a very low figure when they dispose of it, the difference being absorbed in freights, commissions and profits before it can reach the consumer. Some central organization like the State Grange should devise a plan of salvation from this ruinous style of business, such as our Declaration of Purposes proposes.

Bros. Cressey and Dewey are intimately acquainted with the efforts made in the past by the Grange to do away with middlemen and the disastrous consequences. "Burnt bairns dread the fire," and it is not surprising that the same body is somewhat sensitive regarding more attempts; nevertheless, such attempts stand as the plain duty of the State Grange, if the Declaration of Purposes has any meaning. This may explain to Bro. Cressey the peculiar irritation manifest in our Grange. We like visits from State officers, and the open, manly face of Bro. Cressey will haunt us for a long time and his persevering spirit will inspire us when confronting difficulties and will enable us to surmount them as we think of him. At the same time we feel bound hand and foot in our farming transactions, always buying at the dearest and selling at the cheapest in the most ruinous manner, and we did look to his riper experience to suggest a remedy.

The farming business has no method in it nor system; it is all haphazard, or it is gambling with an opponent who throws loaded dice so as to turn sixes while ours is loaded to turn ones: "Heads I win, tails you lose," every pop!

The Louisiana Lottery is deemed infamous and the artillery of law will no doubt suppress it; but great as its evil may be and is, it is insignificant beside the systematic plundering of the farmer, permitted and sanctioned by law.

Now, Bro. Cressey, you will know the secret of our disappointment. We did expect an invasion of the country around, in the interests of the Grange, and an appeal made to the farmers to so unite that our dealings with consumers shall be more direct. Our fetters so cling to us that we are not prepared to undertake this invasion ourselves, though one of these days we may do it in spite of our fetters.

You are old, Father Cressey, as you often said, and the few locks that are left you are gray, and a few years, oh! how few! will place you and me on the shores of the land you are looking forward to, where I hope more satisfactory work will be found us than trying to unite incorrigible farmers. May the interval between now and then be a long one, and that time so loaded with satisfactory work that we will hear then with pleasure that welcome plaudit: "Well done, good and faithful servant." And during that interval I sincerely hope for many meetings with that genial face which so lately graced and lighted up the hall of Tulare Grange.

Farmers for Legislators.

In addressing the great concourse at Williams' Grove last August, Hon. Leonard Rhone, W. M. Pennsylvania S. G., observed:

Well, parties are, after all, what we make them. If farmers have clean-cut ideas on public questions, and go into their political conventions and offer their resolutions, they will go into the party platform and commit the party; then put men in nomination that will carry out your ideas. You have competent farmers enough to send to the Legislature and to Congress to secure what legislation you need. Don't be afraid of the man in your community that has built up the Grange; being true to the Grange he will be true to your interests, no matter how often you elect him, if he is the man to serve you best. Cities and corporations keep men that serve them best in the Legislature and in Congress a lifetime.

Patrons must stand united in the interests of their class if they wish to bring about the same honors and remunerations that other classes acquire through associated effort. To be successful we must carry out our motto, "In essentials, unity, and in non-essentials, liberty." Therefore, for the sake of unity, we must give up detailed differences so as to bring about general results in the interests of agricultural people.



The Highway Cow.

The hue of her hide was dusky brown,
Her body was lean and her neck was slim,
One horn was turned up and the other turned down,
She was keen of vision and long of limb.
With a Roman nose and a short stump tail,
And ribs like the hoops of a home-made pail.

Many a mark did her body bear;
She had been a target for all things known.
On many a scar the dusky hair
Would grow no more where it once had grown;
Many a passionate, parting shot
Had left on her a lasting spot.

Many and many a well-aimed stone,
Many a brickbat of good size,
And many a cudgel swiftly thrown
Had brought the tears to her loving eyes,
Or had bounded off from her bony back
With a noise like the sound of a rifle crack.

Many a day she had passed in the pound
For helping herself to her neighbor's corn;
Many a cowardly cur and hound
Had been transfixed on her crumpled horn;
Many a teapot and old tin pail
Had the farmer boys tied to her time-worn tail.

Old Deacon Gray was a good old man,
Though somewhat tempted to be profane
When many a weary mile he ran
To drive her out of his growing grain;
Sharp were the pranks she used to play
To get her fill and get away.

She knew when the deacon went to town;
She watched him wisely as he went by;
He never passed her without a frown
And an angry gleam in each angry eye;
He would crack his whip in a surly way,
And drive along in his one-horse shay.

Then at his homestead she loved to call,
Lifting his bars with crumpled horn,
Nimbly scaling the garden-wall,
Helping herself to his standing corn,
Eating his cabbages one by one,
Hurrying home when her work was done.

His human passions were quick to rise,
And striding forth with a savage cry,
With fury blazing from both his eyes,
As lightnings flash from the Summer's sky;
Redder and redder his face would grow,
And after the creature he would go.

Over the garden, round and round,
Breaking his pear and apple trees,
Tramping his melons into the ground,
Overturning his hive of bees,
Leaving him angry and badly stung,
Wishing the old cow's neck was wrung.

The mosses grew on the garden-wall,
The years went by with their work and play,
The boys in the village grew strong and tall,
And the gray-haired farmers passed away,
One by one, as the red leaves fall;
But the highway cow outlived them all.

—*Chicago Ledger.*

A Breath from the Redwoods.

[Written for the RURAL PRESS by LIPPA.]

Dear Mrs. Hilton "and others who feel as you do," now that the dishes are washed, the children at school and the men at work in the fields, give me your hand and let me lead you inside this cluster of redwoods that seems to shut out the vast area of little things and inclose us within an emerald tower reaching from earth to the heavenly spaces.

We will rest awhile, for we are tired of a life-long succession of trifles. That bit of peaceful blue overhead that looks so far away is just as near to us here as there, only we cannot quite realize it; and, with a sigh, we nestle down into these great, protecting arms, feeling the touch of tender, pale-green fingers that seem dripping with little seed-cones which hold the concentrated life of future generations of forms like these.

When and how was wrought this wonderful fairy-ring, this circle of existences transfixed and grown to giants? In their presence, childhood's ideality returns, and we, the seeking ones, long to wrest from their joined hands the hidden treasure, the secret of life; but unconscious of us and our wishes, they work on year by year, reaching outward and upward, but only by means of little things. How slowly each baby leaf crept forth from the encircling bud, and how delicately each one of the many millions is marked with spreading veins! We came to escape from trifles, but the smallness and the greatness of this eternal work rebuke us for our complaining. There is no murmuring here except the low murmur of growth and use. Not a discordant note rasps across the music that is silence and the silence that is music. No strained wire or echoing metal has ever reproduced this song of creation, as no brush, however delicate, has ever traced such pictures as freely tint themselves before our eyes and never twice the same.

Grand, wonderful tree! With all the stateliness of the pine and more than the pine's delicacy, it clusters on the hilltop or stands sedately beside a mountain stream that darts down the deepening canyon toward the sea. Such a thirsty tree it is! Silently it draws to itself the mist veils and wraps them about its tossing plumes. It sends its eager rootlets to the sources of mountain springs and seeks the northern slopes that the sun avoids, while the more commonplace and less exacting oaks trail up the southern hills in dust and heat. What a firm hold it has on life, bidding defiance to slow decay, almost to time itself, and in that security offering free hospitality to other forest growths. The great brakes crawl into its shadow to unroll themselves, huckleberry bushes push their independent little branches covered with stubby, saw-like leaves, in and out among the lower boughs, wild blackberry vines peep from the dense greenness, and even the venomous poison-oak is not repulsed, so we shall be welcome.

Yes, let us read while we refresh ourselves, but, if possible, we will read from this illustrated book that is always open and never wearisome when we have learned the meaning of its many characters. You are right in part. "There *are* times and times," and "a thing of beauty" might more often be "a joy" if the needed effort was made by all; but let us apportion the burdens of life more equally. Others are wronged as well as ourselves when we assume more, even of care, than rightfully belongs to us, and they are deprived of the discipline needed for the strengthening of their powers.

If we have learned anything in this season of rest which has been rest indeed, let us carry with us to the world outside this whispering gallery a reminder, a spicy branch of greenness; let us take from the generous roots a slice bearing growing stems to set again though it must be in less congenial soil, and let us come once more when the hue of ripeness has turned the little seed globes to brown, gather, plant and water near our homes, transforming the desolate, lonely spots into resting-places.

We had almost forgotten the questions of "what shall we eat, and what shall we drink, and wherewithal shall we be clothed?" but they cannot irritate us while we hold close to our souls this life-giving talisman, the gift of this wonderful tree.

As we carefully and artistically arrange kindling and fuel ready for the match in the kitchen stove, we will soften the hard facts with a pinch of philosophy, as we soften obstinately tough vegetables with a pinch of saleratus. If the blaze of ambition only smolders, we will feed it with seeds from the tree of knowledge, that has been grafted with cions of wisdom, as we stimulate the hesitating kitchen fire with seeds of the pitted apricots that consumed so many hours of our time. We will dream of the time when a co-operative cook-wagon shall stop at each farmhouse on its tri-daily rounds, bringing, prepared, the articles ordered the day before. We will believe that in the blessed "Twentieth Century" city people are not to monopolize all the conveniences while we drag our weary selves along in the same old way. In that "good time coming" farms will grow smaller and neighbors closer together, so that the few who are born cooks may perform the mysterious processes for those whose bread will be heavy and whose canned fruit will burst its bonds in spite of all their efforts to prevent such a result; but in this transition time, this trying present, that is neither past nor future, we must expect to suffer from the battling forces of both. Each bewildered housekeeper who has but lately learned to heed the many voices from without and from within clamoring for her notice, whose eyes have but lately opened to new sights and whose mind is expanding with thoughts that before were unknown, must still light her little fire on her little domestic altar, sacrificing her wishes, her health or her life to this deity called alimentiveness. The morning hours, glorious in sound, fragrance and color, must be filled with wearisome answers to persistent wants, and often and often Peace must go down before armed and mounted Hurry.

It is easy to understand why so many women and children hate the farm: they are kept always in the atmosphere of the workshop. Men without money and without a trade undertake a struggle for life with natural, industrial and commercial forces; each arm, great or small, is needed and continually, and from thoughtlessness as well as from poverty, the weapons are often out of proportion to the strength, the tools unsuited to the one who is to use them.

Is it any wonder that the fun-loving boy lingers on his way home from school or is unnaturally quiet afterward if, in the instant of his appearance, he is impatiently told to do some hard or disagreeable thing which has been left for him because he is younger? How can the members of a family care to come together around the table if the talk (not conversation) is all of the farm work, the unpaid mortgage, the danger of going to the poorhouse or the cost of what they are swallowing? In these times so favorable to the development of individuality, each is apt to be most interested in some subject that is different, it may be, from the pet study of all the others, so no one has a right to monopolize the whole time and keep up an unceasing chatter or moan, even on that precious theme—money.

As I write, the question, "Which was that—useful or necessary?" flashes its inquisitive little face out from behind the piles of stored things in memory's attic, and the misty garments of an old story seem forming behind it. I think it was one of the Rosamond series, and related the efforts of an elder sister to correct the habit of incessant talking by binding her with a promise to say nothing which was not useful or necessary for an hour. If all should try that experiment, how quiet the world would suddenly become and how much better we could listen, in that hush, to nature's voices that are never useless or unnecessary. The "still, small voice" of the spirit could then interpret the lessons whispered from mountain, valley and ocean, and we should no more pass indifferently by this wonderful specimen of use, strength, endurance and beauty, this king of the Pacific Coast that softly rebukes our murmurings and calls to us to come up higher.

Comfortable People.

Do you know any? Are they few or scarce among us? What are comfortable people? If I questioned what are uncomfortable people, everybody would have an answer ready. But the few of a kind we are looking for—do you know them? Why are they so few? Said a friend one day: "My grandmother was such a comfortable soul! You loved to be where she was. We children would do anything for her and always knew where to find "quarter" in any disaster. And the fun of it was, if two of us quarreled, we always brought up together at grandmother's door. She never seemed to have an ache or pain, never asked for your sympathy because she was old, and yet we always gave it, and were always bringing bits of comfort to her. She used to say: 'My day is past, dearie; I'm not of much account now.' But she always said it with such a cheerful smile, as though it were all a happiness just the same to be with us. She was a comfortable old lady, and we missed her sadly for many a long day."

There is a comfortable mother we wot of, where the children come in from school with a jolly little laugh as she opens wide the door in welcome. There is something about her that comes down to the little ones and is in sympathy with them always. There is a cake (not over-rich) on the shelf, just to save butter and crumbs, when school is out, that they may divide and digest after their own fashion. Somehow there is never any "strapping." It's—"Johnny, mamma said not to, and you know how good she is to us." Or it is—"I'm going in to ask mamma. She'll have time to help me." And after awhile it is—"Let's go in and help mamma." Longing to be with somebody who loves them; longing to be where they are not in the way—why? Because mamma isn't nervous; hasn't got a headache; doesn't think children such a bother; isn't "running the sewing machine and can't be hindered;" or in other words, is a comfortable woman.

Here comes "our John." Oh, he is just the best fellow in the world. If it rains to-day he doesn't growl, but guesses it will be clear to-morrow, and in any case he doesn't believe it will make much difference to the clerk of the weather whether he is pleased or not. He doesn't sit down and want you to "keep still" or wonder "what on earth you do so much trotting about for." He doesn't sit down and with one eye on the paper and one on you, wonder what you are going to do next. He doesn't take up all the room in the kitchen with his long legs and his boots, and wonder "what you want to putter around the stove so much for." Not he. He is a comfortable fellow and keeps out of your way. He goes "a-mending" and you don't know he is in the house so far as annoyance to you is concerned; or he comes in with a joke or something new for you to think about. Maybe he gives you a "lift" on some big job you've been thinking about for a good while—in fact he makes you wish there were more rainy days than there are, because he is such a comfortable fellow.

How many of us have comfortable children? Yet why should they not be? Don't uncomfortable people make children uncomfortable? "Mamma," says my boy, "somehow that woman makes me feel uncomfortable when she's here; she seems so snappy all the time. I want to say just what she says just to see if it won't hurt something or somebody. I want to pull the cat's tail or kick the dog." So do you not think her own children want to kick something, too?

Good people! cultivate comfort—the comfort that has time to live, to be happy, to be cheerful, to make people wish to be where you are, because you are not eternally fretting and fuming about what you can't help. If you can help things, why don't you? If you *cannot*, why be uncomfortable about them? Is it your duty to borrow trouble, to magnify every ache or pain by talking about it? Stop a moment and read a thought or two of somebody's from a paper and so get a thought outside of yourself. There are lots of good times and fun in the world—a great deal more than would balance the misery; and though you may not be "in 'em," they are good to think about. Think of somebody whose troubles are infinitely worse than yours, and you have no idea how much more fortunate you will think you are. Just in proportion to your personal comfort will the comfort around you be increased; and if each and all would endeavor to be comfortable, we should all of us be a great deal happier.—*E. S. Titus.*

You may find hens in a hennery, but don't look for bats in a battery, nor lots in a lottery.

A Lighthouse Heroine.

A paragraph has been floating around in the newspapers to the effect that "Mrs. Grant has had charge of the Matinicus Light, north of the Penobscot river, for 28 years—at first as assistant, but was given full charge in 1866." *The Woman's Column* says this is a mistake, and then gives a correct account of Mrs. Grant's remarkable career, condensed from an article which appeared some years ago in the Rockland, Me., *Free Press*, as follows:

Matinicus Rock is small, rugged, and, except in favorable weather, inaccessible. In 1846 the old lighthouse with wooden towers was replaced by two stone towers 80 feet high and 40 feet apart, and the former dwelling was converted into an outhouse. In 1853 Samuel Burgess was the keeper. His family consisted of an invalid wife, four small daughters and a son, who was much of the time away fishing at the Bay Chaleur and elsewhere.

The eldest daughter, Abbie E, then 14 years of age, was his chief, if not his only, assistant. She was expected to care for the principal part of the domestic affairs and also to aid in the lighthouse work. She modestly says: "I took a great deal of pride in doing the lighthouse work, and tried to do my duty." In the occasional absence of Mr. Burgess, the whole care of the lights devolved upon Abbie. She soon became very skillful and entirely equal to the task, as after-events proved.

On Jan. 19, 1856, when Abbie was 17, there came the memorable gale which swept away the Minot's Ledge Lighthouse. A letter written by Abbie to a friend soon after the storm thus describes it:

"DEAR ——: You have often expressed a desire to view the ocean when angry. Had you been here on the 19th of January, I surmise you would have been fully satisfied. Father was away. Early in the day, as the tide arose, the sea made a complete breach over the rock, washing every movable thing away, and of the old dwelling, not one stone was left upon another. The new dwelling was flooded, and the windows had to be secured to prevent the violence of the spray from breaking them in. As the tide came, the sea rose higher and higher, till the only endurable places were the light-towers. If they stood, we were saved; otherwise, our fate was only too certain. But for some reason, I know not why, I had no misgiving, and went on with my daily work as usual. For four weeks, owing to rough weather, no landing could be effected on the rock. During this time we were without the assistance of any male member of our family. Though at times greatly exhausted with my labors, not once did the lights fail. Under God, I was able to perform all my accustomed duties, as well as my father's.

"You know the hens were our only companions. Becoming convinced, as the gale increased, that unless they were brought into the house they would be lost, I said to mother: 'I must try and save them.' She advised me not to attempt it. The thought, however, of parting with them without an effort was not to be endured; so seizing a basket, I ran out a few yards after the 'rollers' had passed and the sea fell off a little, with the water knee-deep, to the coop, and rescued all but one. It was the work of a moment, and I was back in the house with the door fastened; but I was none too quick, for at that instant my little sister, standing at the window, exclaimed: 'Oh, look! look there! the worst sea is coming.' That wave destroyed the old dwelling and swept the rock. I cannot think you would enjoy remaining here any great length of time, for the sea is never still, and when agitated its roar shuts out every other sound, even drowning our voices."

In the spring of 1857, Mr. Burgess left the rock to obtain his salary and to lay in provisions and fuel. He was prevented by the weather from returning, and his family ran short of food. After waiting till famine stared them in the face, the son started in a little skiff equipped with a sail made by the aid of his sister, for succor. The sea was so rough it was very doubtful whether he could reach the shore; and he was seen no more for 21 days. During the whole of this time, the mother and four girls were reduced to a cup of cornmeal gruel and one egg each per day. To isolation and famine in mid-ocean was added suspense as to the fate of father and son. During all these days, it was Abbie who labored and cheered, kept the lights burning, and cared for a sick mother and sister.

In 1861, Mr. Burgess was, in the change of administration, superseded by Capt. John Grant and son, of Rockland. When they took charge, the services of Abbie were secured to instruct them in their duties and teach them the manipulation of the lamps; for the appointments were of the most approved character, requiring no little skill to run them. In that year she married Capt. Isaac H. Grant, the assistant keeper; so again the rock became her home. In 1865, Mrs. Grant, the principal keeper's wife, died during a gale; and it was not until the fourth day after that her remains could be removed from the rock. The steam blast was established in 1869, and in 1871 Abbie was appointed assistant. The year 1875 found her still on the rock, the mother of four children. In the spring of that year a vacancy occurred at White Headlight, in the town of St. George. The situation of keeper was offered to her husband, and was accepted, and Abbie was appointed assistant. It was only after 22

years of unconscious heroism, during which she had seldom left the rock, that she found a home on the main land.

Mrs. Grant's children are now young men and women. The eldest son is an engineer, and the only surviving daughter has studied at the New England Conservatory of Music. The courageous mother is still living at Spruce Head, Maine.

The Art of Sweeping.

In sweeping, take long, light strokes, and do not use too heavy a broom.

"Alice," said Lois, "do you honestly think sweeping is harder exercise than playing tennis?"

I hesitated. "I really don't know. One never thinks of hard or easy in tennis, the game is so interesting; and then it's outdoor exercise, and there's no danger of inhaling dust."

"Well, for my part," said Marjorie, "I like doing work that tells. There is so much satisfaction in seeing the figures in the carpet come out brightly under my broom! Alice, what did you do to make your reception-room so perfectly splendiferous? Girls, look here! You'd think this carpet had just come out of the warehouse."

"Mother often tells Aunt Hetty," said I, "to dip the end of the broom in a pail of water in which she has poured a little ammonia, a teaspoonful to a gallon. The ammonia takes off the dust and refreshes the colors wonderfully. We couldn't keep house without it," I finished, rather proudly.

"Did you bring some from home?" asked Marjorie, looking hurt.

"Why, of course not! I asked your mother, and she gave me the bottle and told me to take what I wanted."

"A little coarse salt or some damp tea leaves strewed over a carpet before sweeping adds ease to the cleansing process," said Mrs. Downing, appearing on the scene and praising us for our thoroughness. "The reason is that both the salt and the tea leaves being moist, keep down the light, floating dust, which gives more trouble than the heavier dirt. But now you will all be better for a short rest; so come into my little snuggery and have a gossip and a lunch, and then you may attack the enemy again."—*"Mother's Way," in Harper's Young People.*

Chaff.

Now that every one is wiping his feet on Mr. Quay, we begin to see why he is named Matt. —*Puck.*

"O MAMMA," said little Lord Fauntleroy, fresh from the city, pointing to some sun-flowers, "just see those pen-wipers growing over there!"

SOMEHOW a man feels much worse the day after he has lost an hour's sleep on account of the baby than he does the day after he has lost five hours' sleep at the club.—*Atchison Globe.*

A NEW YORK court has awarded Charles Myers $5000 damages caused by a bite from Mr. Vanderbilt's dog. People who are bitten should be careful to pick out dogs with good financial backing.—*Washington Post.*

BILLINGS: I'll take a little more of that railroad soup, please. Mrs. Hashcroft: Railroad soup? Billings: Yes; more water than stock, you know.—*Terre Haute Express*

"HAY FEVER," said the moderator, at the influenza convention, "may be likened to a tie vote." "Hear, hear!" cried the audience. "The eyes and nose both appear to have it."

THE owner of that carload of eggs that went through a bridge in Pennsylvania, the other day, is trying to make the railroad shell out. —*Nebraska State Journal.*

"I TELL YOU Sunday was a red-letter day at Chautauqua," exclaimed a returned visitor to those classic shades. "Impossible!" "Why impossible?" "Because no mail is distributed there on Sunday."—*Pittsburg Chronicle-Telegraph.*

SHE STOOD ON ICE.—At the Portland Fair they had a stuffed cow which they milked (?) whenever a person called for a glass of milk, fresh from the fountain-head. The whole thing looked so natural that many who drank of the milk, believe that the cow was a genuine Durham. The *Journal* editor himself pressed forward to invest a nickel, and after drinking the milk, right from the cow, as he supposed, he looked at the maid with her rosy cheeks, and in a sort of a doubtful way asked: "What makes this milk so cold?" "Oh," said the little vixen, with a roguish twinkle in her eye, "don't you see the cow stands on ice?" We saw the joke and pulled out to make room for another greeny, for they were quite abundant and most of them came from the bunchgrass country.—*Walla Walla Journal.*

THE GAS GAVE OUT.—T. K. Beecher lately told the following: "Some years ago, a young man named Plympton came to Elmira to take charge of a paper. I was in the habit of publishing my church notices in the paper, and one Saturday night the gas gave out and gave promise of staying out for a day or two. So I ran over to Plympton and said: 'Just say, "Services as usual excepting the gas."' 'Shall I publish it just that way?' said Plympton. 'Certainly,' said I, and left him. He did publish it that way, and on the following day narrowly escaped being tarred and feathered at the hands of a committee of my deacons, who thought he was ridiculing me."

YOUNG FOLKS' COLUMN.

The Crimson Flower.

[Written for the RURAL PRESS by MARTHA T. TYLER.]

Little Rudie lived with his father, the old wood-carver, in a small brown hut in the woods. It was the Black Forest, where, you know, many remarkable things are said to have occurred, but during the twelve years of his life, the whole of which had been spent in the great, dim woods, Rudie had looked everywhere for the fairies and goblins in vain. Frequently, when his father was obliged to be absent from home all day, and Rudie could be as idle and fanciful as he pleased, the boy would make an early start, armed with a stout stick only, and wander until sunset through the long green isles of the mysterious forest in search of some extraordinary adventure or discovery; but although he poked into the heart of every hollow tree with his pilgrim's staff and under every heap of leaves, and tapped the bottom of every pool, he could never succeed in arousing the sleeping elves.

One evening, however, in late autumn, when the frost had begun to blight the few remaining flowers, and the birds had nearly all flown to warmer latitudes, Rudie was hastening home from one of his long tramps, watching with the glad heart of a child as he approached the cabin, the glow of the firelight through the one small window, knowing it to be a sign of his father's return, and of the quiet, cosy evening they should have together. Suddenly he observed, as if it had but that moment sprung into existence, a tall, strange-looking plant bearing a lovely crimson flower which nodded its proud head in the wind a few yards in front of him.

"Oh!" said the boy, "what a beautiful flower," and ran eagerly forward to snatch it from its stalk.

He thought it even more wonderful upon careful examination. It was in the bud as yet, so that Rudie could see the outer petals only, which were as red as blood and as large as those of a water lily.

Quite delighted with his prize, the lad hurried on that his father, too, might have a look at the wonderful thing which had blossomed for the first time so near their home.

"In this cold air," said Rudie, "and when all the other flowers are dead or dying! What kind of bloom can it be?"

Breathless with excitement, his blue eyes dancing, and his cheeks glowing from the sharp touch of the wind, Rudie pushed open the door of the hut, and then paused in dismay.

The fire which promised so much was indeed burning brightly, and the table was spread for their simple meal; but his father crouched on a stool near the rude hearth, with his head buried in his hands, as if some trouble had come to him.

"What ails thee, father?" asked the startled boy.

"Thou knowest, my son," answered the old man, as he raised his head and shook his gray locks sadly and hopelessly, "that in an evil hour I became indebted to Hans Brinckermann, the meanest man in the village yonder, and the richest. It was when thou wert so ill, my boy, and I sorely needed the silver for thy sake. To-day I should have paid the last rouble of the borrowed sum, and so have been a free man again; but as I was moving through town with my bundle of wares my foot slipped and I fell, breaking into a thousand fragments those beautifully carven things which have cost me so much time and labor, the sale of which would have relieved me from debt. To-morrow, then, I shall be thrown into prison, for Hans does not love a debtor and will not delay an hour beyond the time specified for the settlement of our account. There, there, child, eat thy supper of porridge and black bread, while thy poor old father wends his way again to the village, to see if aught can be done in the matter before another day dawns."

Rudie forgot to mention his beautiful flower. It fell unheeded on the table, and he sat down to his lonely meal with a heavy heart.

The logs on the hearth crackled merrily, but as time passed Rudie could hear an owl hooting in a tree near by. The frogs, too, that had assembled round a pond across the road, croaked dismally, and although the lad was too much accustomed to melancholy sounds and solitude to be usually affected by either, he felt the influence of both to-night and sighed when he thought of the morrow.

He was still sitting as his father had left him at the pine-board table, his porridge almost untasted, when his attention was attracted by some movement in the heart of the crimson flower. Slowly, leaf by leaf, the petals unclosed, and from the midst of them crept a tiny figure in green with a red cap on its head. The little man doffed his hat very politely to Rudie, but the boy stared stupidly at his new acquaintance as if in a dream.

"Where are your manners, friend?" asked the elfin creature with a dry little laugh. "However, you have brought me across your threshold, and your fire has warmed me, so that I am bound to do you a good turn. You are a pretty fellow to look at, too," he continued, "and the fairies cannot but wish you well. Follow me into the woods and do exactly as I bid you," and the manikin jumped lightly to the floor and ran out into the dark green woods.

Rudie followed, scarce realizing where, and when they had reached a clearing the fairy pointed to a certain bush, which, like the crimson flower, was an entirely new species to Rudie.

"Break off a bit of it and eat it," commanded the elf.

Rudie obeyed.

"Now go back to the pond near the cabin," said the little man, "and the frogs will tell you what to do next, for by virtue of what you have tasted you will understand all that they say."

With these words the fairy vanished, and the astounded Rudie prepared to follow the advice he had received.

"Croak! croak!" said a big frog sententiously, as the boy approached the charmed circle, "Extraordinary! Extraordinary!"

Rudie wondered why he had never before comprehended the language, it all seemed so easy, and was really very much like the German.

"What is so extraordinary?" piped a small frog in answer to the first speaker, hopping a little nearer to the latter in his eagerness to hear the latest gossip.

"At the root of the oak in which the owl lives, there is a bag of gold," said the large frog, "and it shall belong to him that looks for it at sunrise."

"Indeed!" cried a host of frogs in chorus, "and who put the gold at the foot of the owl's oak?"

"The fairy of the crimson flower," said the big frog, and then Rudie knew that it was a free gift which he might not hesitate to accept.

With joyful heart he hurried homeward again, and having said his evening prayer, stretched his bearskin out before the fire and was soon dreaming of the fortune that awaited him.

Hours passed, but the old man did not return, and with the first gleam of daylight Rudie arose and sought the owl's oak armed with a shovel and his stick. As the early rays of the rising sun glimmered in the east the boy began to dig for the hidden treasure, which he found buried many feet deep in the earth.

Seizing the bag with both hands, he ran with it all the way to the village in search of his father.

Once there, he had not far to go. A constable had the old man in custody and was leading him off to prison, when Rudie appeared.

"Stop!" cried Rudie, "I want Hans Brinckermann."

"What is it, Flibbertigibbet?" said the miser with a scowl, stepping out from a crowd of spectators.

"Here is thy gold, old Skinflint," laughed the boy, "and here and here. What's more, my father is to-day a richer man than thou, and in future when thou meetest him, by chance, thou mayest doff thy hat to him."

It was indeed so, for the fairy gift was a munificent one.

GOOD HEALTH

THE EAR.—No oily substance, poultice or liniment should be put into the ear, because great injury is liable to be done. Warm water is the best possible and about the only safe "wash." Do not scratch the ears with any metal; pin-heads, hair-pins or ear-picks should be tabooed. Do not scream if an insect enters the ear; warm water will drown it and wash out the "remains." The ear is not nearly so liable to injury from the intruder as from frantic efforts to dislodge it. Do not put anything cold into the ear; even cold water should be avoided, especially if there is any affection of the hearing. Do not put cotton in the ears if there is any discharge of pus from them. Use warm water as frequently as may be necessary to keep them clean, but do not force the foul matter back into the delicate machinery. If any small hard substance falls into the ear, do not attempt to "dig it out." If not readily removable, allow it to remain in quiet, and have a physician take care of it when convenient; it is not likely to do any serious harm unless tampered with. Anything which is soluble may be washed out, with a little patience, by the use of a syringe and warm water; if not soluble it is harmless. Deafness may sometimes be caused by an excess of ear-wax, which has become hardened and obstructs the action of the membrane. Either have a careful hand apply warm water through a proper syringe, or a piece of cotton wadding wet with essence of peppermint may be introduced, which will dissolve and absorb the hardened wax in a few hours.—*Hall's Journal of Health.*

FACTS ABOUT THE BRAIN.—In an article in the *Popular Science Monthly*, Dr. M. A. Starr says that there are many interesting facts which make one believe that the greater the extent of brain surface in a man, or, to put it a little differently, the more the folds and deeper the creases between them, the greater is the man's mental power; and just here it becomes apparent that to judge of the extent of the entire brain surface by the size of the head, or by the extent of the superficial irregular surface which is covered by the skull, without any regard to the number of folds or their depth, is to fall into an absurd error; and here we begin to see how baseless the old phrenology really is; for a little brain with many deep folds may really, when spread out, have a larger surface than a large brain with a few shallow folds, and a so-called bump or elevation on the apparent surface of the organ, even if it produces a corresponding elevation on the head which it frequently fails to do, will indicate nothing regarding the number of folds or the depth of the creases which lie about it; so that it may be stated without hesitation that from the size or shape of the head no conclusion whatever can be made as to the extent of surface of the brain, and consequently no conclusion can be reached regarding the mental capacity.

DIPHTHERIA is as old as civilization. Homer mentions it as attacking the armies of Ulysses. Hippocrates, the father of medicine, Celsus, Sydenham and others, from the dawn of medical history, have described it under many different names. In the Middle Ages it was known as the Malum Egypticum. The earliest medical records of this country describe it as the putrid sore throat of New England. Yet during all these ages that it has prevailed, no one has known its cause. Why diphtheria attacks the tonsils and mucous membrane of the pharynx is easily understood. Diphtheritic germs have the power to live wherever filth is found. Winter's cold does not destroy them. They float around in the air, are breathed in, and lodge on the tongue, with its heat and moisture to revive them. The saliva furnishes the alkaline medium they require to propagate in, and washes them into the little orifices and crypts or pockets in the tonsils, where they receive warmth, moisture and food at our expense, and the absorbents in the tonsils are royal highways, through which they send their poison to the citadel of life.—*Ex.*

WHERE THE YELLOW FEVER CAME FROM.—At the Medical Congress of Cuba, Dr. Lyada read a paper on yellow fever, which disease he affirms not to have existed in Cuba before the African immigration.

DOMESTIC ECONOMY.

CREOLE PUDDING.—Beat eight eggs with half a pound of sugar, half a pound of butter and the juice of one lemon. Line a deep dish with puff paste, cover with quince preserves, pour over a little of the mixture, lay on more preserves, then more of the mixture and preserves. Bake and eat with sauce.

SPONGE CAKE.—Three eggs, beat two minutes, add 1½ cups of sugar, beat five minutes, add one cup of flour, beat one minute, add half a cup of cold water, beat one minute, add one cup of flour, containing 1½ teaspoonfuls of baking powder, and beat one minute.

FLOUR DUMPLINGS.—One-half cup of sweet milk, one heaping teaspoonful of baking powder; mix stiff enough to form in cakes with the hands. This makes about seven. Drop in the kettle where chicken or meat is boiling (do not let them sink beneath the water), cover tight and cook 15 or 20 minutes.

CRULLERS.—One cupful of sugar, a piece of butter the size of an egg, rubbed well into the flour, two eggs beaten into the sugar and butter, one cup of milk, three teaspoonfuls of baking powder mixed into a cupful of flour. Add a little salt, unless the butter is very salt. Flavor with 1½ teaspoonfuls of lemon extract. Mix very soft.

A NICE DESSERT.—No more wholesome dessert can be made than "pop-overs," if they are light and well baked, and it is one that is almost universally liked. A good proportion for these is four eggs, two cups of milk, two cups of flour and salt. They should be baked in small earthenware cups, which are sold for the purpose, and the oven must be of moderate temperature.

BAKED OMELET.—Five eggs, half cup milk, quarter cup fine breadcrumbs, tablespoonful melted butter; pepper and salt to taste. Soak the crumbs in the milk ten minutes; beat the eggs very light, the whites and yolks separately; stir the soaked crumbs, the milk, the butter and seasoning into the yolks, and mix the whites in lightly. Pour into a well-greased pudding dish and bake in a quick oven.

SCOTCH PUDDING.—One quart of stale breadcrumbs, grated, and seasoned with salt, pepper and powdered sage. Add one pint of minced boiled mutton, one well-beaten egg, one chopped onion and one pint of mutton broth. Bake in a hot oven until firm and browned upon the top. When cold, slice in thin slices. Beef or chicken soup may be used instead of the mutton, but the Scotch receipt calls for mutton.

BIRD'S NEST PUDDING.—Core and peel enough tart, well flavored apples to cover the bottom of a round porcelain pudding dish. Put about half an inch of boiling water in the dish with the apples, cover them with a plate and set them in a hot oven to cook for 20 minutes. At the end of this time the apples should be tender and nearly cooked, and the water entirely absorbed. If any water remains it should be gently turned off, but so as not to break the apples. Prepare an unsweetened custard of five eggs and a quart of milk which has been brought to the boiling point. Add the eggs to the hot milk, carefully beating them in. Season the mixture with a saltspoonful of salt and pour it over the apples; it should cover them. Replace the pudding dish in the oven without a cover, and bake the custard and apples till the custard is firm in the center. The oven should not be too hot.

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SAN FRANCISCO:

Saturday, October 4, 1890.

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Apiarian Supplies—Mrs. J. D. Enas, Napa.
Cattle—Bonnie Brae Cattle Co, Hollister.
Cider—S. Martinelli, Watsonville.
Dry Goods, Etc.—Madden & Sheehy, Watsonville.
Evaporators, Sorghum Mills, Etc.—James Linforth.
Fruit Trees—J. S. Collins, Moorestown, N. J.
General Merchandise—Charles Ford Co, Watsonville.
General Merchandise—Otto Stoesser, Watsonville.
General Merchandise—Horgan & Kane, Watsonville.
Goats—T. H. Harlan, Williams.
Groceries—J. D. Wangerin, Watsonville.
Harrows—H C. Shaw Plow Works, Stockton.
Holstein-Friesian Cattle—Wm. Niles, Los Angeles.
Land for Sale—Joseph Mender, Eureka, Nevada.
Land to Rent—Box 363, Napa
Mansion House—Seitz & Sornborger, Watsonville.
Mansion Stables—D. A. McEwen & Co., Watsonville.
New Western Hotel—Gallagher & Stanley.
Nursery Stock—James Waters, Watsonville.
Nursery Stock—Will & Holloway, Oroville.
Pajaro Valley Bank—Watsonville.
Pajaro Valley Savings and Loan Society—Watsonville.
Peach Trees—D. S. Meyer & Son, Bridgeville, Del.
Poultry—Galt Poultry Yards, Galt.
Plows, Etc—Truman, Hooker & Co.
Plows—Baker & Hamilton.
Real Estate Agents—Besse & Sill, Watsonville.
Spray Pump—R. S. Chapman.
Safety Engines—Electric Vapor Engine Co.
Trees, Vines, Etc.—W. P. Hammon, Oakland.

See Advertising Columns.

Low Priced Racers.—At the sale of George Shults' racing stable at New York, 30th ult., Pancoast, a California horse, which Shults bought for $28,000 four years ago, was sold for $3750. The bay gelding Arrow, for which Shults gave $15,000, was knocked down for $725.

The Week.

The most important event of the week has been the extension of the rain area throughout the State. Before actual precipitation occurred there was a percentage of atmospheric humidity unusual for September, and ill effects were feared upon late ripening and drying fruits and curing raisins. The rain has increased the danger, and in some cases has occasioned loss. The rainfall has been unusually heavy for September, but October seems to be opening well as we write on Wednesday, and a few drying days, if they ensue, will remove much apprehension. The situation is, however, quite serious in some localities, and we trust the losses from the early rains of last year may not be repeated.

Congress is near its adjournment, having held, in point of actual working days, the longest session since the foundation of the Government. It is perhaps fortunate, however, that only about one-twelfth of all the measures introduced secured enactment. The new tariff measure has finally been decided upon, and of its provisions as affecting agricultural producers we hope soon to give information.

Trade in Produce, Not Promises.

We have several times alluded to the Butterworth bill now before Congress, which has for a purpose the demolition of the great produce-gambling trade which is prevalent in all large markets in this country. We trust that Congress will not fail of time to advance this measure speedily, for delay is a detriment to the legitimate production and commerce of the country.

We have so many times proclaimed the injury which such fictitious trade accomplishes that there is little need to enlarge upon it, but there comes to hand occasionally a re-statement of old points so forcible as to give them new significance. Such we find in the following paragraph in the Wichita, Kansas, *Eagle* of recent date, as follows:

The Federal and State courts have unwillingly recognized deals in futures in certain cases because there was no law against it. The Butterworth bill proposes to make a law that will govern deals of this kind, and if passed the courts will cheerfully aid in its enforcement.

The Butterworth bill does not interfere in any way with legitimate future contracts by actual owners or their agents. No one who is about building a house or block goes into the option pit to make his contract; he wants a house or block, not the difference, and he looks for the actual owners and laborers with whom to make his contract. Merchants who wish to contract for a future supply of an article go to the manufacturer and engage with him to supply the article when needed in the future. They do not contract for it with people who do not have it. Why should farm products be on a different basis? If one wishes to contract for these to be delivered in the future, let him contract with those who have them or have the appliances for making them. The Butterworth bill does not touch such contracts. The farmer can contract to deliver his crops in the future, just as the manufacturer can contract to deliver his products when manufactured. It is only the party who contracts to deliver in the future farm products he neither owns nor has the appliances to sow or reap who is required under the bill to pay the tax therein prescribed.

Naturally there is great effort being made against the Butterworth bill by the whole produce-gambling fraternity and their organizations, but the legislators should not be blinded by the dust which they are stirring up. They toil not, neither do they reap nor gather into barns, but they are making desperate efforts to make their wretched business appear a part of the great producing and commercial interests of the country.

Acknowledgments.—For the use of the cuts of Watsonville and Pajaro valley products, that adorn our pages this week, we are indebted to the courtesy of E. S. Harrison, whose recent pamphlet on Santa Cruz county has also been drawn upon for descriptive matter. Mr. Harrison is preparing an elaborate history of the county, which will make a quarto volume of 500 or 600 pages with many illustrations.

One of the strongest dams in Oregon is being erected at the new town of Winchester on the North Umpqua. It will furnish a magnificent water-power.

H. E. N. L.—If the writer claiming these initials will send full address, we will answer inquiries by mail.

California's Growth.

As most of the arable land of California is adapted to raisin grapes, the greater profitableness of this industry will hereafter prevent California from competing largely in producing wheat and barley. The population of the State is increasing mainly in the cities, and what agricultural development the State is making is being more and more turned toward the production of fruit. Within a few years the State is quite likely to be an importer of wheat and flour for its own use.—*American Cultivator.*

At the close of a very kindly paragraph on the growth of our raisin industry, our Boston cotemporary falls into the unfortunate errors contained in the above quotation. Each sentence contains a serious misstatement of facts. It is not true that most of the arable lands of the State are adapted to raisin grapes. It is true that large areas are thus adapted and the production is increasing at a gratifying rate. It is also true that California can easily produce all the raisins needed in the United States, and more, too, but still there will be plenty of land left for wheat and barley so long as they can be profitably grown.

It is not true that the population of California is "increasing mainly in the cities." The country is filling up notably and this will be shown when census figures are available. Besides, the two statements that we are making chiefly a city growth and at the same time developing rapidly in the production of fruit, do not hang together. We grow our fruit in the country, and though of course the advance of this interest stimulates manufactures, trade and other specialties of towns, the great gain of population is near the trees or vines. It could not be otherwise. Grain-growing does not require a large rural population; fruit-growing contributes directly to such population.

There is no probability whatever that California will soon be an importer of wheat or flour. Our Eastern friends forget how large California is. Such products as we are now sending out might squeeze out other branches if we had a small New England State to work in; but with California, with two and a half times as much land as all the New England States together, it is possible to do much without crowding.

From Vine to Basket.

An Alameda county grape-grower has an interesting experiment in progress in the line of an effort to establish direct trade between producer and consumer. He had a crop of Black Malvoise grapes, which, if sold through San Francisco commission merchants, would hardly pay even as much as local wine-makers would pay for such low-quality grapes—say $15 per ton. Knowing what is done in the large Eastern cities in the way of "basket fruit trade," he has begun the effort to establish such a trade in this city, under the name "Home Basket Fruit Co." He secured a small stand at the lower part of Market street and gave out several thousand small circulars making the following offer:

BLACK MALVOISE GRAPES.

FRESH FROM THE RANCH.

The grapes you buy to-day
Were on the vines yesterday.

FIVE POUNDS FOR 10 CENTS.
TWO POUNDS FOR 5 CENTS.

Five lbs. for 25 cts., including a 15c. lunch-basket, and if you will bring the basket back, will fill it again for ten cents every day as long as the crop holds out.

This announcement proved attractive and sales were considerable from the start, and the trade was so economically and ingeniously conducted that the grapes netted two cents per pound, or $40 per ton. The experience with the first stand has led to the establishment of two others at points higher up on Market St.

The experiment is still in progress, and whether the sale of fruit on such a low scale of prices at retail can be made permanently profitable remains to be seen. The experiment has within it the testing of the general proposition to extend the sale of fresh, wholesome fruit in large quantities at rates which are low and yet yield the producer more than he can get through existing channels. To attempt such an enterprise as is now being tried requires personal qualifications for driving close trade and causes the producer to put in his own time possibly at rather low wages. Consequently many producers are not personally qualified for such an undertaking and others can make better use of their time, perhaps. Thus, while the experiment now under trial does not offer a field to all producers, it may possibly lead to a reduction of the retailer's extortions and open the way for a much larger consumption of fruit, at prices which will pay producers something better than they now usually get. For this reason, we have alluded to the subject and noted the progress of the experiment thus far.

Fruit for Eastern Shipment.

P. E. Platt, the well-known fruit-shipper, recently spoke appreciatively to a reporter of the *Record-Union* concerning the progress being made in handling fruit for Eastern sale both before shipment and en route. He also gave utterance to some conservative statements which we think it very desirable to give wider audience through the Rural:

This fruit-growing and fruit-shipping industry is growing into mammoth proportions, and all that it requires is intelligent and judicious treatment at the hands of those engaged in it to make it all that the most sanguine believers in California's future have dared to prophesy. People who read and hear of the excellent prices our fruit had brought, are apt to rush into the business of fruit-growing, thinking that all they have to do is to plant a vineyard or orchard anywhere, and then sit down and receipt for the proceeds of their sales as the money rolls in. Men jump at the conclusion that as Tokay grapes sell well in the Eastern market, they can plant vines and grow a good shipping article on any ground. But this is not true. Much depends upon the character of the soil, the manner of cultivation, care in selecting the best fruit for shipping, and equally as much attention to the packing. Some men have made great successes with their Tokay grapes, but it is because they have conducted the business of growing and shipping with intelligence and care. The same may be said of other fruits. Some are especially adapted to shipping and others are not. Hence some growers will get rich while others will remain poor.

It is very important to emphasize the fact that fruit-growing is skillful business, and as the time has gone by when "any fool would do for a farmer," it is also out of date to make a fruit-grower out of a man who cannot bring plenty of brains, and time to use them, to the fruit-producing enterprise. The higher the prices go the more valuable become the real-estate agents, and they often forget to mention the fact that fruit-growing must be well conducted to prove satisfactory or profitable. Hence we desire to guard some, perhaps, from loss and disappointment by the publication of Mr. Platt's statements. At the same time, to a man who is ready and willing to give thought and attention to the effort and is not too old, conceited or too thick-headed to learn something new every day he lives, the production of fruit and the investment of time and capital therein offers perhaps the best field for effort at present in this State.

There is also much being learned in the shipment of our fruits. Referring to the method of handling fruit, and of its shipment, Mr. Platt said there had been almost a complete transformation in the past year or two. Instead of the old style of ventilated cars, shippers are now using refrigerator cars made expressly for this trade. Shipments made by these cars generally arrive in good condition, and there has been much less complaint this year than formerly from Eastern handlers. The railroad company has just completed a two-story ice-house alongside one of the tracks in Sacramento, where the refrigerator cars are supplied with ice. The first supply of ice cools the fruit throughout the car, and when it is renewed before leaving the Sierra Nevada mountains, comparatively little melting of ice follows, as the fruit and the interior of the car are then thoroughly chilled.

Telegraphed reports from Eastern cities continue to speak well of California fruit. The New York market, as has been previously hinted in at our columns, is proving a vast outlet for our fruit; in fact, all the prophecies which far-seeing Californians indulged in a few years ago about the results of much wider distribution of our fruit than the Chicago trade afforded, are being more than realized. They may have better local fruit crops at the East next year, but the advantage gained this year by California fruit will not be lost. The East can easily eat all they can grow themselves and all we can furnish also.

Irrigation.—The Senate resolution continuing the Select Committee on Irrigation and the Reclamation of Arid Lands during the present Congress has been agreed to.

Friction in Water Traffic.

It is not alone the railroad which grieves producers by exactions. The genius of transportation seems to be continually at war with the genius of production, there being an unceasing effort to get all the traffic will bear by all who take a hand in moving the product from the farm to the market. The river farmers have often enjoyed considerable advantage because of their ability to employ water transportation, but sometimes they have evils to complain of which should be speedily reduced by some competent power.

There is just now a point at issue between the producers, the Harbor Commissioners, the steamship-owners and the city receivers, each against the other perhaps, and the farmer underneath the whole conflict, because whatever the nature of the exaction, it is finally charged against the receipts for the produce and the farmer loses it. The matter came to public notice first through statements by captains of the river steamers to this effect:

Farmers are indignant over the manner in which the new system of collecting tolls robs them. In the days when the State had collectors on each dock, tolls were paid by the consignees through the drivers of the wagons that carted the produce away. Now that the credit system is in vogue, the tolls are charged up to the commission house receiving the shipments, and they come back on the farmers for the amount. The toll thus charged the farmers is largely increased, presumably to the profit of the commission men.

For instance, if the wagon of one commission house makes a load of the consignments of ten farmers, amounting to two tons, the commission house is charged 10 cents for the use of the wharf in hauling that load away, although the steamer which brings the produce down is already paying dockage. The commission merchant may promptly convert the tax on him into a source of profit by charging each of the ten farmers the price of the use of the dock, or a total of $1 for what costs him but ten cents.

The farmers' protest is that they pay freight on their produce to the steamer, which pays dockage, and that they also pay State taxes for the maintenance of the wharves. After all this, to compel them to pay wharf tolls on their shipments is unjust and extortionate. The bills are an annoyance and in the cases of heavy producers they amount to a large sum. Alex. Brown, the wholesale potato-grower of Walnut Grove, is probably the biggest victim. An estimate of his crop at five cents a ton will make his wharfage tolls several thousand dollars for the year 1890, and when it is considered that up to a few years ago there were no tolls imposed on the farmers, it will be seen that this cuts a tremendous slice off the meager profits of the produce-raisers, while the State obtains no benefit from it.

It was hardly to be expected that the commission merchants would rest under this soft impeachment made public by the steamboat men, but they in turn set about showing that the steamboat men were really doubling up the toll charges. A few days ago a statement was printed, signed by many of the large receivers of produce from the riverside farms. These navigation companies have been, according to the statements of the merchants, charging two and three cents a ton more than the five cents a ton allowed by the law. Their frequent demurrers to the rates producing no beneficial results, a meeting of the dealers was called, and after a thorough discussion of the matter, a communication in the form of a petition was agreed upon and addressed to the California Navigation and Improvement Company, complaining of the excessive State tolls charged by that company, the grievance complained of in the same being set forth as follows:

By comparing weights of freight, we find that toll is not charged by the ton, as provided by law, but by the amount of freight bill, and in many instances you charge two and three times the proper amount.

The California Navigation Company, in response to the petition, stated that "the practice of charging toll by amount of freight bill instead of by exact weight is due to the fact that it is next to impossible to ascertain exact weights, and to the further fact that the freight clerks save themselves a great amount of labor by so doing."

On inquiry as to why the rates fixed by law were changed, it is stated that the changes now made are in accordance with a resolution of the Board of Harbor Commissioners, which regulated and established the present system of tolls. Thus the Board of Harbor Commissioners come into the issue and they are promised an opportunity to show by what right they change tolls established by law.

On the whole, the matter seems to be in a great tangle and possibly will need an investigation by a legislative committee to straighten it out. This should be demanded this winter by the farmers, for dark as the problem may be, there is one plain fact, that the producer is losing in a "game he does not understand."

AGRICULTURAL PROGRESS.—The census returns show that like the Indian and the buffalo, range cattle are becoming a thing of the past. With the constant encroachments of the homesteader and the farm, the mining towns and cities that are springing up all over what was once the almost boundless "range," the days of the vast herds, and to a great extent of the cowboy, are numbered. Thus the evolution goes on; first the savage and the native buffalo, then the half-wild cattle with their half-civilized attendants; and then the farm, the city, and civilization. Where the vast territory in its wild condition supported the few, millions under civilization will lead peaceful and happy lives. "Ring out the old, ring in the new."

THE SEQUOIA PARK.—Secretary Noble has promulgated rules and regulations for the government of the park in Tulare county, containing the mammoth sequoias trees, created by Act of Congress and approved Sept. 25, 1890. The secretary christens it "The Sequoia National Park." The rules for its regulation are substantially the same as those covering the Yellowstone Park. The secretary said that if he found it practicable he would procure from a tract adjoining the park a section of one of the mammoth trees for exhibition at the World's Fair at Chicago.

THE LONG-DISTANCE TELEPHONE SERVICE has been made so efficient that the roar of Niagara Falls can be heard in New York over the lines.

Mrs Edith Z. Roache.

The picture upon this page is an accurate and pleasing likeness of Mrs. Edith Z. Roache, now Worthy Master of Watsonville Grange, as she appeared in the garb of Pomona at State Grange at Santa Rosa in 1887. Those who had the pleasure of seeing her thus arrayed will recollect how her beautiful sash, head-dress and bouquet, composed mostly of fresh, many-hued natural grapes, and the queenly air with which she wore them, won the admiration of all beholders.

She was born in 1853 at Aurora, Ill., and there attended the public school. At the age of 13 years she organized and taught a private school, and by teaching from time to time earned money enough to obtain a musical education. Entering the State Normal school at Bloomington, she took the full course and graduated well up in a large class. After nine years' successful teaching in Elgin, Chicago and other places, she felt a pressing need of rest and change; so in 1876 she visited the Centennial Exposition at Philadelphia, and after making the tour of Washington, New York, Boston and other Eastern cities, courageously set out for California. February, 1877, found her in San Jose, alone and an utter stranger. By the 24th of that month she had secured a school and commenced teaching at Watsonville. A year later she received a life-diploma, and on Feb. 22, 1878, married A. P. Roache of Watsonville, where they still reside, working unitedly with noble purpose.



MRS. E. Z. ROACHE AS POMONA OF THE STATE GRANGE.

Soon joining the local Grange, she was successively chosen Lecturer, Overseer and Master, besides being (as above mentioned) Pomona of the State Grange from 1885 to 1887. She has also been on the Board of the Grangers' Union Co-operative store, and the Vice presidency of the Pajaro Valley Fair Association.

With tongue and pen Sister Roache has served the Grange cause heartily, faithfully, and effectively. Her original and select recitals have always been such as to move us with the love of humanity, animating our hearts with nobler purposes and nerving our hands to better deeds. Those who have listened to her eloquent appeals can never cease to admire her for her devoted and able efforts, in which, it hardly need be said, she has always enjoyed the full sympathy and support of her husband, the present W. O. of the State Grange of California.

POULTRY YARD.

Dr. Gally's Hen Disaster.

EDITORS PRESS:—Since you published my letter in which I related the sudden and unaccountable death of my 60 hens, I have received several advices, oral and written, upon that subject.

One letter received by me tells me that the cause is poisoned wheat, but as I cannot find that any such wheat was put out this year within several miles of my place, I find it not easy to agree with the poison idea. In this neighborhood we never have cause to use poisoned grain for other than gophers, and this year, owing to the big wet last winter and spring, we have no gophers worth mention.

Several letters and persons inform me that the hen deaths came from rotten potatoes, but there has been no such potatoes on my place or the place of my nearest neighbor this year. Last spring I bought 40 sacks of seed potatoes direct from San Francisco and they were all immediately planted. Besides that, Mr. John Trafton of this valley, out of 500 hens and chickens, saved only 60 by using carbolic acid and other remedies industriously. Mr. Trafton has raised chickens and potatoes constantly and extensively together on his place, and he says that potatoes will not cause hen death. He says he thinks it is cholera—chicken cholera. But if it is that, and it being contagious, why did it not affect the nearest neighbors?

Other persons say that the cause of my hen disaster is the eating of a beetle found upon the growing potato-vines. Well, that, though not proven, may be, because there was a thrifty growing field of potatoes within a few yards of my barn-yard; another field about 75 yards away; and another across the county-road about the same distance. I give it up.

Hereunto I append an intelligent letter on the hen subject:

FILLMORE, Ventura Co., Cal., Sept. 22, 1890.

Mr. Gally: I see in the RURAL PRESS that you have had your poultry-yard cleaned out with some unknown disease. Had you any unsound potatoes lying around at the time? If so I would suggest that as the cause of your hens dying.

I had a lot die once and did not know what was the matter for a long time after; and now I would not let my chickens get one potato, but burn or bury them out of the way of the hens. I know more cases than my own, and I may say your hens acted just as mine did. Sun-burned potatoes will kill cows. We also had a fine lot of poultry poisoned by fermented fruit. JAMES SHIELLS.

Filmore, Ventura Co.

I would incline to the cholera theory; but I have seen chicken cholera, and my trouble but very slightly resembled that disease.

J. W. GALLY.

Watsonville, Sept. 28, 1890.

From Another Correspondent.

EDITORS PRESS:—In relation to the loss of Mr. Gally's poultry, it is to my mind a clear case of poisoning, as all died. In what way they obtained it is for Mr. Gally to find out. They might have found squirrel poison brought to the top of his wheat field, put out in previous years, or perhaps to spraying fruit trees the trouble could be traced.

Mr. Smith, too, will, by giving close attention, discover a cause of the great loss in his poultry other than a disease. We have never heard a case like Mr. Gally's, and yet we keep about the same number of fowls and precisely the same kinds, but buy roosters annually from breeders of choice fowls. J. T. HOYT.

San Mateo.

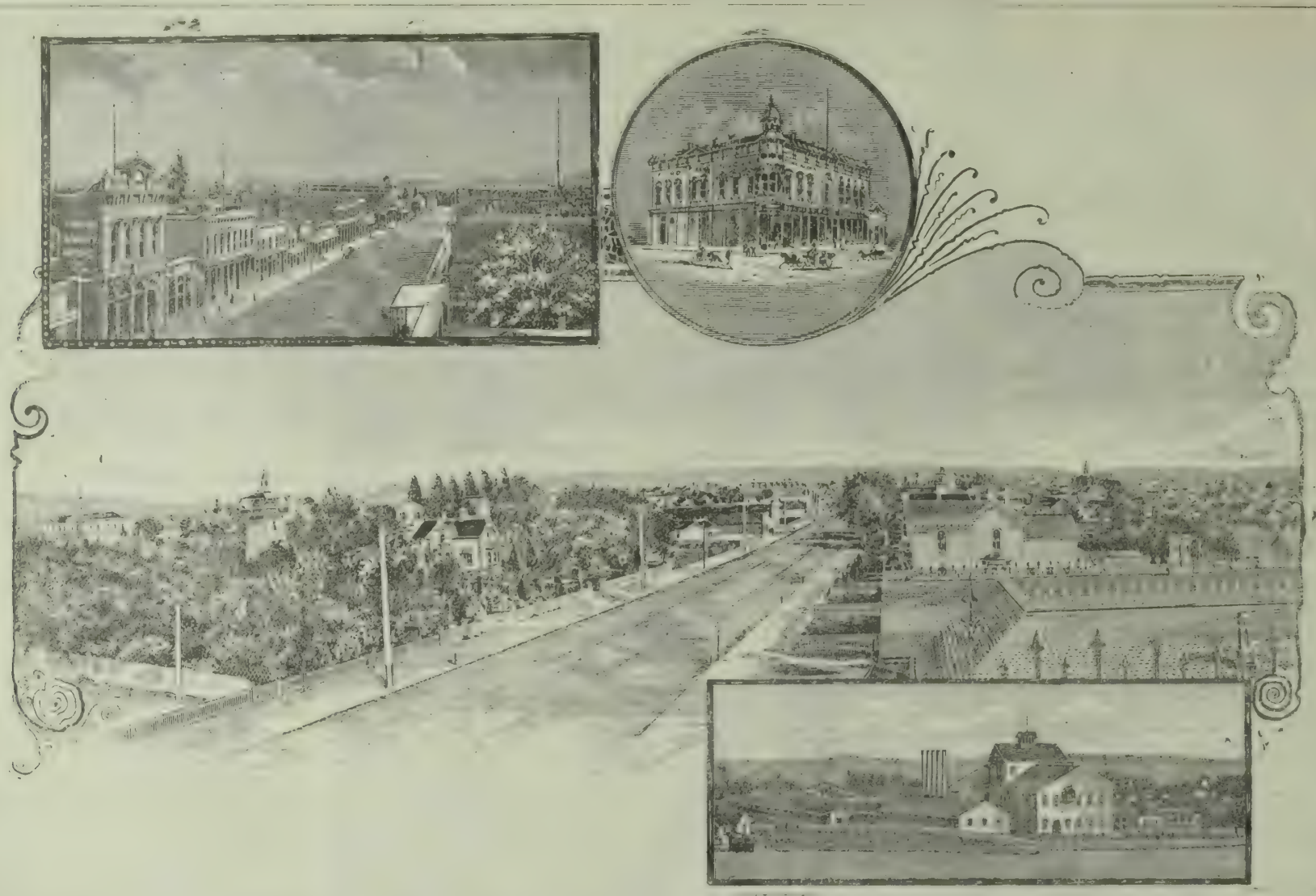
Eggs for Sitters.

EDITORS PRESS:—How many eggs shall we place under a sitting hen? My numbers are 12, 14 or 16; my neighbor's, 13 or 15. Which is right?—A. L., *San Jacinto.*

The number should be what the hen will cover well, and this depends upon the size of the eggs and upon the size of the hen. That the number should be odd and not even is little more than a matter of taste. Probably the prevailing number used is 13 to a setting, but some breeders use a smaller number, say 9 to 11. We have set six hens during the last week, and have used all the way from 9 to 13, as the hen seemed to show her covering quality.—EDS. PRESS.

THE coming winter, according to John McKinney of Lake Tahoe, is liable to be as heavy as the last, and perhaps a little worse. The Carson *Appeal* says he bases his calculations on the fact that the pine cones grow in the tops of the trees, also the prevailing winds of this summer at the lake. Mac says he has won every bet he has made on the weather at the lake, and hasn't had to buy a hat for 20 years.

THE MAN who is trying to climb up finds lots of heels above him and lots of fists behind him.



CITY OF WATSONVILLE—WESTERN BEET SUGAR FACTORY.

Watsonville and the Pajaro Valley.

As peculiarly appropriate to the issue of the RURAL PRESS just preceding the session of the California State Grange at Watsonville, we present herewith some views of that thriving little city and the products of the fertile valley of which it is the commercial center.

The Pajaro (pronounced Pah-har-o) valley lies mostly in Santa Cruz and partly in Monterey county, embracing, with adjacent foothill and mountain valley land, about 50,000 acres. In form it is nearly circular, having the Bay of Monterey to the westward, the foothills of Aptos to the northwest, Loma Prieta looming up darkly to the north, the Santa Cruz mountains to the east, and the Gabilan range and the foothills of Monterey county to the south.

To view the Pajaro valley in all its beauty, one should take a stand upon the Santa Cruz mountains and look off toward the horizon, where the heavens seem to meet the Pacific ocean. Near the foothills is a chain of beautiful lakes that furnish water for irrigating berry-fields and gardens. Beyond them one sees the vari-colored fields of wheat, barley, corn, hops, beets, potatoes and beans, orchards and vineyards, presenting a wonderful mosaic. To the left the Pajaro river, with its wide bed of shining sand, pursues its winding course to the bay. In the distance is Watsonville, coolly shaded by many trees, above whose green foliage the white church spires glisten in the sunlight. In the background a dense volume of smoke pours from the numerous chimneys of the largest beet-sugar factory in the United States; and a little farther breaks the white surf-line of the Bay of Monterey.

The valley is traversed by excellent roads, making every part of it, and contiguous foothills and mountains, accessible to Watsonville, the commercial center and shipping-point. Stock-raising is carried on to a limited extent in the mountains adjacent.

Some additional facts might be given about the marvelous products of the valley, such as pumpkins weighing 275 pounds each, 35 tons of sugar beets from one acre, 300 sacks of potatoes from one acre, 57 tons of hops from 42 acres, 10 tons of strawberries from one acre, etc., but they are misleading because they represent exceptional yields. But they also show what the valley is capable of doing when it tries to make a record.

Watsonville.

Watsonville has a population of about 2200 people, excellent public schools and a high school, the usual quota of religious organizations and churches, substantial business houses, two banks, first-class hotels, and numerous pretty residences. There are a number of fruit-packing establishments and commission-houses, which do an extensive business.

The town is situated on a branch of the Coast Division of the Southern Pacific railroad, connecting Santa Cruz with the main line at Pajaro, two miles southeast of Watsonville. It has direct railway shipping facilities to San Francisco, 100 miles distant, and is only a few miles from the Bay of Monterey, where the coast steamers touch.

The Western Beet-Sugar Factory is located here, and the company have lately constructed a narrow-gauge railroad from Watsonville to their extensive sugar-beet plantation on the Moro Cojo Rancho, 13 miles distant, and near the town of Castroville, in Monterey county. In addition to transporting the products of their plantation to the factory, this road will carry the products of that section of the country to the Watsonville market, and thus create a new source of wealth for the town and increase its prosperity.

Three newspapers devoted to the interests of the town and valley are published here. The *Pajaronian* is owned and conducted by W. R. Radcliff. It is Republican in politics, consistent in its course relative to all local matters, and fearless and independent in the expression of opinions on all subjects. The *Transcript*, published by Geo. W. Peckham, is Democratic in politics, and, like its contemporary, devoted to the upbuilding of the town and the valley. The *Rustler*, established by Joe Hetherington, and now owned and published by Hetherington & Anderson, is the latest born of Watsonville papers. It is independent, with Democratic proclivities, and is very appropriately named, as the business which it has built up in a comparatively short time entitles it to the appellation which it displays at the head of its columns. The papers are all published weekly and have done much for this section of the county.

A pleasant seaside resort near Watsonville bears the name Camp Goodall, in honor of Capt. Goodall, of Goodall, Perkins & Co., owners of the coast line of steamers. It possesses the natural features in common with other resorts upon the shores of the Bay of Monterey, with the added advantage of extensive clam-beds in the immediate vicinity, and, as a natural result, one of the fashionable features of this place has been clam-bakes. There is good surf-bathing at Camp Goodall, and it is a comfortable place to spend the hot days of summer.

The Pajaro valley is not only picturesquely beautiful, but wonderfully fertile and productive. In the days of wheat and barley, the yield of those cereals in this valley was equal to the crops on the islands of the Sacramento river, where more than 100 bushels to the acre have been harvested. But the period of cereal growing is passing away, owing to the greater profits to be obtained from the culture of fruit, vines and various vegetable products. Fields of beans, potatoes, sugar beets and corn, with orchards and vineyards, have to a great extent taken the place of the grain fields. From potatoes, beans or beets a net annual return of $50 per acre, and from strawberries and orchard fruits, notably apples and prunes, $100 per acre, are low estimates of the actual results. The yield of strawberries in this valley is about three tons to the acre, the season lasting from eight to nine months.

The Pajaro valley is a country of small farms and of wealthy and well-to-do people. The records show that there are fewer mortgages on the property of the Pajaro valley than upon any other property in the county. The people are industrious, but their prosperity is due in a great measure to the wonderful fertility of the soil, small land-holdings, and the consequent thorough cultivation. The people of the valley have a common interest, and the free exchange of ideas and opinions relative to the common good has no doubt been a valuable

(Continued on page 298.)

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THE IMPROVED CLIMAX NO. 2

Is a double pump mounted on a 50-gallon barrel and equipped complete with two lines of hose, spray tips, extensions, shut-off valves, etc. This outfit has just been improved and perfected for the season of 1890-91, and is especially desirable in large orchards where economy in material and labor is necessary. Send for descriptive catalogue and testimonials. Address all communications to

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HATS AND CAPS, GENTLEMEN'S FURNISHINGS,
FANCY GOODS, NOTIONS,
TRUNKS AND VALISES,
CLOAKS AND WRAPS, &c., &c.

The People of Watsonville and Visitors to our Town are invited to inspect the Magnificent Fall and Winter Stock, which is New, Bright and Fresh for the Season.

We guarantee Uniform Courtesy and Attention to our Patrons. Our Price is Strictly a Cash Price, from which there is no deviation. We give a Square Deal and like to get one.

Our goods will be found Reliable, and we claim to offer inducements to Cash Purchasers such as cannot be beaten south of San Francisco.

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Respectfully,

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Hardware,
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Glassware,
Hay,
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We Buy Our Goods From First Hands in Large Quantities for Cash.

We Use Every Prudent Economy in the Conduct of Our Business, and Aim to Give Our Customers, in All Cases,

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Carrying the Largest Stock and Doing the Largest General Merchandise Business in Santa Cruz County, we are in a Position to Give

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We Have a Successful Experience of Nearly Forty Years and the BEST FACILITIES for Handling All Kinds of General Merchandise.

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Linoleums,
Furniture,
Window Shades,
Lace Curtains,
Picture Frames,
Etc., Etc.

CHARLES FORD COMPANY,

WATSONVILLE, CAL.



PRODUCTS OF THE PAJARO VALLEY—EXHIBITS AT DISTRICT FAIR AND THREE-YEAR-OLD APPLE TREE.

Watsonville and the Pajaro Valley.

(*Concluded from page 294.*)

auxiliary to the prosperity-producing conditions before noted.

Among other things, and a paradox in California, is an annual fair without a horse-race or any kind of gambling, given under the auspices of the Pajaro Valley Agricultural Fair Association. This association was organized in 1886, and possesses, besides omitting the horse-racing program, these distinctive features: They receive no State appropriation; encourage the young by having a juvenile department with one-half the premiums that all other departments get, including public-school work; give entertainments every evening during Fair week, each year introducing numerous novelties. But the most conspicuous cause of the great success of this organization is the fact that eight of the directors are ladies, viz.: Mesdames E. Z. Roache, A. E. Osborn, A. A. Libby, L. V. Willits, N. A. Uren, G. B. Card, M. E. Tuttle, and H. S. Stipp. The remaining directors are James Waters, A. P. Roache, G. W. Sill, N. A. Uren, A. N. Judd, and H. S. Stipp.

The engraving above, which illustrates some of the principal products of this valley, is from a photograph, by Clark of Watsonville, of exhibits at the Fair of 1889.

The Pajaro Valley Agricultural Association, District No. 24, is composed of the following directors: James Waters, A. N. Judd, G. W. Sill, H. S. Jessen, A. P. Roache, T. J. Horgan, James A. Linscott, and Daniel Tuttle. The officers are: James Waters, president; J. A. Hall, secretary; and J. J. Morey, treasurer.

The Beet-Sugar Factory.

The largest beet-sugar factory in the State, and the one containing the latest and best machinery, is located at Watsonville. It belongs to the Western Sugar-Beet Co., of which Claus Spreckels is the most active representative and largest stockholder. The location could not be excelled, if indeed it could be equaled, elsewhere. The rich alluvial soil of the Pajaro valley produces the largest crop of beets, and these beets contain the highest percentage of sugar and are superior to similar products in Germany, the native home of the beet-sugar industry. The factory at Watsonville represents an investment of over $500,000. It has an average capacity of 350 tons of beets each day, or 45 tons of sugar. It runs from three to five months during the year, or from the time beets ripen until they are all harvested. When the factory is running, 150 men are employed, $12,000 are expended monthly in wages, and $40,000 per month paid to farmers for beets, and 1300 tons of lime-rock are imported annually from Santa Cruz for the lime used in the process of making the sugar.

The culture of sugar beets has proved profitable to farmers of Pajaro valley. The farmer knows just what he is going to receive for the products of his land, as the company pays a uniform price of $4 per ton for beets showing 14 per cent of sugar, and 50 cents additional per ton for each percentage or degree of polarization above 14. As some of the beets run as high as 22 per cent, resulting from being planted upon the right kind of soil and properly cultivated, the intelligent farmer is more likely to receive from $6 to $8 than $4 a ton. As a yield of 15 tons to an acre is considered only an average, the gross revenue of a beet-field is, at $5 per ton, $75 per acre. In a little pamphlet on beet culture, supplied by the company, the total cost of an acre of beets delivered at the factory, including rent of land, $12 50, is estimated at $50. This leaves a net revenue of $25 per acre; but if the farmer does his own work, and does not include rental, the net revenue will be figured at $40 or $50 per acre. Instances might be given showing profits up to $70 per acre, and indeed 35 tons of sugar beets have been raised upon one acre of land.

Heretofore the factory has run but about three months of the year, owing to the insufficient supply of beets. This year, to obviate a short run and consequent curtailment of profits, besides 2000 acres of beets planted by the farmers of the valley, the company has rented a part of the Moro Cojo Rancho, near Castroville, and planted thereon 1200 acres of beets. They have constructed a narrow-gauge railroad from the factory to the plantation, a distance of 13 miles, which doubtless will stimulate the industry of beet culture in the vicinity of its terminus, as there are not less than 10,000 acres here of the finest beet land the sun ever shone upon. The Moro Cojo Sugar-Beet Plantation is under the immediate supervision of W. V. Gaffey, one of Watsonville's prominent and enterprising citizens. The general management of the factory and its contingent interests is intrusted to W. C. Waters, whose experience and ability pre eminently qualify him for the responsible position which he successfully fills.

Another feature of the factory is an artesian well 16 feet in diameter, yielding 700 gallons per minute. This, with another well on the premises, will furnish a daily supply of 2,000,000 gallons of water, the quantity used by the factory when in active operation.

Pajaro Valley Products.

In addition to the general remarks in previous pages, upon the fertility and varied products of this valley, the special instances adduced below will interest the agricultural visitor:

A. N. Judd has a three-year-old orchard of 52 acres. In this orchard last year he had 21 acres of beets, from which he obtained a revenue of $1496; 19 acres of beans, representing a revenue of $1239; 12 acres of potatoes, which brought returns of $3008. The expense account reads as follows: By beets, $650; by beans, $460; by potatoes, $700; leaving $3952 as the total net receipts. To this must be added $1125, net worth of fruit sold from the orchard, making a total net revenue of $5078 from 52 acres. Now this is a fact, and not an extraordinary exhibit, and is misleading only to this extent: Last year there was a splendid yield of potatoes in the Pajaro valley, and the price of this product was unusually high. The data in regard to sugar-beets and beans represent average yields and average prices; but a fact in this connection worthy of remark is that such a quantity of produce was obtained from land on which was a thrifty orchard two and three years old, and from which was obtained a net revenue of more than $1000.

As a practical illustration of the results to be obtained from an apple orchard, and of the judgment of apple dealers, Mr. J. S. Menasco of Watsonville has sold the fruit of a young apple orchard, just coming into bearing, for the next eight years for 85 cents per 100 pounds. He has sold his prunes for $15 a ton. The purchaser is Marco Rabasa, a reliable fruit dealer of Watsonville. He contracts to take all the sound apples, large and small, grown in the orchard, to pick them and to prop the trees when they are liable to break from being overladen with fruit. He has also placed $1000 of forfeit money in the bank, and each has executed a bond of $5000 for the faithful performance of the contract. Mr. Menasco estimates the yield of his orchard, when in full bearing, at seven boxes of apples to the tree. He has 3000 trees, or 39 acres, as there are 77 trees to the acre. This orchard will produce 21,000 boxes of apples, which, at 42½ cents a box, will bring $8925. This estimate is made upon very low figures, as apple trees in full bearing frequently yield 1000 pounds, or 20 boxes, and failures in the fruit crop of the Pajaro valley are "conspicuous by their absence." George H. Brewington has sold his fruit upon the same terms, except that he lives nearer Watsonville, which means less expense in hauling. He is to receive 45 cents a box or 90 cents per 100 pounds.

Certain sections are specially adapted to the growth of hops, the soil being a sandy sediment, possessing a rare combination of qualities, which bring this plant to a state of comparative perfection. There are about 115 acres of hops in the Pajaro valley. The principal grower is Mr. O. Tuttle, who has 42 acres under cultivation. A part of this field is from 20 to 23 years old. The yield will average about one ton to the acre, although Mr. Tuttle has gathered 57 tons from these 42 acres. While it is difficult to estimate the average price of hops, about 15 cents a pound may be regarded as a fair estimate. In 1881 hops sold in this State for $1.15 a pound. That year Mr. Tuttle sold his hops for 55 cents a pound, and cleared $25,000 from a 20 acre field.

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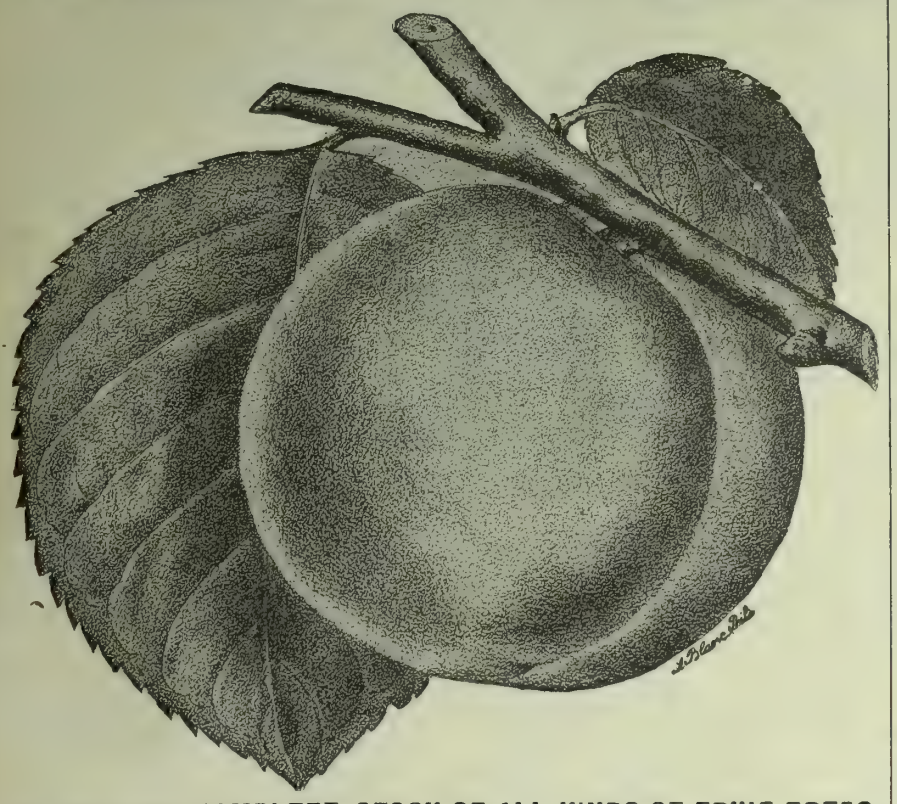
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Agricultural Notes.

CALIFORNIA.

Butte.

Points About Angora Goats. — Oroville *Register*, Sept. 25: G. C. Marquis of Concow has engaged in an occupation something out of the common run. He is raising a large number of Angora goats. These animals, as most of our readers are well aware, live upon the hills and mountain-sides, and do not require the pasture, care and constant watching that sheep do. The fleece brings from 30 to 50 cents a pound, and each goat will average about five pounds of wool. Mr. Marquis has 170 full-blooded Angoras and is keeping them at his home at Concow. He turns them out on the hills in the morning and they return of their own accord about 4 in the afternoon. He thus does not have to provide them with pasture nor seek for them at night. The milk of the Angora goat is rich and sweet, while the meat is more juicy and has less of a strong flavor than mutton.

Colusa.

Sheep.—Orland *News*, Sept. 27: Hon. John Boggs has had 15,000 sheep sheared a few miles northwest of here, and has sold 5000 for mutton.

Contra Costa.

Grape Crop. — Martinez, Sept. 24: The grapes in this vicinity have been slow in ripening this season, owing in great measure to the rather unseasonably cool weather. In many vineyards the practice of staking the vines is not followed, and grapes lying low and being constantly shaded are slow in coming to maturity. When raised up and exposed to the warmth of the sun and the free circulation of air, their ripening is materially hastened. Good prices are being realized from the crop.

Fresno.

Alta Irrigation District. — Selma *Irrigator*, Sept. 22: The Alta irrigation district, in spite of the injunction that was filed by O. L. Abbott, is now at work surveying ditches for the purpose of completing the entire system of irrigation for the district. There has been considerable talk abroad about district bonds; some say they can't be sold. There have been several $500 bonds sold here for cash, and several parties have offered to complete the entire system of irrigation for the district and take their pay all in bonds at par.

Kern.

Peach Items.—Bakersfield *Gazette*, Sept. 27: Peach-packing at the Maul orchard was completed on Wednesday afternoon. From 20 acres, 160 tons of George's Late Cling peaches were obtained; and there will still be realized two or three tons of dried fruit, for which Mr. Maul has already been offered 18 cents per pound. The fruit has been shipped East by the Earl Packing Co. of Sacramento, and high rates are being obtained for it.

Large Sale.—Bakersfield *Echo*, Sept. 25: The Cuyama rancho, consisting of 27,000 acres, is sold to Ex-Gov. Geo. C. Perkins. This rancho lies in the Coast Range mountains, and is used as a stock range. The consideration is said to have been $3 per acre. About 2000 head of stock cattle were sold at the same time to Gov. Perkins.

Lake.

Drying Grapes.—Lower Lake *Press*, Sept. 27: Mr. H. W. Green of Konocksti vineyard has adopted a novel and practical method of drying grapes. The grapes are picked and placed on pieces of sacking about four feet square and in this manner are allowed to dry in the vineyard. The advantage claimed for this method is that it requires less boxes, and very little time is occupied gathering up the grapes when dried, while it prevents dirt getting among the drying grapes.

Los Angeles.

Pomona Dried Fruit Industry.—Los Angeles *Herald*, Sept. 27: Very little wine is being made this year at the winery, as nearly all the grapes are being dried for shipment to New York. The driers are making pots full of money out of the crop. They paid the growers $9 to $12 a ton, or about half a cent a pound for the green grapes, and sell them dried for $70 a ton. Three pounds of the green fruit will make rather more than one of dried, so that a profit is a good deal more than 100 per cent. Last Monday five cars of about 75 tons were sent East, and it is estimated that in all there will be between 500 and 600 tons to go. One firm has dried, at Pomona, 925 tons of apricots and 340 of prunes. The same establishment will can 550 tons of peaches. These figures do not represent, probably, more than a third of the total crop of the place. The whole area of territory contributing to this industry at Pomona is not more than four or five miles square, yet the fruit crop will run up to nearly 5000 tons, all prepared for market.

Cheese.—L. A. *Herald*, Sept. 27: The new cheese factory that has been started at Downey is sending in a very superior quality of cheese. They are pronounced by the trade as the best yet manufactured in this section of the State. The dairy lands in the vicinity of Downey are very extensive and there is no reason why this industry should not become one of the most successful and important industries in connection with the farms that have as yet been started at this end of the State.

Monterey.

Glanders Discovered.—Salinas *Democrat*, Sept. 27: Dr. A. E. Buzard, the veterinary surgeon, who is making an inspection of the horses of the county, writes to Supervisor Samuels that he found the country free from glanders until he reached the old Soledad Mission, where he says: "I find the disease terribly bad. I condemned and had killed six horses yesterday (Wednesday) afternoon." The doctor is going to the Arroyo Seco district, where he is informed that glanders are prevalent. After examining the stock in the Arroyo Seco country, he will go to San Lucas, where he is credibly informed many horses are affected. Dr. Buzard writes that he has met with no trouble, as every one seems anxious to have the matter investigated. They declare that they have had the disease among their stock for three or four years and did not know what it was. He says: "The owners themselves have had many infected animals destroyed."

Nevada.

Irrigation District.—Grass Valley *Tidings*, Sept. 26: D. O. Daggett of Brown's Valley, Yuba county, is the prime mover in a big irrigation enterprise. A stock company has been organized and between $30,000 and $35,000 already secured. It is proposed to take water from the Yuba at a point nearly opposite Deer creek and carry it along a route that will enable the irrigation of all the tillable land in the northern part of Yuba county between the Yuba and Feather rivers. The main ditch will be 16 miles in length.

Silkworms and Hazel nut Leaves.—Nevada *Herald*, Sept. 24: Prof. Ed Muller and Felix Gillet, the well-known nurseryman of this city, have made what may prove a very valuable discovery. A short time since Mr. Gillet found on the leaves of a hazel-nut bush in his nursery a large and perfect silk cocoon, which he gave to Prof. Muller to preserve. Last Sunday Muller went to the nursery and the two commenced to search for more, and they succeeded in finding two. They are equal in size to the largest French cocoon, and contain about as much silk. The color is light straw, and the fiber seems very fine and strong. Under this brush, on the ground, one of the worms was found. It is of a greenish color, and resembles other silkworms with the exception of the horn. Prof. Muller has now three of these cocoons in his possession, which will be closely watched. He feels quite certain that the butterfly or moth will hatch inside of 20 days. If there chances to be male and female, he will preserve the egg till spring, when they will hatch in time to feed upon the young hazel-nut leaves, which are the worms' natural food. He will experiment with and try to domesticate them. If successful in raising a crop, there is no doubt but it will create a new and valuable industry, viz: silk-raising of a pure California product. This species of silkworm would not be subjected to failure of food, as the Chinese and other varieties are which feed on mulberry leaves only, which are subject to destruction by late frosts. The gentlemen have been looking for some species of this kind for the past ten years, they at that time being quite extensively engaged in the silkworm business in this city.

Sacramento.

Improved Method of Shipping Fruit.—Sacramento *Bee*, Sept. 27: Readers of the *Bee* have probably missed this season the daily notices of special fruit trains such as used to go out every day during the fruit season last year. Then it was no uncommon thing for one or even two full trains of ten or more cars each to leave for Chicago of an evening, all loaded with California fruits of every description. The fact is that there has been a complete revolution in the manner of shipping fresh fruit within a year, and special fruit trains of the old car style are practically a thing of the past. The ventilated car through which the air passes by means of holes bored in each end, is no longer the favorite with shippers. It has been found that the surer way is to use refrigerator cars in which the springs are padded with cotton batting, thus excluding the air as nearly as may be entirely. The fruit is so loaded that the air in the car at the start may reach every box or crate, just as was done in the ventilated car. This air is kept cold by means of ice loaded into the top of the car. In the case of the regular refrigerator cars, the ice which is first put in at Sacramento, has to be replaced at Truckee, and if the car goes east of Chicago, at that place also. Another kind of refrigerator car has to take ice at Sacramento, Truckee, Ogden, Cheyenne, Council Bluffs and at Chicago, if its destination is farther east. Of course, the new way costs more than the old, but shippers prefer it, as it is claimed that the fruit reaches its destination in better order and without risk, although the time required is longer, being seven or eight to Chicago, ten or eleven to New York, and about thirteen days to Boston. For each refrigerator car a charge is made of $125 to Chicago, and $50 more to New York.

San Benito.

Grain Crop. — Watsonville *Pajaronian*, Sept. 25: Grain sacks were so scarce in Hollister last week that several machines had to shut down until a supply could be procured from San Francisco. The grain crop in San Benito is much larger than was estimated, and thrashing is not yet finished.

San Diego.

Honey.—San Jacinto *Register*, Sept. 25: The honey market is way above the average this season. Prices are good, and the demand greater than the supply. Kauffman & Haas have shipped this week two carloads of honey to Chicago. Yesterday they received a telegram from New York asking for three carloads. They will be shipped next week.

Potato Crop.—San Jacinto *Register*, Sept. 19: Since the announcement by the Eastern papers of the almost total failure of the potato crop in most of the States, quite a number of our citizens have deemed it a prudential measure to put in a much larger crop than they otherwise would. Our neighbors of the little town of Florida have in over 25 acres. On the Hemet tract in South San Jacinto one man has in 20 acres in a body. In Hewitt's addition to San Jacinto are some ten acres more.

Cabbage Crop.—San Diego, Sept. 19: The prospects are good for a large acreage of cabbage. Some fear that the supply will be greater than the demand. However, the Producers' Union expects to be able to handle an almost unlimited quantity in carload lots, having already found a ready market for winter cabbage.

San Joaquin.

Australian Wheat.—Stockton *Independent*, Sept. 20: The Crown Mills have received 56 tons of Australian wheat, which is being taken by the farmers of this and Stanislaus counties to renew their seed. The growing of Australian wheat has proved so successful in these counties that those who have tried it are extending the area devoted to it and caused the importation of this lot to sow new areas and refresh the seed for the old.

Santa Barbara.

Walnuts.—Santa Maria *Times*, Sept. 27: We were shown some walnuts grown on the ranch of J. H. Rice. They are of the soft-shell variety, of fair size, and pronounced by good judges to be a fine article. There will be several hundred acres put out in walnuts in the valley this winter. Our people are finding by actual experiment, no guesswork, what is best adapted to our soil and climate, consequently we are making haste slowly but surely.

Santa Cruz.

Sugar Beet.—Santa Cruz *Sentinel*, Sept. 27: So far this season, only beets raised on the Spreckels Moro Cojo ranch, leased property near Castroville, have been crushed. There are nearly 20,000 tons of beets from this 1200-acre ranch. This amount of beets will make about 2000 tons of crude sugar. Farmers in the vicinity have about as large an acreage, although they have not yet begun hauling to the factory. Last season the factory turned out something over 2000 tons of sugar; the season before, about 1600 tons.

Shasta.

Large Orchard. — Anderson *Enterprise*, Sept. 25: We are informed by Mr. Wm. Owens that Mr. Hatch, who will take possession of the farm he purchased of him on Oct. 1st, will plant, during the coming winter, to choice fruit trees, 500 acres. This will be the largest orchard in Tehama or Shasta counties, and one of the largest in Northern California. During subsequent winters hundreds of acres more will be added to the orchard, swelling it in the course of a few years to one of the largest and finest orchards on the coast.

Sonoma.

Dewberries.—Healdsburg *Enterprise*, Sept. 27: G. Hunziker of Cloverdale raises the Lucretia dewberry with much success. From less than an acre of vines (in their first bearing) he sold this year over $90 worth of the berries. He regards them as much more profitable than blackberries, with which he has experimented carefully.

Relative Land Values.—Santa Rosa *Democrat*, Sept. 27: As an instance showing the relative values of lands in this State and Kansas, the following is worthy of consideration: A gentleman of this city, Saturday, through the agency of a local real estate firm, traded 12 acres of land, with two acres in orchard and five acres in bearing, incumbered by a $1000 mortgage, for 160 acres of bottom-land, partially covered with walnut timber, in Kansas. More than half of the 160 acres is under cultivation.

Good Prices.—Petaluma *Argus*, Sept. 27: On last Wednesday one of the Santa Rosa canneries paid $80 per ton for a good quality of canning peaches. A San Francisco firm is contracting for grapes in the upper part of the county, paying $18 per ton, the purchaser furnishing the boxes.

Sutter.

A Band of Prize Angoras.—Williams *Farmer*, Sept. 27: Tuesday forenoon T. H. Harlan's band of goats passed through Williams on their return to the range from Sacramento, where they had been on exhibition in the Agricultural Park during the State Fair. This beautiful, proud family returned home adorned with blue ribbons, having secured for their master first award in every instance and for the county of Colusa the credit of being the home of the finest goats in the whole State of California. While in Sacramento Mr. Harlan sold 25 head of Angoras to Federico Mora, agent for the Costa Rica Government experimental stations, with headquarters at San Jose, Costa Rica. The animals will be shipped from this place in the course of two weeks. The sum realized by Mr. Harlan was $20 per head.

Levee-Work.—*Sutter Independent:* Under the supervision of Levee Director Brophy for the protection of the Feather bank, near the residence of W. H. Lee, on Wednesday, the piles were driven closer together than heretofore, and heavy timbers securely bolted to each pile so that each one strengthens the others. Heavy wire cables, doubled and twisted, run from the piles to strong posts in the bank, and these cables are drawn taut with block and tackle. Anchors will also be put in, which will aid in holding the piles firmly in place. The piles are sheathed with boards on the land side, and the space between these and the bank is being filled in with brush and sandbags. This is considered the most dangerous point on the whole river front in this district, and it is hoped the work now under way will make it reasonably safe. Work on No. 70 levee is moving along satisfactorily. The directors have at present about 160 four-horse teams and 24 two-horse teams at work. It is the intention to expend about $30,000 on the levee this year, which it is thought will put it in better condition than ever before. The work is expected to be completed by the first of November.

Vacant Land.—*Farmer*, Sept. 26: Statements from the Marysville land office give 1,280,000 acres of Government land not taken up in that district.

Tulare.

Banner Wheat County.—Visalia *Times*, Sept. 27: Tulare and Fresno counties raised more than one-half of the grain grown in this State this year. Tulare is yet the banner wheat-producing county in the State, notwithstanding the fact that many of her acres have been cultivated to trees and vines within the last year or two.

Organizing Against Grain Thieves.—Visalia, Sept. 27: There has been so much grain stolen from farmers this season, while it was stacked in the field, that an organized effort to catch the thieves has been made in some of the communities. Where this organization exists, farmers take their turn in watching the thoroughfares leading to a market, and every team traveling at night is halted and examined. It is the only manner farmers have for protecting their exposed grain, and some of these mornings a thief will be found hanging to an elevated wagon-tongue, and while the death may be a mystery, the universal verdict will be "served him right."

Dried Fruits.—Traver, Sept. 25: A drive through the colonies north of Traver reveals a busy scene during week days. The drying of raisins is in full blast, and there are also some late peaches still on the trays. Late pears are still ungathered, but nearly all other fruits, except raisins, are dried, sacked or boxed.

Wheat Sold.—Traver, Sept. 25: At this time last year, wheat was worth only $1.07½ per cental, and the warehouses were full of it on storage, as the price offered was not satisfactory to farmers. Now wheat is worth $1.10, has brought as high as $1.16½ this year, and there is very little, considering the heavy yield, that has not already been sold.

Hard Work Did it.—The Clough farm is one which most people who saw it in its uncultivated state considered to be worthless for anything but pasture, but hard work and plenty of water has shown what the soil is capable of, and the young orchard and vineyard now growing there can't be beat for a healthy, thrifty growth of trees and vines, and they are bearing well in their second year. Besides doing a great deal of work herself on the place, Mrs. Clough has raised 700 turkeys this year for the market.

Sugar-Cane on Alkali Lands.—Porterville, Sept. 19: It may not be generally known that sugar-cane can be grown successfully on land so strongly impregnated with alkali as to be generally considered worthless, but such is a fact, as has been proven by Mr. Swayze, who lives on the Harper place, a few miles west of town. He has about an acre of sugar-cane on such land, that it is estimated will make about 800 gallons of sorghum. Several stalks, which he brought to town week before last, measure 13 feet in length.

Ventura.

Bean Crop.—San Buenaventura, Sept. 26: The Santa Clara valley has been especially favored during the past season. The bean crop will not be as large as last year, but the quality is fine and prices are high, so that fully as much money will be brought into the valley from this source as in former seasons.

Barley Notes.—San Buenaventura, Sept. 26: Barley-raising has been successful, and prices have ruled more than double what they were last year; so that barley-growers who came out even last year will have a balance on the right side of the ledger this year. It is estimated that it costs about 45 cents per sack to raise and market barley, and this was about what it sold for last season. This year it is worth something like $1.25, which leaves a splendid margin to the producer, and no wonder the barley-men smile a very broad smile.

Yolo.

Olives.—Woodland *Mail*, Sept. 27: On Mr. Newton Cox's place, just south of town, there are 100 olive trees of the Picholine variety. They are between six and seven years old, and this year they bear their third paying crop. Two years ago Mr. Cox gathered 50 pounds of olives per tree and sold the crop for four cents per pound, or $2 per tree. Last year they bore 70 pounds to the tree, and the olives brought three cents, or $2.10 per tree. This year these same trees will produce $3 to the tree. As they are planted outside of the vineyard and in the avenues, they occupy soil otherwise lost. These trees are still young. Ordinarily, the olive is not expected to bear much before it is six or seven years old, but these trees began to pay well the fourth year. The olive, like the fig, never gets through growing, and for a hundred years will grow and increase its yield.

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WATSONVILLE, CAL.

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UNDIVIDED PROFITS, $5,000.

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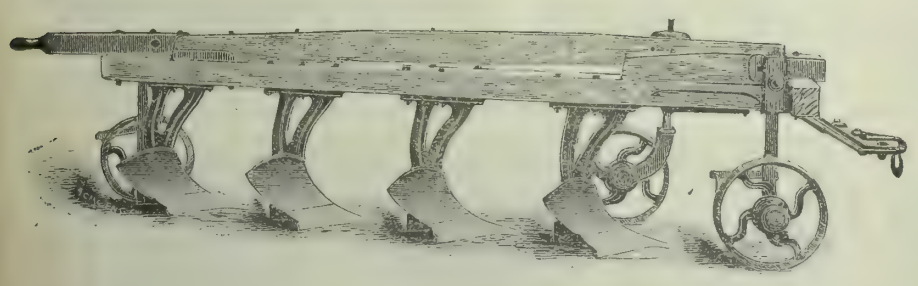
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EXTRA DRY! WARRANTED PURE!

THIS CELEBRATED CIDER is manufactured in the celebrated Pajaro Valley, whose fame is known for fruit all over the world.

THIS CIDER is warranted to be Pure Apple Juice, made from green Apples direct from the Orchards, consuming yearly thousands of boxes of Apples. Should any doubt the genuineness, let them call around during the months of September, October and November, and see for themselves.

Address all orders to

S. MARTINELLI,

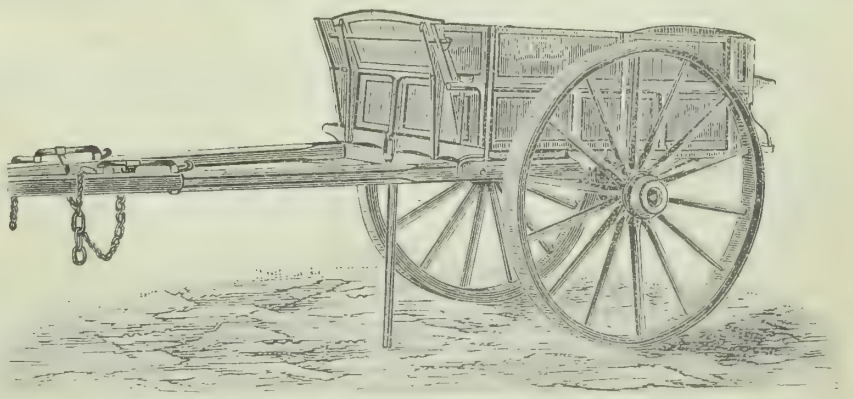
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312 Sacramento Street, - - - - - - - SAN FRANCISCO.

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Truman, Hooker & Co's Vineyard Cart.



FARMER'S VINEYARD CART.

Side-boards can be taken off. Wheels high. Tires wide. Strong, serviceable and extremely low in price. Tires 3 to 4 inches wide. Hollow iron axles and solid iron axles. Especially adapted to vineyard and farm work, *with wide tires, narrow truck.* Light, strong, and made of the best material. Measures 4 feet 6 inches from point of hub to point of hub, which enables it to be used in any place on a vineyard or farm where an ordinary cart or wagon cannot; and the side-boards being high, it carries a larger load than a cart. Write for prices.

TRUMAN, HOOKER & CO., San Francisco.

FRUTO LAND AND IMPROVEMENT CO.

Rancho Fruto, Elk Creek P. O., Colusa County, Cal.

OFFER FOR SALE

MUSCATEL, GORDO BLANCO AND MUSCAT OF ALEXANDRIA

ROOTED VINES!

Grown in Foothills of Coast Range. Disease Unknown. True to Name.

Address R. WATTS, Elk Creek, Cal.



GREAT REDUCTION IN PRICES TO CLOSE BUSINESS!

We now offer our Entire Stock of

Carriages, Buggies, Phaetons, 4-Spring Wagons, Carts, Harness and Lap Robes.

BRIGGS CARRIAGE CO., 220 & 222 Mission St.,
C. CREGO, Agent. SAN FRANCISCO, CAL.

Sheep and Wool.

Angora-Goat Breeders' Meeting.

Editors Press:—The sixth annual meeting of the Angora-Goat Breeders' Association of California was called to order on Thursday, Sept. 18, 1890, at 8 o'clock P. M., at Pioneer hall, Sacramento, Vice-President T. H. Harlan in the chair, Julius Weyand secretary.

After calling roll of members, the last minutes were read and approved; Willard Bailey, Jr., representing his father C. P. Bailey, absent. The members present paid expenses incurred to date.

On motion, the old board—C. P. Bailey president, T. H. Harlan vice-president, and Julius Weyand treasurer and secretary—were declared re-elected to serve until the next annual meeting.

The report of the secretary was presented, stating that the Government expert for examination of mohair had been requested to forward instructions to determine factory standards of mohair fiber for the guidance of examiners of goats for registration, but no information had been received to date. On motion, the report was received and ordered that the subject be laid over until the next meeting of the board or the association.

In the absence of the president, the secretary read his report on the mohair industry, and on motion it was resolved that the same be printed in connection with and appending the minutes of this meeting, and that a copy be sent by the secretary to each member of this association. On motion, adjourned.

T. H. Harlan, Vice-President.
Julius Weyand, Sec'y.

The Mohair Industry.

From the first two Angora bucks imported by W. M. Landrum, in the year 1861, we gained a sample of the white silky fleece on several thousand of the native goats. These two animals were from the flock of Col. Peters of Atlanta, and were the progeny of the Dr. Davis first importation from Turkey. No doubt they were the best from Asia Minor, because they were the present of the Sultan to Dr. Davis when he returned from his mission as Consul to his native land.

In 1867, Mr. Landrum imported eight head males and females from Chenery in Boston. In the same year, and up to 1875, the number imported from Peters and of Chenery and Diehl & Brown importations and those by Thomas & Shirland, imported from Entychide, made a total of 56 head pure breeds, so called; they were mostly bucks.

In 1876, John S. Harris of Hollister arrived with 12 head bucks and does, brought direct from Asia Minor. It has been admitted that the Harris goats were the best fleeced, most valuable animals ever imported into California. Harris distributed his goats very extensively, but not finding the trade as profitable as expected, he neglected his stock and now has lost his prestige as a breeder.

All the first breeders drew large premiums at the fairs. In 1878 the State Board of Agriculture paid $670 premiums to encourage further importations, but no further movements being made to improve the stock, the premiums were reduced, and the beneficiaries of this industry withdrew from the contest to advance or to exhibit their stock.

In 1881 the laws prohibiting the exportation of Angoras from Turkey made it impossible to get new blood from that source. The mixture of descendants of really only three strains of noted stock, from Davis, Chenery and Harris, had to build up a new race of Angoras in California. The Brown & Diehl and Entychide importations were never held to be of select quality. Col. Peters imported only one buck, Mohammed, in 1881, the last one coming from Asia Minor; but California only received one of his offspring, as far as known, and since that time this State received no new additions of pure-bloods from the East or elsewhere.

Fink & Co. of Texas imported several goats from Evans Bros. in Cape Colony. Nothing has been learned of their value as breeding stock.

How to Reach the Highest Type of an Angora Goat

Has been and now is a question of great importance to this State. For four years we have met as members of the Angora-Goat Breeders' Association, we determined to establish an Angora Goat Register, coming one step nearer to it every year, and had we received instructions or guides from the Government expert for classifying mohair on a factory standard, we would have made appointments of examiners of Angora goats offered for registry this time, but the secretary failed to receive the information to this day. Therefore another meeting of the association will be required to attain a Register, provided our instructions come to hand. It cannot be denied that only about 20 imported bucks were of good breeding quality, and did improve the crosses of pure breeds in this State; the balance gave but ordinary results.

We would not have the array of fine horses, cattle and sheep in California, if we had only imported a few head of each class. As this State begins to excel many older States in live-stock of every other kind, we should aim to excel in goats also. Our climate in many localities is similar to that of Asia Minor; in many it is superior. We are not visited with extreme changes of temperature, especially with deep snow, as in Asia Minor. We have higher percentages of kids in this State generally, proving the climate superior, and our mohair is more lustrous and silky than the Turkish or Cape Colony product, as we are informed by manufacturers.

In the wool reports of the United States, printed in 1886, we find that samples sent to Philadelphia by C. Strenzel of mohair raised in this State, were tested and found stronger and of better quality than the product from any other State or foreign country.

From 1885 to 1889 the prices of mohair were low, the industry was neglected, many herds were reduced, and others entirely killed off; breeders considered the stock unprofitable to handle.

In 1885 California had nearly 100 goats, and in 1889, only 55, being a loss of 45 per cent in four years, which was principally caused by reckless slaughter of the animals. Last winter's storm reduced again our flocks, but not more in proportion than other stock was lost.

The principal cause of low prices for mohair in those four years was the easy way laid out to help the manufacturers, who were permitted to invoice foreign mohair as carpet wool, and to pass the same through the custom-house, paying 2½ cents per pound instead of 12 cents per pound, import duty thereon.

The manufacturers made a profit, and the breeders stood a loss of 9½ cts. per pound on their clips. The present Secretary of the Treasury, being advised of this state of affairs, instructed the appraisers of the custom-house to do their duty and appraise every invoice at its real value, and the 9½ cts. per pound are now turned into the pockets of the breeders to the extent of their clips, encouraging them to foster and develop this industry and to increase the number of flocks in our State.

It is not an illusion to say that the guarantee for pure-blooded stock is only secured by honest registration, and this assurance becomes a stimulant to many breeders who would join us in this industry, but without registered stock they would not invest their money in the stock. Therefore we must be prepared to furnish and supply the very best males of strong powers of reproduction, bearing heavy silky fleeces, and in general improve the quality of our goats to a standard equal to the best in the world, producing clips of mohair paying handsome returns for investments.

It appears that many breeders are dissatisfied with the present condition of the business. They have sent orders to some breeders for pure-blood males, expecting to improve their stock by new blood. They paid fair prices for said stock, besides the cost of transportation, and the progeny of these high priced males did not prove satisfactory. When quantity and quality of mohair is not improved, the expense of shearing, packing, marketing being the same, there is no hope left to the grade-breeder to reach a higher standard and make his business more profitable.

The Flesh of the Goat

Is undeniably the healthiest meat, it is first on the list of easily digested meat for dyspeptic patients, it is juicy, free from the strong mutton taste of the sheep; properly prepared it is pronounced by the best informed to be excellent.

Butchers generally prefer sheep mutton for their trade, because their customers are not acquainted with this meat, and frequently have a prejudice against the name of goat.

There is a good opportunity at present to change this, as sheep mutton is the highest-priced meat in our markets, being very scarce. Every goat-breeder should make it a point in his business to induce his nearest butcher to give this goat mutton a fair trial among his customers, and it is certain that the demand for this meat will be increased to the benefit of the breeders.

Good pelts, long, full-haired, fine and lustrous, are quoted $1.50 to $3 per skin in New York; other pelts are quoted from 25c down to 18c per pound to be stretched, dried and undressed. This shows that breeders should experiment with a shipment East of Angora pelts, and publish results. The tanners in this State will hardly pay for value of the fleece on a pelt, and shorn hides they allow only a pitiful price. Dressing of a fleece hide is worth $1, but when you wish to buy a dressed skin you have to pay $2 50 to $3 50 for the same. Smooth Angora glove and lacing leather costs us to-day as much as at the time we received $1 per skin for smooth skins. It appears there is a tanners' combination against us, instead of a competition among tanners for our benefit. May be the New York trade will help us out of this dilemma, and realize good values for us.

The Improvement of Stock.

Returning to this subject, let us investigate what breeders of other stock have done and accomplished in this State since importations and registrations of blooded stock began. In horses for the turf and general work, we have as fine an assortment as any State. The imported registered cattle are furnishing the dairy and the range with continuously improved stock. The imported and registered sheep have driven inferior breeds out of existence, and the same can be said of hogs. And now although this State is an exporter of fine stock, our most intelligent breeders are constantly searching the world for better points to be added to our live-stock; new importations follow each other,

(Continued on page 301.)

The Whole Country Needs Fertilization

ADMONITION TO FARMERS!

Guaymas, Mexico, September 9, 1890.

R. B. CUNNINGHAM, ESQ., Agent Mexican Phosphate and Sulphur Company—Dear Sir: In answer to your inquiries as to the value of phosphates for worn-out lands, I will state that it is my opinion the lands of the older settled portions of California afford a good field for the use of phosphates. These lands have been cropped for years without any restoration of the chemical constituents necessary for an abundant crop. They therefore show plainly that they need assistance artificially to produce crops good in quantity and quality, let the crop be whatever it may.

Take, for instance, San Joaquin and Santa Clara valleys, and what do you see? Many crops that are so imperfect in quantity and quality that the eye at once detects the defect. The only relief that can be resorted to must be infused into the soil to replace the chemical properties that have been extracted by previous crops, and the writer is of the opinion that a liberal supply of phosphates will accomplish this.

The attention of the cultivators of the soil is sharply turned to rotation of crops, hoping thereby to get wealth out of their lands without fertilization. Some have turned their attention to beet cultivation in soil worn out by other crops. Beet or other seeds will not grow successfully unless the soil will nourish them.

This summer I saw several crops of beets on excessively cropped lands, the majority of which showed that there was something wanting to complete the plants to ample size and in quantity that should be expected of sugar beets under favorable circumstances. If a good crop is not obtained, there is deficiency in profit. It costs as much to cultivate soil deficient in chemical properties as it does if ample nutrition was in the soil. Under the former condition a deficient crop is certain, while under the latter condition he may reasonably expect an ample crop with profit.

Fields often are allowed to go to weeds, supposing thereby to enrich the soil. This is an uncertain method and not profitable. Your weeds have grown up and seeded; the dead stems can only add a limited addition to fertilize the soil, while the seeds of the same will cause much expense to exterminate them from the future crops. Besides, while thus only weeds as a crop, no profit was realized, while if a supply of phosphates had been applied to the soil, a profitable crop of beets or corn would be had. Besides, the weeds would have been exterminated during the cultivation of the said crop. I am, Sir, your obedient servant,

EDWARD PALMER, M. D.

THE MEXICAN PHOSPHATE AND SULPHUR CO.

Manufacture three grades of this Superior Fertilizer of the following analyses:

GUARANTEED ANALYSIS.	Brand A for Sugar Cane, Sugar Beets, Etc	Brand B for Grain, Gardens, Lawns, etc.	Brand C for Fruits, Vineyards, Etc.
Phosphoric Acid	10 to 11 per cent.	15 per cent	12 per cent.
Potash	9 to 10 "	2 "	5 to 6 "
Ammonia	3 to 4 "	2 "	3 to 4 "

And will sell in lots to suit.

PARTICULARS AND CIRCULARS MAY BE HAD OF THE UNDERSIGNED.

H. M. NEWHALL & CO.,

AGENTS.

309 & 311 SANSOME STREET, SAN FRANCISCO, CAL.

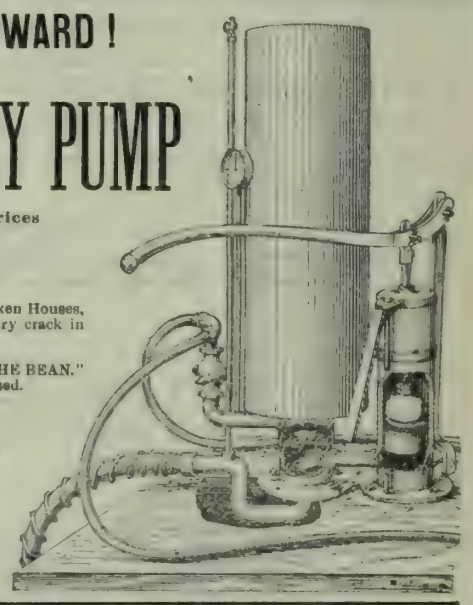
ANOTHER STEP UPWARD!

THE BEAN SPRAY PUMP

Is now made in FIVE SIZES with Prices that will Suit.

You can Whitewash your GRAIN HOUSES, Chicken Houses, Barns and Fences at a great saving of time, and every crack in the ceiling will get a dose.

Tree spraying is made easy and cheap by using "THE BEAN." With our LARGE pump four strong sprays can be used.

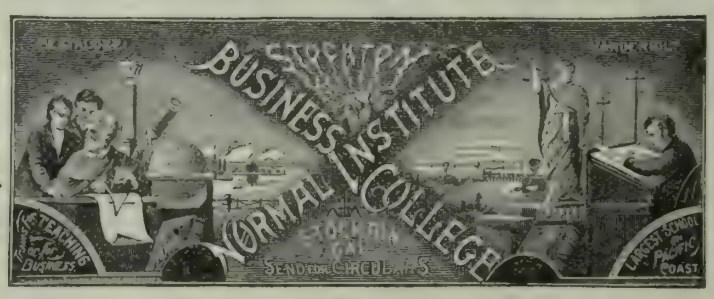


Go to the Pavilion at the State Fair and see them, or send for circulars and testimonials to

BEAN SPRAY PUMP CO.,

LOS GATOS, CAL.

EXCELLENT BOARD, $10 per Month.



FURNISHED ROOM, $3 per Month.

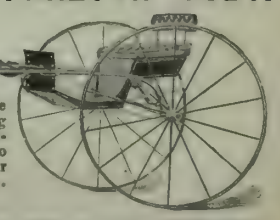
Occupies two elegant buildings, containing over 70 rooms. Employs the ablest teachers, has the largest attendance and is the most highly recommended of any private school on the Pacific Coast. Board, Room and Tuition for six months, $128. Board, Room and Tuition for fifty-two weeks, $244.

☞Circulars containing Rules, Rates of Tuition and Board, and Courses of Study sent free to any address; also, beautiful specimens of Penmanship. Address,

TRASK & RAMSEY, Stockton, Cal.

THE BLUE RIBBON CART, WITH PHAETON BODY.

$35



Has a seat wide enough for two, with box underneath for parcels. The body has been lengthened, is securely framed and strengthened by making the panels in one piece. Sarven wheels, steel axles, and curved dash. Finished in scarlet lake or brewster green. The "Blue Ribbon" has proved to be the best built, most popular and best selling low-priced Phaeton Cart ever brought to this market. With Patent Spiral Spring Lazy Back. Shipped securely crated. Weight, 175 pounds.

FRANK BROTHERS, 33 & 35 MAIN STREET, SAN FRANCISCO.

THE TWENTY-FIFTH
INDUSTRIAL EXPOSITION
— OF THE —
MECHANICS' INSTITUTE, 1890,
Opens Sept. 18th, Closes Oct. 25th,

With a grand display of Inventions, Manufactures and Art. The Latest Novelties and Improvements in Electricity will be made a special feature, including the celebrated Edison "Tower of Light." The Music will consist of a band of 42 talented musicians, supplemented by the best Vocal Talent obtainable. Miss Mathilde Lennon, a noted Contralto singer from London, and late from Boston, has been engaged, as also Miss Pearl Noble, the accomplished young Californian Cornetist. The Art Gallery, 300 feet long and 50 feet wide, will be filled with rare and beautiful works by local and foreign artists, in oil and water colors. Photography will be shown in the most attractive form by Professionals and Amateurs. Machinery of all kinds will be in operation, and many novelties exhibited for the first time.

Admission:
Double Season Tickets, $5.00 | Single Adult Admission, 50c
Single Season Tickets, 3 00 | Children.....25c
Season Tickets to Members of the Institute, Half-Rates.
J. H. CULVER, Supt. DAVID KERR, Pres.

J. L. HEALD, Pres. C. B. MORGAN, Sec'y.
HEALD MFG. CO.
Crockett, Contra Costa Co., Cal.

Stationary Engines and Boilers,
TRACTION ENGINES,
Portable Straw-Burning Boilers & Engines.
IRON AND BRASS CASTINGS.
Machinery of all kinds furnished at shortest notice.

Heald's Patent Wine-making Machinery,
Including Grape Crushers and Stemmers, Elevators, Wine Presses and Pumps, and all appliances used in Wine Cellars. Irrigating and Drainage Pumps. Heald's Patent Engine Governor, Etc.


THE "CALIFORNIA FIELD GUN,"
THE LATEST AND BEST.

Damascus Barrels, Matted Rib, Polished Walnut Stock, Circular Hammers, Rebounding Bar Locks, Pistol Grip, Patent Fore-End, Choke-Bored, with Greener Cross-Bolt through Frame and Extension Rib, Calibers 10, 12 and 16.

PRICE ONLY $25.

GEO. W. SHREVE, 525 Kearny St., S. F.
Trial Allowed.

SEND FOR PRICES. SEND FOR SAMPLES.
THE DEWEY ENGRAVING CO.
PHOTO FACSIMILE and other ENGRAVING, DESIGNING, etc.
FINE ZINCOGRAPHING A SPECIALTY.
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Engravings made from photographs, drawings and origina designs, for newspaper, book, card and job printing. Engraved prints enlarged or reduced, cheaply and quickly. Also copies of manuscript, legal documents, wills, contracts, signatures, portraits, buildings, machinery and printed documents reproduced with accuracy. Photographs, stereoscopic views, etc. duplicated, enlarged or reduced. Slides for magic lanterns made from photographs, lithographs, and steel or wood gravings etc. Satisfaction guaranteed. Agents wanted in all cities and in all towns. Address, for further information, DEWEY ENGRAVING CO., 220 Market St., San Francisco

CLARK'S CUTAWAY IMPROVED SEEDING HARROW



POSITIVE IN ITS ACTION AND PERFECT IN ITS SEEDING.
Will sow all kinds of GRASS SEED & GRAINS
SEND FOR SPECIAL CIRCULAR.
HIGGANUM MANUFACTURING CORPORATION SOLE MANUFACTURERS HIGGANUM, CONN.
New York Office, 189 & 191 Water St. NEW YORK.

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Opposite City Hall and City Park, one block from Custom House and U. S. Treasury, two blocks from General Postoffice. Four Lines of Cable Cars pass the door, to and from Ferries and Park, Cliff House and Pre-idio.
NEW AND ELEGANT FURNITURE THROUGHOUT. Electric Bells, Thermostats, in all the rooms. Baths, Elevator. The only complete Fireproof Building in the State, having Four Fire Escapes.

Rates, $1.25 to $2.00 per Day.

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For Governor,
EDWARD B. POND of San Francisco.

For Lieutenant-Governor,
R. F. DEL VALLE of Los Angeles.

For Chief Justice,
JOHN A. STANLEY of Alameda.

For Associate Justices.
JACKSON HATCH of Santa Clara (Short Term).
JAMES V. COFFEY of San Francisco.
GEORGE H. SMITH of Los Angeles.

For Secretary of State,
W. C. HENDRICKS of Butte.

For Controller,
JOHN P. DUNN of San Francisco.

For Treasurer,
ADAM HEROLD of Placer.

For Attorney-General,
WALKER C. GRAVES of San Francisco.

For Surveyor-General,
STANLEY C. BOOM of Humboldt.

For Superintendent of Public Instruction,
H. C. HALL of San Mateo.

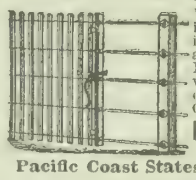
For Clerk of Supreme Court,
J. D. SPENCER of Stanislaus.

Congressmen,
First District—THOMAS J. GEARY of Sonoma.
Second District—A. CAMINETTI of Amador.
Third District—JOHN P. IRISH of Alameda.
Fourth District—.....
Fifth District—THOMAS J. CLUNIE of San Francisco
Sixth District—W. J. CURTIS of San Bernardino.

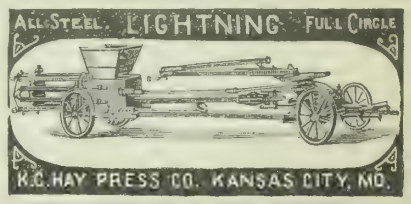
Board of Equalization,
First District—.....
Second District—JAMES BRADY of Alameda.
Third District—RICHARD H. BEAMER of Yolo.
Fourth District—JOHN T. GAFFEY of Los Angeles.

Railroad Commission,
First District—ARCHIBALD YELL of Mendocino.
Second District—C. H. HASWELL, JR., of San Francisco.
Third District—LAWRENCE ARCHER of Santa Clara.

The Garrett Picket & Wire Fence Machine



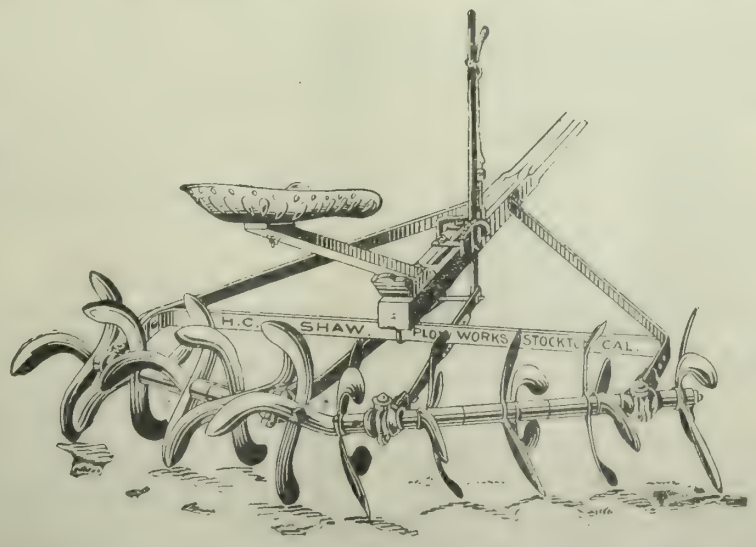
Weaves to the posts. Best in the world. Thousands in use. Guaranteed. Agents are reporting big sales. Machines, Wire, etc., at wholesale direct to Farmers where I have no agent. Catalogue free. Address
K. C. DUSSENBERG,
AGENT for
Pacific Coast States, San Francisco, Cal.



ANY ONE wishing to rent a well-improved farm of 480 acres in a healthy locality, at very moderate cash rent, can learn particulars by applying to "Cash Rent," Box 27, Tulare, Cal.

THE "TRIUMPH"
— ALL METAL —
SPADING HARROW!
The Best Pulverizer in the World.

JUST THE THING
— FOR WORKING —
Summer Fallow Land.



Specially Adapted
— FOR —
ORCHARDS AND VINEYARDS.

FOR TWO HORSES. Works the soil about six feet wide. Angle of teeth adjustable to work the soil at desired depth. THIS HARROW is something entirely new. IT IS THE GRANDEST ACHIEVEMENT of its inventor, C. LA DOW, who is the recognized authority on Harrows, there being but few leading harrows at the present time not built under his patents. We have made exclusive arrangements for its sale and it can be obtained only through us or our agents.

THE NAME "SPADING" refers to its action on the soil. The action of each cutter is like that of a small spade, lifting and turning the soil from a depth of four to six inches, doing more perfect work than is possible with any other Harrow in the world. THE BLADES are made from spring steel, in operation vibrating and shaking off sticky soil. IT NEEDS NO SCRAPERS to clean the revolving cutters.

Considering the immense amount of labor done, the draft is very light, as the pulverized soil passes through the gangs of revolving cutters, being left smooth. THE GANGS are so arranged that the most uneven ground is thoroughly harrowed and left level. IT LEAVES NO FURROW or ridge; when the field is harrowed it is all left smooth.

Oregon State Fair.

NUMBER II.

[Written for the PRESS by MRS. I. L. HILLEARY.]

The Cattle.

Among the exhibits in the cattle yards we note:

THE RED POLLS [illegible] by J. L. Parrish, Salem—[illegible] and takes 3 first prizes and 1 second. L. K. Cogswell, Chehalis, Wash., has 27 head of Red Polls, among them Martha Washington, the first Red Poll dropped on the Pacific Coast. Mr. Cogswell takes 8 first and 4 second prizes and first prize on herd.

HEREFORDS.—A. H. Johnson, Portland, exhibits 7 head, taking first prize on herd and several other prizes; J. W. McKinney, Turner, shows 13 head and takes 4 second prizes; E. E. McKinney, Turner, with 5 head, is awarded 2 first and 1 second.

JERSEYS.—Charles Miller, Jefferson, exhibits nine head, all A. J. C. C., and takes second on herd. R. N. Snell shows one and takes sweepstakes; L. F. Mascher, Silverton, has eight head of fine animals; D. H. Looney, president of the board, shows 17 head and is awarded first prize on herd, 6 first and 3 second prizes; R. Cary has three head and takes 1 first and 1 second; Ex-Governor Moody exhibits a fine yearling.

HOLSTEINS.—H. W. Cottle & Son, Salem, have a fine herd of nine head; F. W. Durbin, Howell, exhibits 10 head and takes 5 first and 3 second prizes, and first on herd; Smith & Skiff, Salem, five head, get 1 first and 2 second prizes; Gray Bros., Salem, exhibit one and get second prize.

SHORTHORNS. — Wm. Chalmes, Cornelius, shows the finest animal of his class on the ground; weight 2300 pounds, takes sweepstakes. R. A. Witzel of Turner, S. Condit, Aumsville, and J. N. Davis, Silverton, each show specimens worthy of mention. Jas. Richards, Oakland, 10 head; takes 5 first and 4 second prizes, and second on herd. C. Davis exhibits 6 head; P. Feeley, 1; H. G. Eldridge, Gervais, 1; J. H. McCormack 1, and takes second prize; G. W. Dimmick, Hubbard (who advertises in the RURAL PRESS), shows 5 head and carries off several prizes, including first on herd. A. Kirschheiner, Mayville, exhibits 3 head and is awarded a second prize.

GUERNSEYS.—Hon. A. Bush, Salem, has the only herd on the ground—5 head—and takes 4 first and 1 second prize.

POLLED ANGUS, OR ABERDEEN.— R. Cary shows 12 head; takes 7 first and 3 second, and first prize on herd. G. W. Dimmick (a RURAL advertiser) has 9 head; takes 2 first and 3 second prizes and second on herd.

DEVONS.—J. Trippeer, Wapinitia, exhibits 10 head, the only ones on the ground, and takes several prizes.

Poultry.

In this department we find J. M. Garrison, Forest Grove, and in his coops 14 varieties or breeds, embracing Silver Wyandotte, Light Brahma, Plymouth Rock, Partridge Cochin, Rose, single comb, Brown and White Leghorn, Langshan, Houdan, S. S. Hamburg and Black Minorca, the largest exhibit of poultry on the ground, in fact as large as all others combined. He has been in the business 14 years, and his trade extends over the entire Pacific Slope, and to British Columbia. His advertisement appears in the RURAL PRESS of Sept. 13th.

Next comes E. J. Ladd, Portland, with Wyandottes, White Plymouth Rocks, P. Cochins, L. Brahmas, Langshans, G. S. B. Bantams, Pekin ducks, lop-ear rabbits, taking 10 first and 4 second prizes.

Christian Kocher, Aurora, exhibits fine birds, embracing L. Brahmas, Barred P. Rocks, White-faced Black Spanish, W. and Brown Leghorn, S. L. Wyandotte, P. Cochin and a cote of pigeons.

Mrs. Gov. Moody exhibits some fine birds and turkeys; also a coop of Chinese pheasants.

Stock Parades.

The parade of fine cattle was pronounced by those who have attended the State Fair for years to be the finest ever seen on these grounds, and the parade of premium horses drew out many remarks of surprise from visitors from other States. One fine animal in the draft class tipped the beam at 2300 pounds. Messrs. Galbraith exhibited a number of horses and of the usual high standard of their importations.

The racing and trotting on the track was very fine, but your reporter is not a horseman and cannot give you many items.

Machinery.

The aermotor shown by Fuller, Martin & Co. attracted a crowd on account of the novelty of its tilting tower.

The chop-feed mill on roller principle (W. E. Wood, manufacturer, Portland) had a crowd of farmers and stock-feeders around it all the time, and is certainly next to a French burr-mill in excellence.

Staver & Walker take the lead, as usual, in the magnitude of their display of machinery, including a power hay-press, the first ever exhibited on this fair-ground. They showed a stump-puller with which one has pulled up an oak-tree a foot in diameter. This machine is equal to a large herd of Chinamen among grubs. A number of farm-gates were shown, but did not have that merit which attracts a crowd. Only two binders were on exhibition—Woods and Osborne. A novelty in the pump line, on elevator principle, was shown by Staver & Walker.

Pomona Exhibit.

The Marion County Pomona Committee to make exhibit at State Fair received congratulations from all sides and justly feel proud of the success of their first effort in such work. When your reporter looked in upon the scene on Monday at 9 A. M., it was chaos and confusion—cereal and vegetable mixed apparently in a hopeless tangle. But Sister E. Bagley was installed as manager, and assisted by Mesdames Minto, Boise, Hilleary, Clara Smith, Pettyjohn and other ladies, with Bro. Stamp (a whole tree in this kind of work) and your reporter as carpenters, before noon of the first day the display of Pomona became a thing of beauty.

The committee received contributions from the following named members of the Granges of Marion county: John Minto, R. P. Boise, N. Cawood, A. M. Lafollett, T. L. Davidson, M. A. McCorkle, G. F. McCorkle, B. Weisner, T. H. McIntire, Asa Simmons, W. M. Hilleary, Mrs. M. A. Minto, Mrs. E. A. Boise, J. E. Kirkland, J. W. Batcheller, Mrs. I. L. Hilleary, Mrs. E. Bagley, J. B. Stump, Wm. Wright, Clara Smith, Mrs. I. C. Needham, G. W. Weeks, F. R. Smith and others whom I cannot recall.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING SEPT. 23, 1890.

436,931.—TRACTION ENGINE—Daniel Best, San Leandro, Cal.

436,932.—INJECTOR—Daniel Best, San Leandro, Cal.

436,933.—BOILER—Daniel Best, San Leandro, Cal.

437,101.—WATER-CLOSET INDICATOR—J. Dihrberg, Visalia, Cal.

436,936.—EXPLOSIVE ENGINE — J. W. Eisenhuth, S. F.

437,029.—AXLE MACHINE—Silas Harris, S. F.

436,786.—SHIPPING RECEIPT BOOK — J. Howe, Tacoma, Wash.

436,946.—PNEUMATIC RAILWAY—J. B. Kelly, Pleasant Home, Or.

436,938.—GOVERNOR—J. F. Kirby, S. F.

436,859.—CAR COUPLING—N. Kramer, Sacramento, Cal.

437,128.—CIRCULAR SAW—W. A. Miller, Wapinitia, Or.

436,841.—SASH FASTENER—Z. Pinard, Portland, Or.

437,002.—BLOCK PUZZLE—J. A. Rueger, S. F.

436,942.—LAWN SPRINKLER—Thos. Scheen, St. Helena, Cal.

437,135.—WIRE-DRAWING DRUM—W. W. Shearer, Port Angeles, Wash.

436,861.—UTERINE SUPPORTER — A. T. Sherwood, S. F.

436,809.—DOOR CHECK—Wm. Shipsey, San Luis Obispo, Cal.

436,950.—WIRE FENCE STAY—M. S. Turkington, Tulare, Cal.

436,814.—ELECTRIC ARC-LAMP — A. Wagniere, Los Angeles, Cal.

437,064.—HAME HOOK—J. H. Watson, Selma, Cal.

436,943. — LIFTING-JACK—Hugh Wilson, Duncan's Mill, Cal.

The following brief list by telegraph for Sept. 30 will appear more complete on receipt of mail advices:

California—Robert Addison, assignor of one-half to A. F. Mills, Pasadena, portable centrifugal lawn sprinkler; William H. Anderson, Riverside, package tie; Howard W. Brown, Oakland, copying-sheet; Harris G. Cox, San Jose, check-bit; Herbert F. Dugan, S. F., coin-operated telephone attachment; Leonidas Guillmet, S. F., air-brake; Charles Ireden and D. Callahan, Riverside, remedy for asthma; William Jones, S. F., lime-kiln; Benjamin F. Levett, assignor of one-half to F. W. Stewart, San Diego, hose-coupling; Demitry Niddlekauf, S. F., explosive compound; Arthur F. Purley, Lawrence, telegraph-key; Carl Strathmeyer and W. G. Gutenberger, Sacramento, car-coupling; Edgar Thompson, S. F., dental engine. Oregon—Alex H. Quain and G. P. Warner, Albany, high-grade water-power.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

"Battle of Gettysburg."

The celebrated Panorama of the Battle of Gettysburg and Museum, corner Market and Tenth Streets, San Francisco, is a wonderful production. It has captured the entire State, doing a great deal of good. There is no better way of passing an hour or so, and in studying American history, than by visiting this Grand War Panorama. If any of our readers have not seen it, it will pay them well to do so.

SUCCESS TO THE PRESS.—"By the way, your paper is our paper, and its success means success to the farmers and P. of H. Then success to the PRESS! Fraternally, "J. C."

Buggies, Bike Boards, Spring Wagons, Surreys and Road Carts. Write for our new catalogue. Baker & Hamilton, San Francisco and Sacramento.

DR. T. J. FRAZER, Dentist, Room 54, Flood Building, Market and Fourth Streets, San Francisco, Cal.

Angora-Goat Breeders' Meeting.

(*Concluded from page 300.*)

and there is a continuous improvement reached in the progeny of this stock selected by the best experts in the State. All of the importations made are allowed by our own Government and permitted by foreign Governments. It it quite different with the obtaining of Angora goats from Turkey or Asia Minor; we cannot do it. In 1881 the Turkish Government prohibited the exportation of Angora goats; heavy fines and imprisonment are imposed upon the person who will attempt to export this kind of stock. No goats can be removed from one district to another in Asia Minor without permission and under supervision of Government officials.

It being essentially necessary to make the goat and mohair industry a permanent branch of business for those localities in the United States suitable for this animal, and being mostly unfit for any other domesticated animal, therefore we should solicit the assistance of our Government to obtain permission from the Turkish Government to allow exportation of a number of pure-blood goats of both sexes to this country.

To have the importation accomplished and have the stock passed into private hands, would, however, have the effect of a system of charging exorbitant prices for any of this stock to breeders who were not fortunate enough to become interested in this lot imported, and such sales would be similar to an auction sale at Cape Colony, where, as reported by U. S. Consul-General G. H. Heap: "$447.50 was paid, average price per head for 31 bucks, and $267 per head for 13 does." Only one importation being contracted for, it is utterly impossible that through private ownership of this new flock, an average goat-breeder could ever be benefited by this importation, as the offspring would not be sold except at fabulous prices.

After careful study of this subject and its workings, the writer suggests that the Government be appealed to by every goat-breeder in the United States, and that Congress pass resolutions, laws, and make suitable appropriations for our relief and for the industry in general, and more particularly conforming hereto.

First, to negotiate with the Government of Turkey for the permit to select and purchase a flock of at least 100 does or ewes and 25 bucks in Asia Minor, and to permit their exportation.

Second, to instruct the Secretary of Agriculture to engage some suitable person or persons to proceed to Turkey to examine goats of different localities, to select the very best obtainable, to purchase animals selected and to accompany this shipment to this country as directed.

Third, that the Secretary of Agriculture select a proper locality and appoint proper persons to remove the flock and keep them separate from any private property of this class, to attend to them, and also take charge of the propagation and care of the flock and increase.

Fourth, that the Secretary of Agriculture may set aside a suitable number of males and females, young or old, not diminishing the original number in the flock, selling them under a rule giving the different States, where these animals are successfully raised, equal chances, and at a price to cover expense and outlay for importation, and for keeping this stock, but no more.

It appears there cannot be a valid reason why this enterprise could not be added to one of the Government Experimental Stations, especially if a suitable locality can be determined upon.

By the system just named and suggested, each State now engaged in the goat industry would acquire a nucleus to draw from for the general improvement of this stock.

The Government purchasing a flock large enough to supply the whole country for a period of eight or ten years would be well paid for its beneficent act by the increase in wealth in the roughest parts of our country. If the goat-breeders will unite in presenting this matter to members of the House and the U. S. Senate, also as far as possible make an effort to have some suitable person specially authorized to look after their interests, and each breeder to work for the common good of all, we will be successful beyond doubt. JULIUS WEYAND

Colusa, Cal.

California's Stallions.

I beg to announce that, with a view of perpetuating the forms and characteristics of the leading stallions of California, I am issuing a series of lithographic likenesses. Each portrait issued will be an acknowledged likeness, the result of a close study of the horse and an artistic treatment of the subject. In order to secure for the series an immense advertising value, from a breeder's point of view, 4000 copies, at least, of each portrait will be issued.

Terms, $100 for first issue of 100 copies. In quantity, for advertising purposes, copies will be furnished at low rates.

H. BOYD, Artist.

268 Golden Gate Ave., San Francisco.

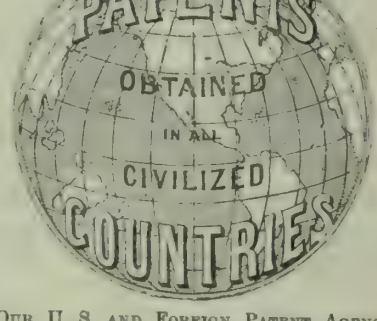
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Should this paper be received by any subscriber who does not want it, *or beyond the time he intends to pay for it*, let him not fail to write us *direct* to stop it. A postal card costing one cent only) will suffice. We will not knowingly send the paper to any one who does not want it if it is continued, through the failure of the subscriber to notify us to discontinue it, or some responsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

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Founded in 1878, this Home-Reading Circle has grown to marvelous size. It has met with eager welcome from thousands who aspire to a broader life. The daily routine of cares and labor may be lightened by systematic reading of good books—a little every day. A Michigan farmer's wife writes: "Living on a farm too far from town to join a circle, I have so far read alone. Into my busy life the daily time allotted to my reading comes like a benediction." Should you not like to join this great company of readers? You may read alone or with a group of friends. Write to John H. Vincent, Drawer 194, Buffalo, N. Y., for full details and membership blanks.

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For all Aches and Pains. Relieves Pain in One Minute.

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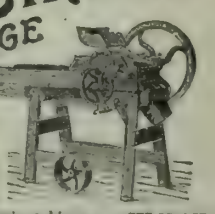
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ENSILAGE AND FEED CUTTER



Strongest, Most Durable, Easiest Running, and in every way THE BEST FEED CUTTER made. All Sizes, for Hand or Power. Correspondence Invited. For Low Prices and Best Discounts, and for Illustrated Catalogue [illegible] "Valuable Ensilage Receipts" free to all who mention this paper. Also Manufacturers of the Celebrated Cortes and Freeman Mills, and a Full Line of Horse Powers and Horse Jacks. The Freeman Implement Co., Portland, Or.

THE LARGEST STOCK OF
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On the Pacific Coast, and at the Cheapest Prices, is at
C. L. HASKELL'S, 10 Bush Street,
San Francisco, Cal.

Santa Barbara County Fair.

EDITORS PRESS:—Our county fair was not conspicuous for being overcrowded in any direction. Indeed, I fear the display might justly be characterized as somewhat meager. This was owing partly to the general depression in all business circles—to be cured now soon, as the railroad is to be built, connecting us with San Francisco—partly to our rather unfavorable season. Even the babies, God bless them! at the baby show were fewer than usual, although what there were, were as chubby and kicking and smiling as ever. Some of the little angels, as the judges passed in review before them, would thrust out their fat little fists and seize the judges by the hand, as much as to say: "Now see here, old fellow (or my fine lady, as the case might be), I would like one of those nice gilt cups amazingly. Do you see anything green in my eye?"

What few things we had at the fair were mostly good, indeed excellent, showing plainly that we could (and should) have done better. Beets, onions, beans, potatoes, mangolds, corn, etc., were all of superior quality, and if not of monstrous size, were large enough. Melons I noticed of 60 and 70 lbs.; one squash of 163 lbs. and others nearly or quite as large. I think I never saw nicer apples, grapes, peaches and blackberries. As much could be said also of several other varieties of fruits and vegetables.

A highly interesting feature of the fair was the grain exhibit of the Agricultural station at Paso Robles.

There was quite an exhibit of poultry, pigeons, guinea pigs, a family of white rats, and a huge Maltese cat. There were some excellent hogs, well fattened, over-fattened, a few fine Jerseys, and that was about all in that line. There were some good horses, and this brings me to the races. We had them, of course. At least I saw everybody except myself and about two dozen others trudging out to the race-course. When are we going to become sufficiently civilized to have fairs without horse-races? I do not object to horse-racing in its proper place, but who ever heard of a horse-race unless there was betting, and betting is just as good as gambling? There was a balloon ascension; a person let himself down with a parachute; he did not get killed, I believe; there is to be another today.

S. P. SNOW.

Santa Barbara, Sept 26, 1890.

Ventura Jottings.

EDITORS PRESS:—It began raining here Thursday night, Sept. 25th. Only a small amount of rain fell, probably less than an inch, but owing to the warm weather the beans are considerably damaged. The air has been sultry and the sky did not clear until the 29th. The Pacific Coast has evidently imported a genuine old-fashioned thunder-storm.

But a small part of the beans have been threshed. The weather has been so unfavorable for this operation that some of the machines refused to do more work until the beans were drier.

In different portions of the county there have been 11 Farmers' Alliances organized. The latest one is at Montalvo, about five miles from Ventura.

A lumber company has been recently organized here in opposition to the consolidated lumber firms of Ventura county, which will open business about the 7th of October. The stockholders are mostly farmers, and it is hoped lumber will be reduced to a fair price. Heretofore, as Bardette remarked, it has taken a fortune to build a woodshed.

MAX.

Ventura, Sept 30, 1890.

DEATH IN THE WINE VAT.—Are deaths through entrance to wine-casks and other receptacles which contain carbonic acid gas never to cease? It would seem that enough have lost their lives in this way to put all workers in wineries and cellars on their guard, and yet only this week two workmen were killed by carelessness in entering a foul vat. They were on their guard to a certain extent, for they applied the lighted-candle test, but they did it so carelessly that one was led to descend into the death-trap and the other perished in trying to help him. Possibly a few thousand more lives lost may make men more careful or may bring to light some other way of preserving human life. Evidently cellar-men are not to be trusted even with their own lives. Probably the lives lost from this cause are more numerous than those incurred in the handling of high explosives, and yet there should be no such comparison possible. The subject is certainly worthy of consideration. If any of our wine-producers have any systematic method of preventing such disasters, we would be glad to hear from them.

A PEPPERY PONY.—Out at the Folsom prison, says the *Telegraph*, there is a horse that has developed an earnest desire to eat all the red and green peppers he can get hold of. The animal behaves just like any other horse, except in the particular matter above. He is a good worker, tame and manageable. How he acquired the love for peppers is a matter of conjecture.

AN Alameda family was poisoned last Saturday by eating pressed corned beef, and some of the members were in danger of their lives for two days, but are now recovering.

California Fruits East.

CHICAGO, Sept. 25.—The Earl Fruit Co. sold California fruits to-day as follows: Winter Nelis pears, $2.30@2.35; Strawberry peaches, $1.70; Honey Cling, $1.55; Salway peaches, $1.35@1.55; Picquets, late, $1.40@1.45; hf-crates Tokay grapes, $1.35@1.45; hf-crates Muscats, $1.55@1.65. A large quantity of peaches was sold to-day.

Porter Bros. Co. sold to-day five cars of California fruit. Full crates of Tokay grapes, $2.85@3.10; hf-crates, Tokays, $1.35@1.50; full crates Muscat grapes, $3.60; hf-crates Muscats, $1.85; full crates Emperor grapes, $3; hf-crates, $1.55; full crates Verdelle grapes, $2.25; hf-crates Verdelle, $1.85; Cornichon grapes, $3.45; hf-crates, $1.55@1.70; peaches, $1.25@1.75; Beurre hard pears, $3.80; Beurre Diel, $2.50@3.05; Beure Clairgeau pears, $3.25.

CHICAGO, Sept. 26.—The Earl Fruit Co. sold at auction to-day, Salway peaches at $1.35; Tokay grapes, hf-crates, $1.35@1.50; Muscats, hf-crates, $1.70. Fruit in fair condition; weather fine and cool.

CHICAGO, Sept. 27.—The Porter Bros. Co. sold to-day four cases of California fruit. Full crates Muscat grapes, $3.60; full crates Tokay grapes, $2.85@3.35; hf-crates Tokays, $1.50; Cornichon grapes, $3.05; Cling peaches, $1.40@2; German prunes, full crates, $3.70; boxes, $2; Golden Drop plums, $2.05; Ickwith, $2; Duchess pears, $3.70; Vicar pears, $2.35; stock, $1.80@2 10.

NEW YORK, Sept. 28.—The *Sun* this morning says: Less than six years ago the multifarious delicacies of the glorious climate of California were almost unknown in the New York market. To-day they adorn nearly every big and little fruit-stand in town. They excel the finest native products in beauty and size, vie with them in flavor, and are not so dear that a workingman cannot afford to buy some for his wife or sweetheart. Only a few years ago Tokays from the Golden Gate brought 50 cents a pound. Now they may be had for 10 and 15 cents. This is because California has awakened to the fact that New York is the great fruit center of the world, and pays the highest price for the best products. At the end of this season California will have poured from her marvelous cornucopia into this and neighboring States 10,000,000 pounds of grapes, pears, peaches, prunes and plums. That will be just half of what she will unload at Chicago this year, and ten times as much as she sent to us only three years ago She has got a grip on the affections of fruit-lovers hereabout by offering them only her best products, and she is going to try to keep it. Our native fruit is not holding its own against the Western invader. This is especially true of pears, which are much inferior to the luscious, clear-skinned California Bartletts that may be seen on hundreds of stands in tempting picturesque pyramids of gold and rose. The peaches from across the continent don't come up to the best from near-by orchards, but they are big and juicy and fair to look upon.

NEW YORK, Sept. 28.—Raisins, 3-Crown, $2@2.20; London, $2.10@2.35. Raisins are not arriving fast enough for trade wants. One and two-pound cartons will be popular. California evaporated apples, 16½c. They are not popular, being too sweet. Apricots weakened early in the week, but recovered to full prices. The best pie-baking trade here use them largely. Dried peaches are neglected at the ruling rates. Prunes are held at 12½c. Four sizes of selected forties, 14c.

NEW YORK, Sept. 28.—There is a fine display of pears. The Bartletts went out high. A large offering of peaches was made at easy prices. Grapes are in good order and active. One firm sold 50 cars at auction as follows: Bartlett pears, boxes, $2.70@4.40; Seckel, fancy, $7.20; Beurre Clairgeau, $3.10@4.30; Duchess, $2.35@4.30; various brands, $1.65@4 20; quinces, $2.20@2.75; peaches, 65c@$2.35; almonds, $1.25@1.40; nectarines, $3.25@4.20; Japan plums, $4.10@6 90; others, $1.55@1.85; prunes, $1.50@3; Tokay grapes, double, $2.35@6.10; single, 90c@$3.35; Muscat, double, $1.05@2.50; single, 75c@$1.60; Malaga, double, $2.10@3.10; various, 80c@$3.15. The California Fruit Union sold eight cars at auction: Peaches, 75c@$1.80; quinces, $3.75; Winter Nelis pears, $2.75@3.50; Beurre Clairgeau, $3.07@4.50; others, $3.10@3.30; prunes, $1.40@2.10; Tokay grapes, single, $1.10@1.40; others, 65c@$2.85.

CHICAGO, Sept. 29.—Porter Bros. Co. sold to-day five cars of California fruit: Full crates Muscat grapes, $3.80; full crates Tokay grapes, $3.25@3.40; half crates Tokays, $1.40@1.60; Cling peaches, $1.40@1.75; Salway, $1.35@1.50; pomegranates, $1.75; French prunes, $1.90; quinces, $1.85.

The Earl Fruit Co. sold to-day: Tokay grapes, half crates, $1.25@1.50; full crates, $2.25@3.35; Muscats, half crates, $1.75@1.85; full crates, $3.65; German prunes, $2.40; French prunes, $2; Salway peaches, $1.35@1.40; Winter Nelis pears, $2.40@2.45; Beurre-Clairgeau, $3 35; Vicar, $2.25; Beurre Gris, $2.50; quinces, $1.90. Fourteen carloads of fruit were sold this morning.

CHICAGO, Sept. 30.—Porter Bros. Co. sold to-day seven cars of California fruits. Full crates of Tokays brought $3.50@3.65; full crates of Muscat, $1; Beurre Diel pears, $2.85@3.25; Cling peaches, $1.40@1.60; Salway peaches $1.25@1.50; quinces, $1.75.

The Earl Fruit Co. sold California fruit at auction to-day, realizing the following prices: Four cars California fruit, full crates, Muscat grapes, $4; full crates Tokays, $3.30; half crates Muscat grapes, $2; half crates Tokay grapes, $1.55; Salway peaches, $1.40; Strawberry peaches, $1.40@1.60; Honey Cling, $1.40@1.45; White Nelis pears, $2.55. Twelve carloads were sold here this morning.

NEW YORK, Oct. 1.—Sgobel & Day, agents of the California Fruit Co., sold two carloads of grapes, all hf crates. Tokay, $1.40@2.20; Muscat, $1.10@1.40; Morroco, $1.65@2,20; Cornichon, $1.80; Rose of Peru, $1.05; Emperor, $2.10. The market is steady, but high-colored Tokays are wanted. Peaches sell at $1 30@1.50 ₱ box and receipts are equal to the demand.

CHICAGO, Oct. 1.—The Earl Fruit Co. sold California fruit to-day at the following prices: Pears—Glout Morceau, $3.15; Duchess, $3.15; Winter Nelis, $2.30@2.50; Vicar, $2.20; Strawberry peaches, $1.40.

CHICAGO, Oct. 1.—Porter Bros. sold five cars of California fruit to-day at the following prices: Peaches, $1.05@1.30; grapes, hf crates, Tokay, $1.55@1,95; Muscat, $1.85@2; full crates, Tokay, $3.40@4; Muscat, $3.90@4 05; Cornichon, $1.85. Pears—Vicar, $2.50; Beurre Clairgeau, $3.05; Beurre Bosc, $3.45, Beurre de Tonga, $3.10.

TREES, PLANTS
AND
VINES
FOR THE SEASON OF 1890-91.

Having decided to re-establish the GENERAL NURSERY BUSINESS at Oakland, Cal., I have purchased the ENTIRE NURSERY STOCK grown by Mr. James Shinn at Niles, Cal., embracing a most complete assortment of unusually fine stock, grown without irrigation, that I am offering at reasonable prices.

All the Leading Varieties of APPLE, PEAR, CHERRY, PLUM, PRUNE, APRICOT, NECTARINE and ALMOND.
Fine Stock of ORANGES, LEMONS, OLIVES, NUT TREES AND FIGS.
The Only Stock of PERSIAN WALNUTS (Kaghazi) on the Pacific Coast.
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IT WILL PAY FOR ITSELF OVER AND OVER AGAIN IN A SHORT TIME.
Send for Descriptive Pamphlet with Prices to
JAMES LINFORTH, 37 Market St., San Francisco.

Sorghum Syrup.

James Linforth of San Francisco, agent for the Blymyer sorghum machinery, shows us a letter received from T. J. Henderson of Moore's Station, Butte county, and a sample of some excellent sorghum syrup which he is making from orange sorghum cane. Mr. Henderson writes that he is having good success and is selling all the syrup he can make at 85 cents per gallon, including can, 75 cents in the buyer's receptacle or 65 cents per gallon by the barrel. He believes the demand for this syrup in the mountains is going to be immense. The interest in the crop is large, as he has 15 to 40 visitors a day. He proposes to put in 250 or 300 acres next year, and take in a partner with capital. The syrup he makes weighs 11½ or 12 pounds per gallon, and has a flavor which is popular with buyers.

A Moving Appeal.

"Lives of poor men oft remind us
Honest toil won't stand a chance,
The more we work, there grow behind us
Bigger patches on our pants;
On our pants once new and glossy,
Now are stripes of different hue,
All because subscribers linger,
And won't pay us what is due.
Then let all be up and doing,
Send your mite, however small,
Or, when snows of winter strike us,
We shall have no pants at all."

FOR ILLEGAL TIMBER CUTTING.—A dispatch from Tucson states that Daniel Ross, a millman of the Copper Queen Mining Co., has been arrested by U. S. Marshal Paul for cutting Government timber. His bail is fixed at $10,000. A civil suit will be commenced against Ross and the Copper Queen Co. for $90,000. It is alleged they have cut 3,000,000 feet of lumber.

GROUND was broken at Sacramento Sept. 30th for the new Government building, to cost $300,000.

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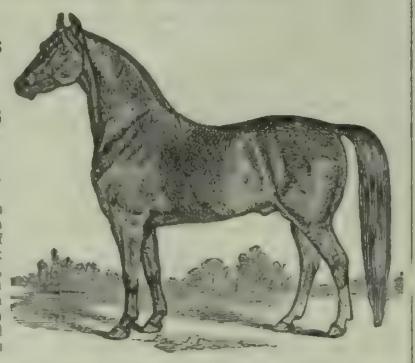
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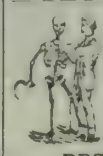
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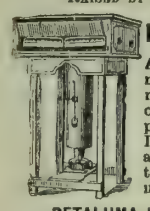
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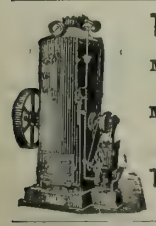
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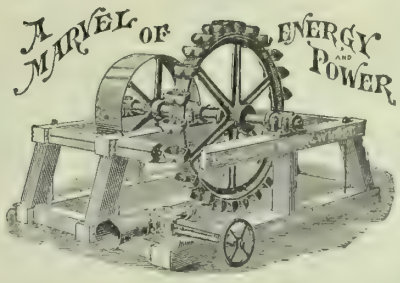
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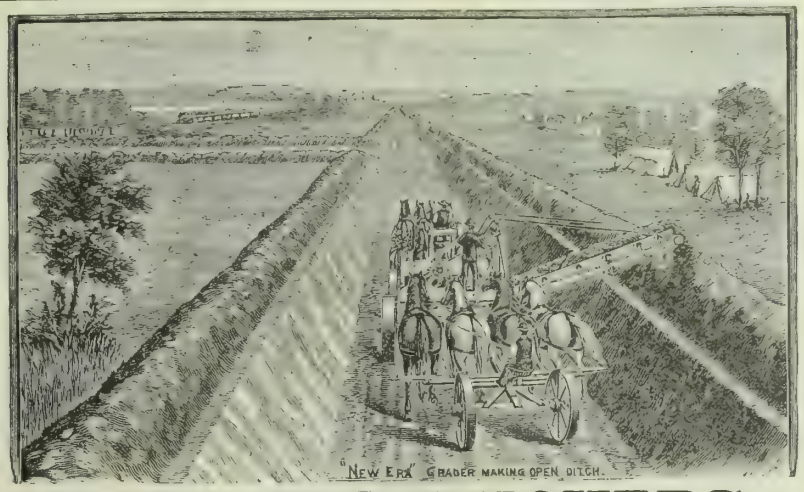
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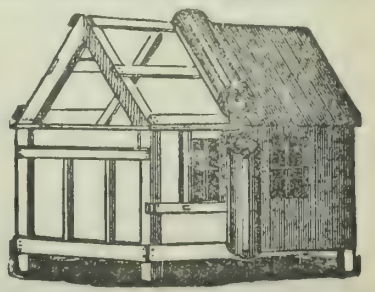
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IRVINGTON, ALAMEDA COUNTY, CAL.

S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Oct. 1, 1890.

Trade in farm products was interrupted the past week by rains, but at this writing the weather is clear, and with its continuance for the next fortnight no severe damage to exposed farm products will be met. Money is generally easy, and obtainable on first-class security at low rates, but for advances on country realty many capitalists are offish. The decline in silver to $1.09 an ounce had a bad effect on wheat, but with the price advancing again, wheat shows more strength. The following is to-day's cablegram:

LIVERPOOL, Oct. 1.—Wheat—Firmly held. California spot lots, 7s to 7s 2½d; cargoes off coast, 37s 3d; just shipped, 37s 3d; nearly due, 37s 3d; cargoes off coast and on passage, steadier; Mark Lane wheat, quiet but steady; French country markets, quiet.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Sept.	Oct.	Nov.	Dec.	Jan.
Thursday	7s8d	7s8½d	7s8½d	7s8½d	7s8½d
Friday	7s8½d	7s8½d	7s8½d	7s8½d	7s8d
Saturday	7s8½d	7s8½d	7s8½d	7s8½d	7s8½d
Monday	7s8½d	7s8½d	7s8½d	7s8½d	7s8½d
Tuesday	7s8½d	7s8½d	7s8d	7s8½d	7s8½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	37s3d	37s8d	37s8d	Inactive.
Friday	37s3d	37s8d	37s8d	Quiet.
Saturday	37s8d	37s8d	37s8d	Dull.
Monday	37s8d	37s8d	37s8d	Easy.
Tuesday	37s8d	37s8d	37s8d	Heavy.

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week:

Day.	Sept.	Oct.	Nov.	Dec.	May.	June
Thursday	100⅝	101⅛	....	103⅝	108⅝	....
Friday	101½	101⅝	....	104	109⅝	....
Saturday	101	101½	....	103⅝	108⅝	....
Monday	100	100½	....	102⅝	107½	....
Tuesday	....	101⅝	....	104½	108⅝	....

The closing prices for wheat have been as follows at Chicago for the past week:

Day.	Oct	Dec.	May.	June.
Thursday	97	100	105	....
Friday	97	99⅞	104⅝	....
Saturday	96⅛	99⅛	104⅛	....
Monday	95⅛	98⅛	103⅝	....
Tuesday	97	100⅛	104⅝	....

NEW YORK, Oct. 1.—Wheat—$1.03 for cash, $1.01½ for October, $1.03 for November, $1.04⅜@1.04¾ for December and $1.08¾ for May.

CHICAGO, Oct. 1.—Wheat—$1.00⅛ for December and $1.05¾ for May.

Foreign Grain Review.

LONDON, Sept. 29.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: English wheats are in plentiful supply and prices have fallen 6d. There has been a general drop of 6d in foreign wheats. At Liverpool, California futures fell 1d ₩ ctl. At to-day's market there were increased supplies of English wheat; good White was offered at 35s; California and Australian at 38s. Foreign flour was 6d lower. Corn was in buyers' favor.

The Hop Crop.

MIDDLETOWN (N. Y.), Sept. 26.—It is about certain that the hop crop will not be over two-thirds the usual yield. A report is afloat that Clarg, the biggest hop-grower in the State, has refused 50c per lb. for his crop.

LONDON, Sept. 26.—Hops advanced 30@40 marks in the German market the past week.

Eastern Wool Markets

NEW YORK, Sept. 26.—*Bradstreet's* says: The wool market shows a decided increase in activity. The worsted mills have been heavy; buyers and prices have strengthened in consequence. In Boston the sales have been the largest for any week during the year. There is a strong tendency upward and prices are slowly rising. The strongest demand seems to be for fine Territory wools, though business in all classes is fairly brisk. Pulled wools are strong and the call for them is very good. There is more activity shown in Australian wools than a week ago. Texas wools are comparatively quiet, though a good movement in them is expected to occur soon. Dealers are making no concessions. The Philadelphia market is strong with an upward tendency. Boston sold 5,989 500 pounds domestic and 385,000 pounds foreign. The sales were largely Texas and Territory. Spring California, 17@25c; fall, 16@19c. There is no speculation, though a large attendance of manufacturers. The prices are 1 cent better in instances, all firm.

Local Markets.

BARLEY.

	Buyer Season. H.	L.	Seller 1890. H.	L.	Buyer 1890. H.	L.
Thursday	144⅛	143⅜	...	...	...	...
Friday	143	142½	...	...	137½	136⅞
Saturday	143	142	...	...	....	....
Monday	143⅞	142	...	...	137½	136
Tuesday	144	144⅛	...	...	137⅝	137½

WHEAT.

		S. S.	Nov.	B. '90.	B S.	S. '90.
Thursday	h.	138	....	137⅝	145⅝	....
	l.	138	....	137½	144⅝	....
Friday	h.	....	....	137	145	....
	l.	....	....	136⅞	144⅛	....
Saturday	h.	....	....	137	145	....
	l.	....	....	136⅝	144⅞	....
Monday	h.	....	....	136½	144⅛	....
	l.	....	....	135⅞	144⅛	....
Tuesday	h.	137	....	136½	143⅞	....
	l.	137	....	136⅛	143⅝	....

BAGS — The market for standard-sized grain bags is dull at 6¼@7c. A local authority figures out the cost of laying down Calcuttas here for 1891 at 6c, as follows: Cost at f. o. b. at Calcutta at £8 ₩ bale, $40; duty, 2c ₩ lb, $16; freight at $8 ₩ ton, $4; total, $60 ₩ bale of 1000. There have been further purchases of 4,000,000 at Calcutta, making a visible supply for the season of 1891 of 37,000,000 bags.

BARLEY—The market has held dull at easy prices, although at the close there appears to be a stronger tone. In futures, trading has been light, barely enough to make quotations. The following are to-day's reported sales:

Morning Session: Buyer 1890—400 tons, $1.36. Buyer season—100 tons, $1.43⅜; 300, $1.44 ₩ ctl. Afternoon Session: Buyer 1890—400 tons, $1.35⅝. Buyer season—100 tons, $1.43¾; 900, $1.43⅜ ₩ ctl.

BUTTER—Heavy offerings of pickled, with concessions obtainable, are affecting the market for fresh rolls. California creamery is gaining in reputation and consequently is having better sales. The market for all kinds is barely steady. The early rains had a bad effect.

CHEESE—The market is heavy. While it is not quotable lower, yet to place consignments, concessions would probably have to be made.

EGGS—Choice fresh laid meet with a good inquiry, particularly if they are of good size. Eastern eggs are reported to average better, and as they are coming in fairly free, the market for Californian is kept down.

FLOUR—The market is barely steady. The demand is not urgent.

WHEAT—The sample market is dull. At the close there appears to be a stronger undertone. In futures, trading has been light, with no fluctuations calculated to draw in operators. The following are the reported sales made on to-day's Call:

Morning Session: Buyer 1890—200 tons, $1.38¾; 500, $1.39. Buyer season—200 tons, $1.46 ₩ ctl. Afternoon Session: Buyer 1890—100 tons, $1.39½. Buyer season—100 tons, $1.46⅜; 200, $1.47. No. 1 Brewing, buyer season—400 tons, $1.50; 100, $1.52½ ₩ ctl.

[COMMUNICATED.]

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Sept. 30th, were as follows:

Flour, qr. sks	204,442	Middlings, sks	3,048
Wheat, ctls	156,503	Alfalfa, "	....
Barley, "	32,871	Chicory, bbls	225
Rye, "	400	Broomcorn, bdls	....
Oats, "	11,763	Hops, bls	1,234
Corn, "	4 780	Wool, "	2,484
*Butter, "	1,147	Hay, tons	4,044
do bxs	285	Straw, "	48
do bbls	105	Wine, gals	137,920
do kegs	36	Brandy, "	12,350
do ½ do	....	Raisins, bxs	3,715
†Cheese, ctls	759	Honey, cs	163
do bxs	16	Walnuts, sks	2
Eggs, doz	19 250	Flaxseed, sks	225
do " Eastern	57,100	Mustard, sks	278
Beans, ctls	7,860	Almonds, sks	302
Potatoes, sks	25,101	Peanuts, sks	496
Onions, "	2,206	Popcorn, sks	51
Bran, sks	14,581	Beet sugar, bbls	371
Buckwheat, sks	555		

*Overland 250 ctls. †Overland 329 ctls.

Cereals.

In regard to the foreign situation, a London authority has made up the following figures of estimates of wheat supply and requirements this year compared with actual figures last year:

Countries.	Probable supplies in 1890–1. Qrs.	Actual exports last season Qrs.
United States of America	9,000,000	13,600,000
Russia and Roumania	15,000,000	16,000,000
India	3 250,000	3,350,000
Austria-Hungary	4,000,000	1,250,009
Australasia, Chili, Argentine	2 250,000	1,500,000
Bulgaria, Egypt, Canada and other countries	2,750,000	1,500,000
Total	36,250,000	37,100,000
Equal, bu hels	290,000,000	296 800,000

Countries.	Probable requirements. Qrs.	Actual imports last season. Qrs.
United Kingdom	19,000,000	18,750,000
France	6 000,000	4,300,000
Belgium, Holland, Germany	5,000,000	5 000,000
Switzerland	1 000 000	1,000,000
Italy	3,000,000	3,000,000
Spain and Portugal	2 000,000	1,000,000
Greece, Norway and Sweden	1,000,000	800,000
West Indies, China, Brazil, etc.	2,500,000	2,250,000
Total	39 500,000	37,100,000
Equal, bushels	316,000,000	296,800,000

The *Mark Lane Express* of Sept. 8th says: It becomes necessary to remind the trade that the crops of the season will not be augmented by a single sack as the result of these market crises, that the balance of supply and demand for the next twelvemonth is likely to be a tight fit, and that the short yield in the United States being coincident with a rise in the rouble and the rupee, the chances of English produce being undersold in 1890–1 are less than they have been at any date within the last decade. [With a decline in the price of silver since the above date, both the rouble and the rupee have fallen. What farmers must have is free coinage in the United States.—Commercial Editor RURAL PRESS.]

The European wheat-producing area is divided, for the sake of convenience, into ten divisions. Of these the first is France, which in the present season is credited with from 35,000,000 to 36,000,000 qrs.; Russia comes next with 28,000,000; Austria-Hungary with 24,000,000 to 27,000,000; the Danubian provinces and Turkey with 14,000,000 to 16,000,000; Italy with 14,000,000 to 15,000,000; Germany with 12,000,000 to 13,000,000; and Spain and Portugal with 12,000,000 qrs. The United Kingdom comes seventh with 9,500,000 qrs., while Belgium and Holland with 3,250,000 and all other countries with 2,750,000 complete the list. Thus the yield of the European wheat crops may be taken at not less than 154,500,000 qrs., or more than 162,500,000. The requirements for food and seed of the ten regions may be put as follows: France, 14,000,000; Russia, 20,000,000; Austria-Hungary and Switzerland, 22,000,000; Southeastern Europe, 10,000,000; Italy, 18,000,000; Germany, 14,000,000; Spain and Portugal, 13,000,000; United Kingdom, 26,000,000; and all other countries 10,000,000 qrs. Total, 174,000,000. Thus Europe will need to import 11,500,000, and may need 19,500,000 qrs. of North and South American, of Indian and of Australasian grain. It is not as yet by any means certain that the quantity required will be secured, and the situation of the trade may be very definitely asserted to be one in which price abatement is neither called for nor desirable.

The local wheat market ruled inactive throughout the past week in sympathy with lower prices abroad and light tonnage here. The decline abroad is largely due to the fall in the price of silver, English farmers marketing their grain and heavy importation of Indian and Russian wheats bought before silver was advanced over $1 an ounce. (Silver went up to $1.20 an ounce, but is now down to $1.10 an ounce.) It is claimed that silver will make another advance as soon as the Government commences to buy, which will be on to-day (Wednesday), but when the 4,500,000 ounces are purchased, then the price will set off again. Free coinage will bring the price up to $1.29¾ an ounce and keep it there, which will cause farm products to fetch better prices. Farmers in many localities in this State have housed their grain, so that there will be less selling pressure. The present rains are causing farmers in other localities to rush their grain to cover as soon as possible, and when once warehoused it is virtually out of the market, except at higher prices. The early rains cause many to look for last year's experience, which, if proven correct, will cause another short crop. The number of ships putting in an appearance the past few days will call for more wheat later on for their loading.

Barley has ruled fairly steady. Receipts are light, and as the demand is still good, stocks are being decreased. The rain, it is claimed, will cause a lessened inquiry for barley. There can be no doubt but in the country feeding will be lighter while it lasts, but it will start up again with a renewal in outdoor work. Some barley is being loaded for New York and also for England.

Oats, under free receipts, are weaker, with concessions necessary to induce free purchasing. The crop up North is said to be larger than before estimated.

Corn is firm for yellow varieties and barely steady for white kinds. Receipts are only fair. The rains, it is claimed, have caught considerable not harvested. The East reports a fairly active market.

Rye and buckwheat are barely steady at quotations.

Feedstuff.

Both bran and middlings are lower, the rains causing a shading in the price. Rolled barley is fairly firm.

Hay has a stronger tone, owing largely to the rains creating fears of lessened receipts. Farmers who have not housed their holdings are putting their crop under shelter as fast as possible. The available surplus is now claimed to be considerably short of last year's in this month, while the consumption is much larger.

Wool.

H. Kains Jackson in London *Farmer*, Sept. 15, says: Business is readily done at last Monday's rates, or even a trifling advance. The upward tendency is even now marked in colonial wool. Botanies dearer, and cross-breds show hardening tendency. Rather more business in worsted yarns, but the rates obtained are unsatisfactory. In piece goods some small orders are placed for home trade. At Leicester also on Wednesday a better tone prevailed, and a growing confidence in the full maintenance of values. Saturday's market was characterized by an increasingly firm tone, and a slightly improved business was transacted at firmer quotations. The inquiries are very numerous, particularly for choice growths of luster and demi-luster fleeces, and users are prepared to buy larger quantities to cover existing requirements and to protect themselves against any further increase in values. Heavy speculation, however, is still avoided, and the business done is sound, regular and healthy in character. The above indicates that luster goods are still fashionable, and therefore wools from which they are manufactured will fetch the best prices. In our local market quotations are reported unchanged, but the general tone is healthy, with a fair demand ruling.

Fruits.

Two or three days of more or less rain are a disturbing element. Large dealers claim that prices for berries and grapes will be irregular for the next few days, after which, if the weather is fair, there will be more satisfactory returns to shippers. Several consignments of grapes received this (Wednesday) morning are more or less moldy, and in consequence trucksters got bargains. Good-keeping grapes for shipment fetched an advance. If rains set in again at an early date, the unpicked grapes will be ruined; the same can be said if the weather turns off hot. Wine grapes are dull; the outside quotation is $16 a ton in this city. About all received so far have been too green.

Peaches are firmer. Canners are paying from 4c to 5c a pound, with now and then a slight advance paid for something very choice. Plums are about out of market. It takes a very choice pear to fetch over $1 a box. There is loud complaint of wormy and otherwise defective apples. To sell off apples, no reasonable offer is refused. Sales are made as low as 25c a box. The free supply of wormy apples is against choice good keepers. The latter are only bought in a small way, which makes it difficult to get over $1 a box. Quinces are in good supply.

The dried fruit market is very dull, with buyers offish—only concessions tempt them. Apricots are well cleaned up. There are several parcels of ungraded prunes on the market, but sellers' views are above buyers. The time to sell is when buyers are in the market for their largest Eastern supplies, and this is passed for this year. Peaches are off, under liberal supplies and a lighter inquiry. The high prices caused buyers to hesitate. Plums and nectarines are well cleaned up.

The raisin market is in a waiting mood. Dealers are rather bullish, still they appear disposed to await further advices regarding the rainstorm. The prevailing opinion is that under the most favorable circumstances, considerable loss will be met through the last rains, and if they are followed within a week or ten days with other rainstorms the effect will in some sections be quite disastrous.

Vegetables.

Rains the past week will stimulate gardening, particularly so with last year's experience fresh in mind.

The market is well supplied with seasonable garden truck. Prices run along at about previous quotations.

Onions are firmer under lighter receipts and a good demand for the more choice keepers.

With the rains, receipts have fallen off, causing a stronger tone to prevail. Buyers are a little offish, claiming that with clear weather receipts will be increased and prices shade off. The shipping demand is fair.

Live-stock.

Bullocks are offering very freely, causing prices to rule in buyers' favor. Mutton sheep are easier, with the tendency to lower figures. Hogs are coming in quite freely. It is difficult to get an advance on quotations. Fresh milch cows are inquired for; buyers are reported to be quite particular. Horses are unchanged.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4@4½c ₩ lb; dressed, 7@8c ₩ lb.; heavy, 3½@3¾c ₩ lb.; dressed, 6@7c ₩ lb. Stock hogs, 3½@3½c ₩ lb.

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¼@5½c ₩ lb.; second quality 4¾@5c ₩ lb.; third quality, 4c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6@8c ₩ lb.; large, 4@6c.

MUTTON—Wethers, 7½@8c ₩ lb.; ewes, 7@7½c ₩ lb.; lamb, spring, 9@10c.

Miscellaneous.

Poultry continues steady, with a firm tone.

Wild game comes in generally in poor condition, owing to sultry, close weather.

Beans are stronger. The strength of the market is due to fears of rain damage to the outstanding crop.

Hops show continued strength, but it would take something very fancy to fetch outside quotations.

New crop nuts are coming in more freely. The market shows considerable strength under a good demand for the winter trade.

Grass seeds are being inquired for.

Mustard seed is meeting with a good demand from the East.

The following are the exports by sea the past week: Flour, bbls, Guayquil, 4288; Honolulu, 175. Wheat, ctls, Cork, 48,898; Liverpool, 59,977. Mustard seed, lbs, New York, 216,902. Barley, ctls, New York, 7534. Bran, sks, Honolulu, 2990. Dried fruits, lbs, Victoria, 2700. Wool, lbs, New York, 135,674. Wine, gals, New York, 146 982. Brandy, gals, New York, 7128, Canned fruits, cs, New York, 1019.

From the *Commercial News* of Sept. 30th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	277,243	232,981
On the way to neighboring ports	21,561	16,619
In port, disengaged	8 273	15,676
In port, engaged for wheat	57,720	68,129
Totals	364 797	333,405

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Sept. 24, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	2,383 701	2,512.032
Flour, bbls	238.321	240 334
Barley	58,601	316,248

Dried Fruits, Etc.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices named, unless otherwise specified, are for fruit in sacks. Add for 50-lb. boxes 3c per lb., and for 25-lb boxes 1c to 1c per lb.

Apples, sun-dried, quarters, common	7	@	—
" " " prime	8	@	—
" " " choice	9	@	—
" " sliced, common	9	@	—
" " " prime	9½	@	—
" " " choice	10	@	—
" Evap. bleached, ring 50-lb. boxes	1	@	—
Apricots, sun-dried, unbleached, common	10	@	11
" " " prime	12	@	—
" " " choice	14	@	—
" " bleached, prime	15	@	—
" " " choice	16	@	—
" " " fancy	17	@	—
" Evap. choice, in boxes	17	@	—
" " fancy, "	18	@	—
Figs, sun-dried, black	2	@	3
" " white	—	@	—
" " " washed	—	@	—
" " " fancy	8	@	10
" " " pressed	5	@	6
" " " unpressed	2	@	3
" Smyrna boxes	14	@	16
" do sacks	10	@	12
Grapes, sun-dried, stemless	3½	@	4
" " unstemmed	2	@	3
Nectarines, Red, sun-dried	10	@	13
" evaporated, in boxes	13	@	14
" white, sun-dried	12	@	—
" evaporated	16	@	1 4
Peaches, sun-dried, unpeeled, common, bleached	14	@	15
" " " prime, "	16	@	17
" " " choice, "	18	@	19
" " " fancy, "	20	@	—
" evaporated " choice	19	@	—
" " " fancy	21½	@	—
" sun-dried, peeled, prime, bleached	20	@	—
" " " " choice	23½	@	—
" " " " fancy	25	@	—
" evaporated, " in boxes, choice	25	@	—
" " " " fancy	27½	@	—
Pears, sun-dried, quarters	8½	@	9½
" " sliced	9½	@	10½
" evaporated, " in boxes	10½	@	10½
" " ring "	11	@	11
Plums, pitted, sun-dried	8½	@	10½
" " evap. in boxes, choice	10½	@	11½
" " " fancy	11½	@	12½
" unpitted,	5	@	8
Prunes, Cal. French, ungraded sizes	9	@	10
" " " graded " 90 to 100	9	@	—
" " " " " 80 to 90	9½	@	—
" " " " " 70 to 80	10	@	—
" " " " " 60 to 70	10½	@	—
" " " " " 50 to 60	11	@	—
" " " " " 40 to 50	12	@	—

Fancy sell for more money.

RAISINS.

Halves, quarters and eighths, 25, 50 and 75 cents higher respectively than whole box prices.

London Layers, choice ₩ bx	$1 85	@	2 10
" fancy, "	2 25	@	2 50
Layers, ₩ bx	1 50	@	2 00
Loose Muscatels, common, ₩ bx	1 15	@	1 35
" choice, "	1 50	@	1 75
" fancy, "	1 80	@	1 90
Unstemmed " in sacks, ₩ lb	4	@	6
Stemmed " " "	4	@	7
Seedless " " "	6	@	7
" ₩ 20-lb bx	1 15	@	1 25
" Sultanas, unbleached, in bxs	1 15	@	1 25
" " bleached "	1 25	@	1 30

CALIFORNIA HONEY.

Comb, dark, 2-lb. frames, 60-lb. cases, ₩ lb	4	@	5
" amber, " " cs. new "	4½	@	5½
" white " " " "	9	@	12
Extracted, dark, 5-gal. cans, 2 cans to case, ₩ lb.	4	@	4½
" amber, " " "	4½	@	5½
" white, " " "	5½	@	6
Comb, 2-tins, 2 doz. to case, ₩ doz	—	@	—
Extracted, " " "	—	@	—
" 4-lb. tins, 1 doz. "	—	@	—
Beeswax, per pound	21	@	24

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Oct. 1, 1890.

BEANS AND PEAS.			
Bayo, ctl	3 25	@	3 75
Butter	2 00	@	2 30
Pea	2 75	@	3 25
Red	2 10	@	2 35
Pink	2 10	@	2 30
Large White	—	@	—
Small White	2 75	@	3 25
Lima	—	@	—
Fld Peas, blk eye	1 60	@	1 75
do green	1 25	@	2 00
do Nies	1 35	@	1 55
Split	6	@	—
BROOM CORN.			
Choice to Extra	75 00	@	85 00
Fair to Good	65 00	@	70 00
Poor	45 00	@	60 00
CHICORY.			
California	6	@	6½
German	6½	@	7
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair, lb	15	@	22½
do good to choice	25	@	32½
do Giltedged	35	@	—
do pickled	18	@	21
do in kegs	17	@	20
do Creamery in rolls	36	@	—
Eastern do	25	@	32½
do do, in tubs	20	@	25
CHEESE.			
Cal. choice mild	9½	@	11
do fair to good	7	@	8½
Young America	10	@	11
N. York Cream	9	@	12
Western	8	@	10
EGGS.			
Cal. ranch, doz	32½	@	34
do do sel'cted	35	@	—
do. store	25	@	27½
Est'n, cld st'rage	—	@	—
do fresh	17½	@	25
do selected	27½	@	—
do to arrive	—	@	—
FEED.			
Bran, ton	16 50	@	18 50
Feedmeal	28 00	@	29 00
Gr'd Barley	29 00	@	30 00
Middlings	22 00	@	24 00
Oil Cake Meal	25 00	@	27 00
Manhattan Food Per 100 lbs	7 50	@	—
HAY.			
Compressed	12 00	@	16 00
Wheat, per ton	10 50	@	14 50
do choice	15 00	@	16 00
Wheat and Oats	10 50	@	15 00
Wild Oats	8 00	@	12 00
Tame do	8 00	@	12 00
Clover	8 00	@	11 00
do ch'ce red top	—	@	—
Barley	8 00	@	11 50
Barley and Oats	8 00	@	11 50
Alfalfa C'mpr'sd	—	@	—
Straw bale	45	@	55
FLOUR.			
Extra, City Mills	4 25	@	4 50
do Co'try Mills	4 25	@	4 50
Superfine	3 25	@	4 00
GRAIN, ETC			
Barley, feed, ctl	1 27½	@	1 32½
do Choice	1 33½	@	—
do Brewing	1 37½	@	1 42½
do do Choice	1 45	@	1 47½
do do giltedg'd	1 50	@	—
Chevalier once	1 50	@	1 52½
do com to good	1 32½	@	1 45
Buckwheat	1 75	@	2 00
Corn, White	1 20	@	1 28½
Yellow, large	1 25	@	1 30
do, small	1 25	@	1 30
Oats, milling	1 62½	@	1 67½
Surprise	1 67	@	1 72½
Choice feed	1 57½	@	—
do good	1 55	@	—
do fair	1 5.	@	—
do Gray	1 45	@	1 55
do Black	1 55	@	1 70
Rye	1 20	@	1 30
Wheat, milling.			
Gilt edged	1 41½	@	—
do Choice	1 3[illegible]	@	—
do fair to good	1 36½	@	—
Shipping, cho'ce	1 33½	@	—
do good	1 31½	@	—
do fair	1 28½	@	—
Sonora	1 25	@	1 30
HIDES.			
Dry Ight to h'vy	10	@	11
Salted	6	@	8½
HOPS.			
Oregon, 1890	32½	@	37½
Cal 1890 Choice	35	@	37½
do Fair to G'd	32½	@	—
ONIONS.			
Silver Skin	2 00	@	2 40

NUTS—JOBBING.			
Walnuts, Cal. lb	9	@	10
do Ch'ce	11	@	12
Almonds, hd shl.	5	@	6½
Softshell	12	@	14½
Paper shell	16	@	—
Brazil	11½	@	13
Pecans	9	@	11
Peanuts	7	@	9
Filberts	11½	@	12½
Hickory	6	@	8
Chestnuts	14	@	—
Pine nuts	7	@	8
POTATOES.			
Early Rose, sks.	60	@	75
Chile	85	@	1 00
Peerless	50	@	90
River Reds	—	@	—
Humboldt	—	@	—
Petaluma	—	@	—
Burbanks	60	@	1 25
Sweet	75	@	1 25
POULTRY AND GAME.			
Hens, doz	5 00	@	7 50
Roosters, old	5 00	@	6 00
do young	4 50	@	6 50
Broilers, small	2 50	@	3 50
do large	4 00	@	—
Fryers	4 50	@	—
Ducks, tame	4 00	@	5 00
do large	5 50	@	7 00
Geese, pair	1 25	@	1 75
Turkeys, Gobl'r	16	@	20
Turkeys, Hens	15	@	18
Pigeons	1 75	@	2 50
Rabbits, doz	75	@	1 25
Hare	1 00	@	1 50
Venison	6	@	8
Dove	50	@	75
Quail	1 00	@	1 50
Snipe, English	2 00	@	3 00
do Jack	75	@	1 00
Ducks, Mallard	3 00	@	4 00
do Sprigs	2 00	@	2 75
do Teal	2 00	@	3 00
do Widgeon	1 25	@	1 50
do Small	1 00	@	1 50
Geese, Gray	3 00	@	—
EGG FOOD.			
Manhattan, ₱ lb	12	@	—
PROVISIONS.			
Cal. Bacon.			
Heavy, lb	10½	@	11
Medium	12	@	—
Light	13	@	13½
Extra Light	—	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11	@	12
Hams, Cal	13	@	14
do Eastern	14	@	15
SEEDS.			
Alfalfa	8	@	8½
Canary	3	@	4
Clover, Red	1 ½	@	11½
White	17½	@	20
Cotton	20	@	—
Flaxseed	2	@	3
Hemp	4	@	5
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German	5	@	6½
do Common	5	@	6
Mustard, yellow	1½	@	2½
do Brown	2½	@	3½
Rape	1½	@	2½
Ky. Blue Grass	14	@	16
2d quality	13	@	14
Sweet V. Grass	75	@	—
Orchard	12	@	14
Hungarian	27½	@	40
Lawn	6	@	8
Mesquit	6	@	7
Timothy	6	@	7
TALLOW.			
Crude, lb	3	@	5
Refined	6	@	
WOOL, ETC.			
SPRING—1890.			
Humboldt and Mendocino	19	@	24
Sac'to valley	15	@	22
Free Mountain	18	@	24
S Joaquin valley	12½	@	17
do mountain	17	@	22
Cala'v & F'th'll	15	@	24
Oregon Eastern	13	@	22
do valley	20	@	25
So'n Coast, def	10	@	14
So'n Coast, free	12½	@	19
FALL—1890.			
North'n, choice	15	@	17
do defective	12	@	14
Mountain Free	11½	@	14
San Jo quin defective	8	@	11
Southern do	8	@	11

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Oct. 1, 1890.

Bananas, bunch	1 00	@	3 00
Cranberries	10 00	@	11 00
Limes, Mex	4 00	@	5 50
Lemons, Cal., bx.	2 00	@	4 00
do Sicily, bx	7 00	@	9 00
do Malaga	7 00	@	9 00
Pineapples, doz.	3 00	@	5 00
Strawberries chest	4 00	@	10 00
Bl'kberries, do	4 00	@	5 60
Huckleberries lb	9	@	12
Figs, box, black	40	@	50
do white	40	@	50
do Smyrna	—	@	—
Pears, bx	50	@	1 00
Peaches box	50	@	1 00
do choice	1 25	@	—
do canning, lb	4	@	5
Apples com box	2	@	75
do choice	90	@	1 25
Grapes, box	15	@	50
do Musca's	20	@	65
do Rose of Peru	20	@	55
do Tokay	25	@	75
do Blk Hamb'rg	25	@	60
do Isabella	50	@	75
do Queen	1 00	@	1 25
do Malvo'se	20	@	70
do Cornichon	50	@	75
do wine Zinfandel	14 00	@	16 00
do other wine			
black kinds	12 00	@	15 00
Waterm'l'ns	100	3 00	@ 5 00
Cantaloupes crt	50	@	—
Nutmeg melons	25	@	50
Crabapples, box	75	@	1 00
Quinces, box	50	@	70
VEGETABLES.			
Okra, dry, lb	6	@	10
do green bx.	40	@	60
Parsnips, ctl	1 25	@	—
Peppers, dry, lb	12	@	—
do green, bx	25	@	40
do Bell	40	@	65
Turnips, ctl	75	@	—
Beets, sk	—	@	1 00
Cabbage, 100 lbs	75	@	—
Carrots, sk	50	@	65
Cucumbers box	20	@	40
do for p'ckling	70	@	50
Tomatoes, bx	25	@	50
String Beans	2	@	2½
Lima do	2	@	3
Squash, summer, bx	25	@	50
Marrowfat, ton	8 00	@	12 00
Garlic, lb	8	@	10
Green corn ch'ce	20	@	22
do do com sk	60	@	1 25
Egg Plant, bx	40	@	70
Cauliflower doz	40	@	60

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE: Sept. 24-30.	Olympia. Rain	Temp.	Wind	Weather.	Portland. Rain	Temp.	Wind	Weather	Eureka. Rain	Temp.	Wind	Weather.	Red Bluff. Rain	Temp.	Wind	Weather.	Sacramento. Rain	Temp	Wind	Weather	S. Francisco. Rain	Temp	Wind	Weather.	Fresno. Rain	Temp	Wind	Weather.	Keeler. Rain	Temp	Wind	Weather.	Los Angeles. Rain	Temp	Wind	Weather.	San Diego. Rain	Temp	Wind	Weather
W.	.00	56	N	Cy.	00	58	N	Cy.	.00	51	Nw	Cy.	.T	76	S	Fr.	.T	64	SE	Cy	00	56	W	Cy.	T	72	Nw	Cy	.T	66	S	Cy.	.04	66	W	Cy.	.00	66	W	Cy
T.	.00	56	N	Cy.	.00	62	N	Cy.	....	54	0	Fy.	.00	86	SE	Fr	00	78	S	Cy.	.00	55	W	Cy	00	80	Nw	Fr	.00	74	SE	Cy.	T	65	W	Cy	.00	68	W	Cy.
F.	.00	60	N	Cl.	.00	72	Nw	Cy.	.00	52	W	Fy.	.00	88	SW	Fr.	00	81	W	Fr.	00	66	W	Cl	02	82	S	Cy.	.00	70	SE	Cy.	00	66	W	Cy.	00	68	Nw	Cy.
S.	.00	72	N	Cl	.00	78	NE	Fr.	....	54	N	Fy.	.00	96	0	Cl.	00	81	S	Fr	00	58	S	Fy.	02	74	E	Ry.	.09	62	SW	Ry.	.01	72	E	Ry.	14	74	NE	Ry
S.	....	....	....	....	.00	80	Nw	Cl.	00	52	N	Fy.	.00	86	SE	Fr	.00	80	E	Fr	T	67	W	Cy	.02	76	W	Cy	.06	62	Nw	Ry.	.01	74	W	Cy.	.02	70	Nw	Cy.
M.	.00	62	N	Cy.	.T	70	Nw	Fr.	....	....	....	....	.64	66	SE	Cy	.78	62	S	Cy.	29	58	W	Ry	....	....	....	....	.37	60	SE	Cy.	00	63	W	Cl.	.36	70	Nw	Fr.
T.	.00	64	SW	Cl.	.12	64	Nw	Fr.	.72	54	SW	Cy	.90	64	SE	Cy.	.00	62	S	Cl.	01	60	W	Fr	.00	70	Nw	Cl	.00	68	Nw	Cl.	00	68	SW	Cl.	.04	68	Nw	Cl.
	.00	....	....	....	.12	....	....	....	.72	....	....	....	1.54	....	....	....	78	..			30	....	....	....	.06	....			.52	....	....	....	.06	....	....		.56	....	....	...

EXPLANATION. Cl. for clear; Cy, cloudy; Fr., fair; Cm., calm; – indicates too much all to measure. Temperature, weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

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Rope.

Baling, Duplex, lb	12
" Manilla, lb	14
Twine, for hops, balls, tarred, lb, Manilla	16
" " grape vine, balls, lb "	16½
" " " coils, lb "	16½
" spring, lb "	18
" binder (65 ft. to lb), lb	15½
Duplex twine 3c per lb less.	

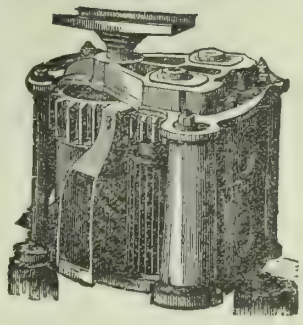
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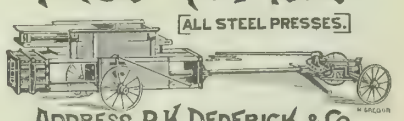
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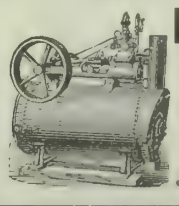
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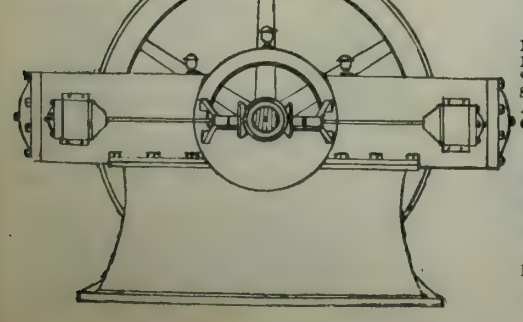


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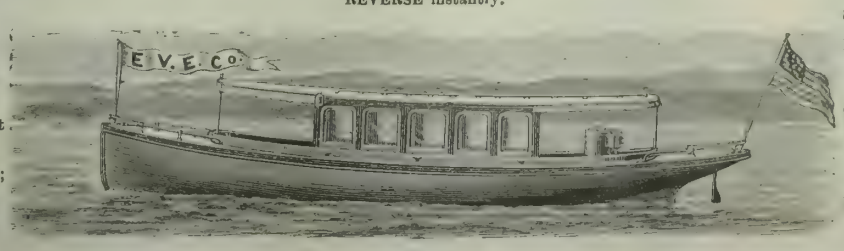
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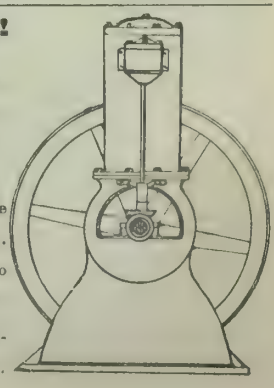
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A Mine of Beeswax.—Beeswax is an article of commerce which it is generally supposed is furnished only by the "busy bee," but one of our Oregon exchanges gives the following account of a beeswax mine in that country: No one has ever been able to give an authentic account of how such enormous quantities of beeswax came to be deposited on the beach near Nehalem. Specimens are found along the beach in various places, but it is most plentiful near the mouth of the Nehalem. As the sea shifts the bars, pieces of it are washed ashore, and large quantities are found by plowing in some of the low land near the beach. There are spots where the sea has never reached in the memory of the oldest settlers, and which are covered with a good-sized growth of spruce, where deposits of wax may be found by digging. Specimens of the wax may be found at the house of any settler on the beach, and to all appearances it is genuine beeswax. Several tons have been unearthed, and one man shipped a large amount to San Francisco once, for which he received $500. In quality it is as good as any in the market, and has retained its familiar odor through all its rough usage and age. It is supposed by some, and so stated, that it came from a wreck of a Spanish vessel over a century ago. Others say it came from a wrecked Chinese junk. These traditions in regard to the wrecks come from the Indians and are not reliable. It is most probable that this beeswax is really "lost treasure," which people are digging for on the Nehalem.

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For Sale.—Valuable land in Tulare county artesian belt. 160 acres, 1½ miles southwest of Tulare city; 480 acres, 7 miles southwest of Tulare, with large flowing artesian well, well-finished two-story house, large barn, etc.; 160 acres, 2 miles southwest of the above; 480 acres 3 miles southwest of Pixley and about 4 from Alila. For sale by owner in lots to suit at low prices, low interest and very easy terms. For further information, address LAND OWNER, Box 2517, S. F., or A. T. DEWEY, No. 220 Market street, San Francisco, C l.

Housewives, Attention!

Two *new* first-class Sewing Machines for sale cheap. Will be sent direct from warerooms if desired. Address, H. F. D., Box 2517, San Francisco, Cal.

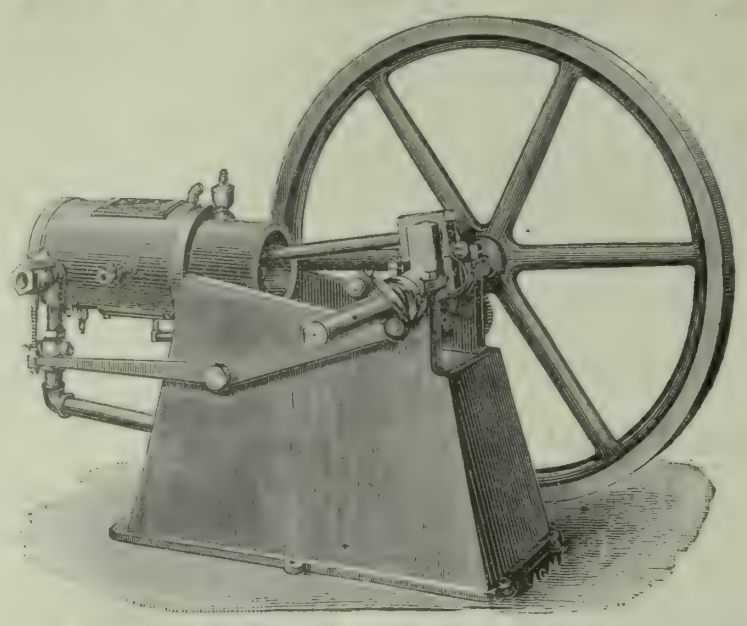
$500,000

To loan in any amount at the very lowest market rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California St., San Francisco. **

$3,250,000

To loan on mortgage on ranches and city real estate below market rates. HOWE & KIMBALL, 508 California St., S. F. **

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NO BOILER, FIRE, EXPLOSION, STEAM, ASHES OR ENGINEER.

STARTED INSTANTLY WITHOUT EVEN A MATCH.

The Moment Engine Ceases to Run, all Expense Stops.

Upright and Horizontal, Stationary and Marine Engines from ¾ to 60 Horse Power.

OUR STATIONARY ENGINES are especially adapted for PUMPING and IRRIGATING.

OVER 150 IN USE.

POPE & TALBOT, Lumber, Office, 204 California Street. P. O. Box 2215.
San Francisco, Feb. 25th, 1890.

Regan Vapor Engine Co.—Gentlemen: The 4 H. P. Vapor Engine I bought of you last May has been in constant use ever since, and has given me entire satisfaction. I have found the engine to be all that you claimed for it, and more too. You can use my name for reference if you so desire. I am, yours truly, H. TALBOT.

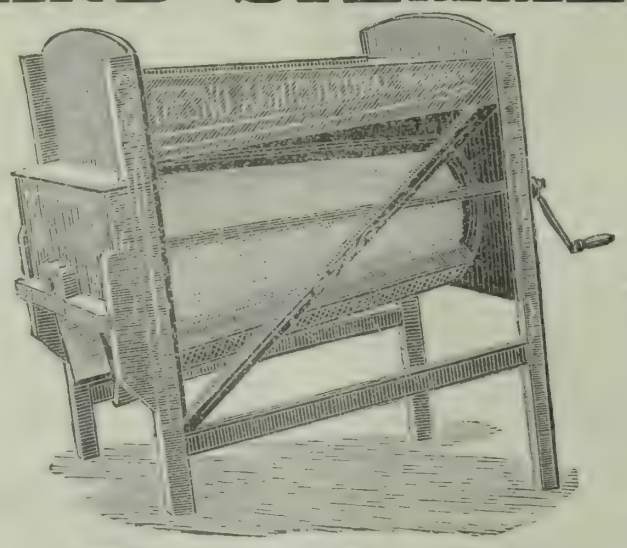
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Among the abundant treasures of our immense stock *every one* is sure to be suited. Please select in time your "autumnal music books."

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50th Year. *(Mention this paper.)*

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Fruit and Ornamental Trees,
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25,000 Sweet Seedling Orange Trees, one and two years,
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400,000 OLIVES, 18 VARIETIES.

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Budded Orange and Lemon Trees.

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SEEDLESS GRAPE ROOTS.

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$30 to $60 per 1000. Circulars and price list free. Address D. S. MYER & SON, Bridgeville, Del.

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For the Season of 1890-91.

Having decided to re-establish the GENERAL NURSERY BUSINESS at Oakland, Cal., I have purchased the ENTIRE NURSERY STOCK grown by Mr. James Shinn at Niles, Cal., embracing a most complete assortment of unusually fine stock, grown without irrigation, that I am offering at reasonable prices.

All the Leading Varieties of APPLE, PEAR, CHERRY, PLUM, PRUNE, APRICOT, NECTARINE and ALMOND.

Fine Stock of ORANGES, LEMONS, OLIVES, NUT TREES and FIGS.

The Only Stock of PERSIAN WALNUTS (Kaghazi) on the Pacific Coast.

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Red Top, Timothy, Red Clover, Kentucky Blue Grass,
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We are prepared to furnish the leading varieties of fruit trees and vines for planting season of 1890 and 1891. Our trees are grown in rich alluvial soil, entirely free from scale. An inspection of our stock is respectfully invited. Write for pricee.

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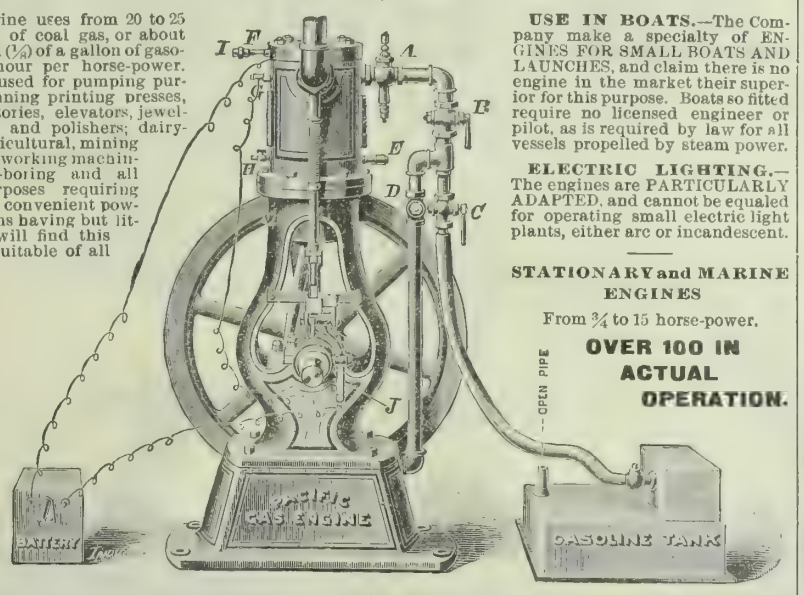
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PATENTED JUNE 17, 1890—NOS. 430,504, 430,505, 430,506.
Also in Great Britain and other foreign countries.

Starts Instantly Without the Necessity of Boiler, Fire or Experienced Engineer.

The engine uses from 20 to 25 cubic feet of coal gas, or about one-eighth (⅛) of a gallon of gasoline per hour per horse-power. It can be used for pumping purposes, running printing presses, small factories, elevators, jewelers' lathes and polishers; dairymen's, agricultural, mining and wood-working machinery; well-boring and all other purposes requiring cheap and convenient power. Persons having but little space will find this the most suitable of all motors.



USE IN BOATS.—The Company make a specialty of ENGINES FOR SMALL BOATS AND LAUNCHES, and claim there is no engine in the market their superior for this purpose. Boats so fitted require no licensed engineer or pilot, as is required by law for all vessels propelled by steam power.

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STATIONARY and MARINE ENGINES

From ¾ to 15 horse-power.

OVER 100 IN ACTUAL OPERATION.

READ THESE TESTIMONIALS.

ALAMEDA, April 8, 1890.

PACIFIC GAS ENGINE CO.—GENTLEMEN: Permit me to add my testimonial to the many you have received indorsing your engine. As you are aware, mine was a Regan engine which gave me considerable trouble. I had to remove the head and raise the tappet valve every time I wanted to start the engine. I sent you the engine; you removed all the Regan appliance except the cylinder and stand. You put in your appliances, head, sparking device, inlet valve, and, in fact, changed it to the Pacific Gas Engine, which now works splendidly. I have not had to remove the head for any cause since you made the change (over two months). It gives me no trouble; my boy, 14 years old, attends to it.

The change from the Regan to the Pacific is a decided improvement. I can also get a third more power since the change, and I cheerfully recommend your engine as being simple, effective, and cheap. Respectfully yours,
B. S. HILL, S. W. Cor. Encinal Ave. and Morton St.

MAYFIELD, March 26, 1890.

PACIFIC GAS ENGINE CO.—We have given your little 1-H. P. engine a splendid advertisement. A fire broke out at 2:30 o'clock this morning, in a tenement house on my premises. I started the engine, connected the hose, and by its use saved at least $3000 worth of my property. I saved my blacksmith shop, lying 12 feet from the burning building, my barn and my dwelling. Three times the fire started in these buildings, and I extinguished it every time. The engine never faltered, and threw water between 50 and 60 feet high. The whole town was astonished, and they acknowledged that I saved at least $20,000 worth of property.

A fire department is being organized here, and I think they will have one of the engines on a truck for fire purposes. *They cannot be beaten.*

Hoping that all of your customers will be as well pleased with the engine as I am, I remain, Yours truly,
JOS. P. PONCE.

PACIFIC GAS ENGINE CO.,

Send for Circular and Price List. **230 FREMONT STREET, SAN FRANCISCO.**

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R. W. BELL, Proprietor,
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A Superb Lot of Bartlet's and Apples
(on Whole Roots),
Cherries, Olives, Walnuts, Shade Trees, Table and Raisin Grapes, &c., &c.

ORANGE CULTURE A practical treatise by T. A. GAREY giving the results of long experience in Southern California. 196 pages, cloth bound. Sent post-paid at reduced price of 75 cts. per copy by DEWEY & CO., Publishers, S. F.

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"Greenbank" 98 degrees POWDERED CAUSTIC SODA (tests 99 3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by

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Home Mutual Insurance Company,

216 Sansome Street, San Francisco.

INCORPORATED A. D. 1864.

Losses Paid Since Organization	$3,033,420 31
Assets, January 1, 1890	821,517 09
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	244,384 14

Windmills, Pumps, Etc.



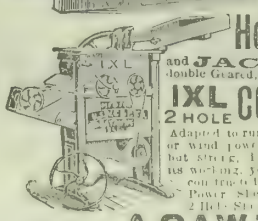
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Do your own Shelling and Grinding at Home, saving tolls and teaming to and from the Grist Mill. This work can be done rainy, windy days, when out-door work is suspended on the farm. The same Mill will cut corn stalks, saw wood, run churn, grindstone, pump water, etc. We make the



HALLADAY GEARED WIND MILL

in 11 sizes, 1½ to 40 horse power, and GUARANTEE they have no equal for Power, Durability and Storm-Defying Qualities.



Horse Powers and **JACKS** both single and double Geared, made heavy and strong.

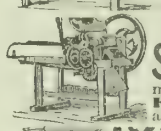
IXL 2 HOLE CORN Sheller

Adapted to run by hand, horse, steam or wind power. Not cheaply made, but strong, durable and effective in its working, yet light running. It is now run by a similar to the large Power Shellers, and is the best 2 Hole Sheller on the market.



SAW TABLES

Both Swinging and Sliding Tables. We make a Saw Table especially adapted to sawing long poles. Special care is taken to make these machines strong and durable.



THE IXL STALK CUTTER

made in 5 sizes, with **Safety Fly Wheel, Safety Lever,** and all late improvements.



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3 sizes, both Belt and Geared Mills. Can be run by any power, and especially adapted to Wind Power. Will grind any kind of grain, and is the lightest running and most effective Feed Grinder made.



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For warming water in Stock Tanks. Made of the best quality of iron cast in one piece, no sheet iron to rust or solder to melt and cause leak. Will burn any kind of fuel. It is very effective and takes less care to operate than any other Heater made.

We also make the

HALLADAY PUMPING WIND MILLS

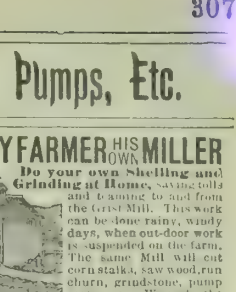
In sizes; 8 to 60 ft. diameter, and one man to 40 horse power. The **U. S. SOLID WHEEL WIND MILL,** 7 sizes. **Iron and Brass Pumps** in great variety. **Tanks** all kinds and sizes, and the **Standard Hay Tools** consisting of **Anti-Friction, Swivel, Reversible** and **Rod Hay Carriers, Harpoon** and **Grapple Horse Hay Forks, Pulleys, Floor Hooks, etc.** All goods fully guaranteed. Send for Catalogue and Prices. **Reliable Agents wanted** in all unassigned Territory.

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BRANCH HOUSES:—Kansas City, Mo.; Omaha, Neb.
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DO YOU WANT A **Profitable Business?** Do you wish to **SUCCEED** where others fail? Then

BORE WELLS with our famous **Well Machinery.** The only perfect self-cleaning and fast-dropping tools in use.

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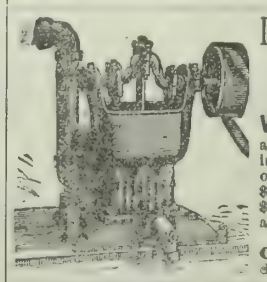
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HORTON & KENNEDY still continue to supply the famous

ENTERPRISE WINDMILLS.

These Windmills have been advertised in and known by the readers of the PACIFIC RURAL PRESS for over 20 years. The Best is the Cheapest. Write for circulars and prices.

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San Francisco Agency, JAMES LINFORTH, 87 Market St.



IRRIGATING PUMPS

Horse Powers
Windmills, Tanks

and all kinds of Pumping Machinery built to order. Windmills from $65. Horse Powers from $50. Send for Catalogue and Price List.

F. W. KROGH & CO., 51 Beale St. San Francisco.

We have the Latest Improvements in

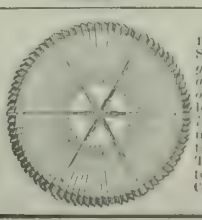


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For all Formations and for any Depth.

Send 20 cts. for mailing Catalogue.

F. C. AUSTIN MFG. CO.
CHICAGO.



If you want the most WONDERFUL, EXTRAORDINARY, SIMPLE Wind Mill of the age, *get of parties who have made a business of building Mills for over 20 years.* Send for catalogue giving full information. 20 SIZES AND KINDS BUILT more than any other house in the world. Pumps, Cylinders, Tanks, Horse Powers, Cutters, etc. Address, Challenge Wind Mill & Feed Mill Co., Batavia, Illinois.

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The New "Bradley" Gang Plow.

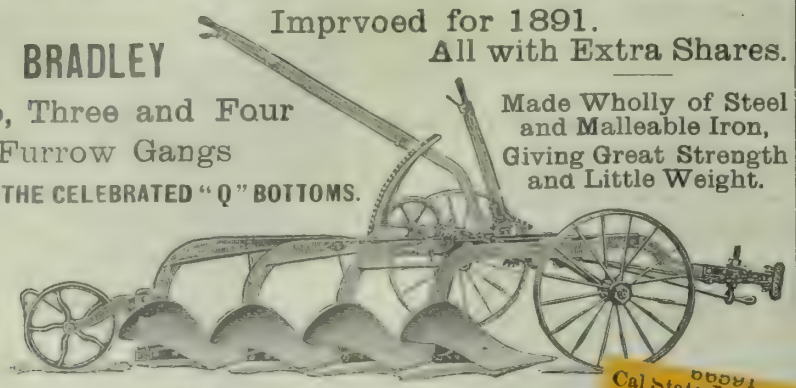
Imprvoed for 1891.
All with Extra Shares.

BRADLEY

Two, Three and Four Furrow Gangs

WITH THE CELEBRATED "Q" BOTTOMS.

Made Wholly of Steel and Malleable Iron, Giving Great Strength and Little Weight.



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THE "BRADLEY" PRONOUNCED THE "BOSS."

SOLANO, CAL., April 19, 1889.

MESSRS. TRUMAN, HOOKER & CO., San Francisco, Cal.—Gentlemen: In regard to the Four-Gang Bradley Walking Plow you sold me, it is superior to any I ever tried. I can plow as much in half a day with it as I did with my old Eureka two-gang plow all day, and only two more horses. All the farmers who saw it pronounce it the "Boss." I certainly would not be without one. You can put my testimony as strong as you see fit. I cannot say too much in its favor. Yours truly, A. W. McPHERSON.

THE "BRADLEY" TURNS THE GROUND PERFECTLY.

SANTA CLARA, CAL., December 4, 1889.

MESSRS. TRUMAN, HOOKER & CO., San Francisco, Cal.—Gentlemen: I write to inform you that I have been using the two Four-Gang Bradley Plows that I purchased of you last month for the last two weeks, and that they give me entire satisfaction. I have been using plows of all makes for many years on this coast, and I know that the Bradley is the best that I have ever seen or used. They turn the ground perfectly, and pull as easy as my old two-gang Eureka did, which only turned 24 inches, while the Bradley turns 41 inches, plowing at the same depth. If you have any customers in these parts who are thinking of purchasing plows, send them here to see my Bradley work. Yours very truly, R. B. CAVE.

THE "BRADLEY" WORKS ON THE VERY WORST ADOBE.

SANTA CLARA, CAL., July 10, 1889

MESSRS. TRUMAN, HOOKER & CO., San Francisco—Gentlemen: I cannot say too much for your Four-Gang Bradley Plow. I have plowed with it in THE VERY WORST ADOBE LAND in this section of the country. I have also plowed on side hills that I never plowed before, and cut a full furrow with the four plows. Yours truly, H. S. JONES.

SACRAMENTO, CAL., February 18, 1890.

MESSRS. TRUMAN, HOOKER & CO.—Gentlemen: Mr. Garcia was plowing yesterday with the Bradley Two-Gang Square Corner Plow, and it does good work. There are different kinds of land in my ranch, and we have tried it on all. I think you will sell a lot of them in this neighborhood. Yours truly, J. L. NORIEGA.

The Bradley Square Corner Sulky and Gangs.

"SQUARE CORNER" SULKIES AND GANGS.

Bradley "Square Corner" Sulky Plow

Runs Lighter, is Handled Easier, and the SHARES LAST LONGER than any other Plow sold on the Coast. All the BRADLEY PLOWS have EXTRA HARDENED Soft Center STEEL Moulds.

Note the Points of Superiority.

The Bradley Square Corner Sulky is Without an Equal.

SANTA CLARA, CAL., Nov. 8, 1889.

I, the undersigned practical fruit-grower, have witnessed the Bradley Square Corner 14-inch Sulky Plow in my field cutting a [illegible]4 inches wide and 12 inches deep, [illegible] a draft of 700 lbs., on an average [illegible]ve small horses to do the work on gravel and adobe ground.

DAN GAMER.

Best Made and the Lightest Draft Plows in the Market.



THE BRADLEY SQUARE CORNER IS THE THING FOR PLOWING FOR PLANTING VINES.

GRAND BRADLEY VICTORY.

We don't wish to weary you with too much reading, so we print only our latest testimonial:

CLAUS SPRECKELS, Moro Coio Sugar Beet Farm, November 25, 1889.

MESSRS. TRUMAN, HOOKER & CO., San Francisco—Dear Sirs: We had a plow trial to-day with the Bradley Square Corner Sulky, 14-inch bottoms, Big Injun and Cassady Sulkies. The draft of each sulky was as follows:

BRADLEY SQUARE CORNER SULKY,	15 in. wide,	11 in. deep.	Draft, 750 lbs.
BIG INJUN SULKY	14 "	10 "	" 950 lbs.
CASSADY	15 "	11 "	" 825 lbs.

The Bradley also turned the land over better than the others. I was so thoroughly convinced of the superiority of the Bradley Plow that I bought eight of them to-day. Respectfully yours, W. V. GAFFEY.

[In two months Mr. Gaffey ordered five more.]

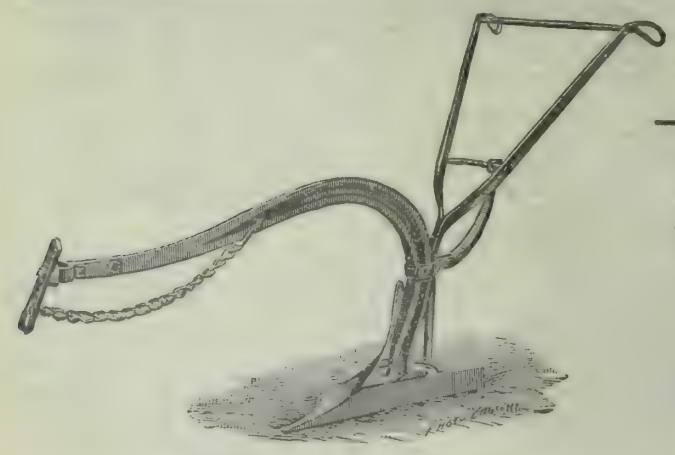
You can PLOW DEEPER with this Plow than any other Sulky ever made, and they are the Lightest Running.

Send for Special Circular, giving Prices and Full Descriptions. Send for our No. 15 1890 Catalogue; Mailed Free to any address.

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TRUMAN, HOOKER & CO.

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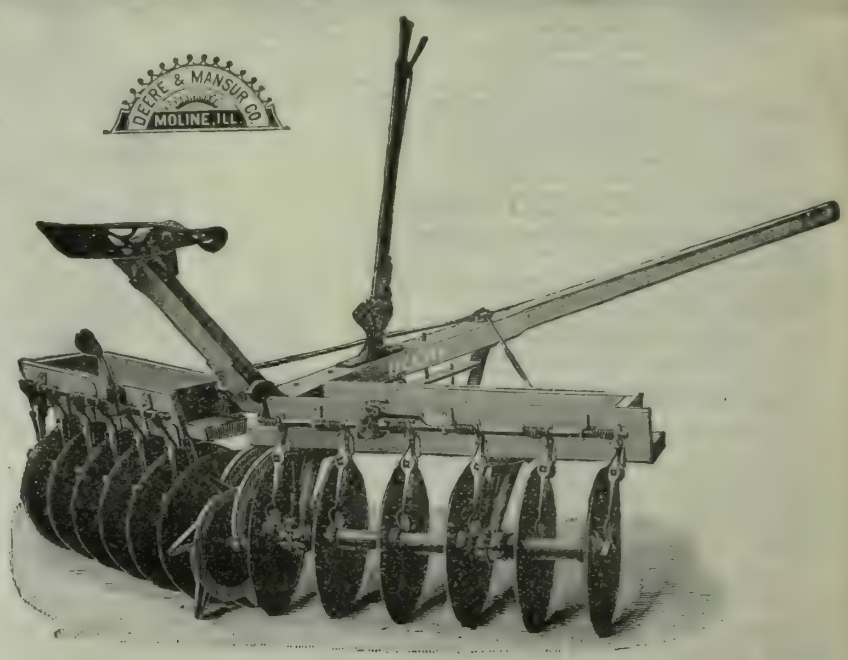
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Pleasing Landscapes.

As the delightful California autumn invites to the open air, we again adorn our first page with glimpses of charming natural scenery. We have had frowning rocks and dense shade in large variety, and at this time we select the thinly-wooded valley and the placid river with its border of graceful trees. The scenes are not Californian. The larger landscape is in Central America, and yet the wide valley with low, shrub-clad hills, and the lake in the middle distance, and the range beyond, might be moved a thousand or two miles up the Pacific Coast and still not be incongruous among other features of our local scenery. To trace the resemblances, then, between scenes familiar to us and those in distant parts may give pleasure to the home-bound reader to whom the opportunity for extended travel never comes. To such, the photographer, the engraver and the printer render delightful service. Additional interest, of course, pertains to Central American scenes not only because of the closer affiliations likely to exist among all American nations, but because of the vast enterprises for travel and transportation which are now planned or in progress. One of these is an international railway connecting North and South American countries, which is now projected, and of which we hope to give an outline at another time.

The smaller scene is probably located somewhere in the Middle States. Many a time those who have long been Californians have cast lines into such still waters, or have mused beneath the shade of such trees, while the sights and sounds of the broad meadows adjacent have delighted the senses and enraptured the soul. The little picture may serve some of our young readers as a suggestion for brush or pencil in the pleasant task of home adornment.



Chrysanthemum Show.

The committee to whom the State Floral Society intrusted the arrangements for a fall show will report in favor of holding a chrysanthemum show on November 6, 7 and 8 in a hall on the ground floor of the new building of the California Academy of Sciences, which has been generously placed at the disposal of the society without charge. It is expected that liberal prizes will be offered, and the show, although more restricted than some the society has held, will be more creditable and more desirable to patrons because of higher-class exhibits. It is proposed to admit only exhibits showing excellence and to display them in the most satisfactory manner. No doubt the report of the next meeting of the Floral Society will contain full information of the show; meanwhile all should have an eye to preparing exhibits in their best style, thus improving themselves and educating the public.



DISTANT SCENES: BESIDE AN EASTERN RIVER AND IN A CENTRAL AMERICAN VALLEY.

Correspondence

Correspondents are alone responsible for their opinions.

Napa Notes.

Editors Press:—Our first rain of the season commenced falling on the evening of the 28th ult., and during that night and the following two days light showers passed over the county. Though threatened for some time, this rain took many of our grape-growers unawares. Not more than one-third or one half of the grapes in Napa valley had been gathered before the rain, and our vineyardists felt gloomy. There was a lack of sugar in many varieties of grapes, and this rain promised to ruin the crop. Happily for grape-raisers and orchardists who were engaged in drying fruit in the open air, the rain has passed over and we now have clear skies and bright sunshine. About half an inch of rain fell at Napa City. The rainfall farther up the valley was lighter. Some grapes are injured, but the damage is comparatively slight.

Many of our grain farmers' gladly welcomed the good rain, as they are ready to commence operations for another season. Some little dry plowing has been done. There is but a small acreage of summer-fallow. The fact that the Hessian fly has injured wheat in the last few years in certain localities in the county will deter many from sowing this grain to any great extent this winter. The yield of wheat in this valley this season was quite small, owing in part to the very wet winter of '89-90, and to the fact that many farmers are turning their attention to raising fruit of various kinds, in which branch of farming there is certainly more profit.

The yield of grapes in the valley is not large this season, and for that and other reasons the price of this fruit is higher than it has been for several years. So unremunerative had been the culture of the grape for the last two or three years, that several vineyards were left to shift for themselves, and many were not kept in first-class condition. Now vineyard men are more encouraged. Prices vary from $10 to $15 per ton, and some vineyardists are holding for still higher figures. Over in Sonoma valley as high as $17 per ton is paid. The entire yield will not fill the cooperage of our cellars. No grapes, or at least none to any amount, will be dried in this valley, owing to the fogs that drift up from the bay in the early mornings. In the valleys in this county situated farther from the coast, where there are few wine-cellars, and where the climate is warmer, the drying of grapes can be prosecuted profitably.

Wine-makers complain of a minimum amount of sugar in this season's grapes. This is owing to the quite cool summer we have had, for there has been little very warm weather. On every road centering at Napa or St. Helena, scores of wagons loaded with grapes and drawn by two, four and six horses are daily to be seen, early and late.

More fruit has this season been dried in this valley and in other parts of the county than in any previous year. Many prune orchards are yearly coming into bearing, and the drying of this variety of fruit of itself is a growing industry that is destined to attain large proportions. The output is exceedingly creditable to our county. Already 25 or more tons of a splendid article have been shipped to cities in the East.

Our orchardists are much pleased at the result of the season's operations in the matter of marketing green fruits. The yield was very good, nothing extra, and prices were high. Many a one has a well filled purse this fall. Quite a large amount of apples have been marketed, sold either to San Francisco parties or to our local drier, which employs a score or more hands. But cherries, peaches, pears and prunes have been the principal varieties shipped. Some of our foremost orchardists are not disposed to raise many apples, preferring to devote their attention to other fruits, as they have proved more profitable.

Apple trees require so much attention now the codlin moth has made its home in our orchards, that many are deterred from raising the fruit. What with spraying, scraping trees and using other precautions, the time and expense incident to apple culture, as compared with that required by other fruit, is too great. Said a prominent and successful orchardist a day or two ago: "There's not much profit in trying to raise late apples. About the only variety I would recommend for profitable cultivation is the 'Alexander.' This variety matures early, you are at very little trouble to spray, etc., and it always sells well in any market." This same gentleman sold his "Alexanders" in the orchard for $7 per tree, and as he had quite a number he was ahead quite a sum on this variety of fruit alone.

Said another fruit-grower to-day: "B fore I had as much experience as I now have, I thought the stories I used to hear of orchards netting their owners $200 or $300 per acre were, to say the least, overdrawn and not worthy the belief. But what I am about to tell you is the truth without any coloring. I had 2½ acres of Salway peaches that netted me over $1000. I think that is doing well enough. I shipped them green to San Francisco."

The well-merited fame of Napa's race-track is extending and will be the theme of many a horseman's conversation this fall. That it is one of the fastest tracks in the State, and consequently in the country, was the verdict Marvin and other veteran horsemen pronounced a year or two ago. The races during the fair held here last month only hightened the opinion of racing men for our course, and this, coupled with the liberality of the association directors, has made this a favorite track with horsemen. Sunol and Palo Alto made fine records here last year.

Next month the Pacific Coast Horse Trotting & Breeders' Association are to meet here, and there will undoubtedly be some very fine racing. Then, too, later in the season the Blood Horse Association may speed their horses on the same track. Our local society, the Napa & Solano Agricultural Association, has a fine property of 60 or 75 acres of level land just outside the city's limits and on the line of the Napa valley railroad, on which this course is laid out.

One of the industries firmly established in Napa is the manufacture of cream tartar. This article of commerce has been made here for several years, but this year it will be manufactured on a much larger scale than formerly. A new company has spent several thousands of dollars in putting up a well-arranged plant, and has already commenced operations. From time to time new factories are established here, and Napa is rapidly becoming a noted manufacturing center.

R.

Napa.

Shorthorn Breeders' Association.

Editors Press:—The stock sale held under the management of the Pacific Coast Shorthorn Breeders' Association, at Sacramento, Sept. 19th, was a success, and fair prices obtained for stock sold. The association is determined to make their sales a success, and offered some of their best cattle at this sale, which was appreciated by purchasers; knowing that no by-bidding was allowed, and that the stock was bid on legitimately, they bid freely. This sale was considered an improvement on the one held in April last, and at the annual meeting of the association it was determined to continue holding annual sales, and place before the public some of their best cattle for their bids. It may be that a sale of bulls will be held in the spring, thereby enabling stockmen to purchase the best stock in the State, from the best breeders, at public sale.

At the annual election, Judge E A Bridgford of Colusa was re-elected president; A. Heilbron, vice-president; J. F. Chiles, secretary; P. S. Chiles, treasurer.

The board of directors consists of president, vice-president, secretary, El Younger, Jos. Marzen and P H. Murphy. J. F. Chiles.

Davisville, Cal. Sec'y.

Bee Disease and Ergot.

Editors Press:—While in your city recently, thinking to satisfy myself as to the correctness of my conclusion on the bee disease (Claviceps Apium), I called upon Dr. H. W. Harkness, president of the California Academy of Sciences. After a statement of symptoms and surrounding conditions, the doctor remarked: "Your solution is correct. Clevesis or Ergot is found upon the flora and grasses of this State in such quantities that it might be profitably gathered for medicinal purposes, and it poisons stock feeding upon it." He also further cited a case of a cow dying from poisoning by this fungoid. It may be of interest to bee-keepers and stockmen to know of these facts.

W A. Webster.

Amherst, Mass., Sept. 25 1890.

Beginnings in Weather Science. — The history of meteorology has been made a subject of investigation by Dr. G. Hellmann. He finds that it is not exactly known who first kept a regular meteorological journal; but Humboldt attributes it to Columbus on his first voyage to America in 1492, while the Italians also appear to have made daily observations from the middle of the fifteenth century. The oldest of the meteorological instruments is the wind vane. The qualities of the winds were correctly described in the periods of Homer and Hesiod, in the ninth and eighth centuries B. C., while the first arrangement for observing wind direction was the Temple of the Winds, at Athens, built about 100 B. C. Eginhard, in the reign of Charlemagne, denoted the winds by the four cardinal points. The first instrument for denoting wind force—essentially the same as the pendulum anemometer now used—is ascribed to Robert Hooker, in 1667. The absorption hygrometer was invented about the middle of the fifteenth century, by N. D. Cusa, and the first condensation hygrometer is credited to the Grand Duke Ferdinand II of Tuscany. The first continuous hygrometrical observations appear to have been by R. Boyle, at Oxford, in 1666. The first thermometer is attributed to G. Galilei, toward the end of the sixteenth century. The first rain-gauge was used by B. Castelli in 1639. The first barometer was made by Torricelli in 1643.

Prof. Hazen suggests that the force of a tornado may be largely diminished by the explosion of gunpowder or dynamite, just as the waterspout at sea is diverted and broken by a like discharge of explosives.

Agricultural Science.

The Use of Fertilizers in California.

University Experiment Station Bulletin No. 88.

The fortieth anniversary of the admission of California into the Union reminds us that she has ceased to be a stripling. With this advance in dignity comes the inference that however fertile her soils, it is to be expected that those long occupied or heavily cropped will now require serious care in order to keep up or restore production That this is really so is proved by the rapidly increasing correspondence on the subject that is addressed to this station; and to avoid the unnecessary rehearsal of general statements in each individual case, it seems desirable to put in print for general information what can be stated in a general way on this subject. Of course many individual cases will still require special consideration on account of peculiar conditions of soil or location; for in a great many instances the failure to produce satisfactory crops is not at all due to soil exhaustion, but to improper physical conditions of the subsoils, unsuitable cultivation or irrigation, alkali, etc. The fact that orchards and vineyards form costly investments of much greater permanence than the annual crops that occupy the vast majority of the cultivated land east of the Rocky mountains, and the high returns so often realized from them, has brought the manure question forward here much earlier than has usually been the case in the United States; and happily the silly adage that "manuring is too costly and will never pay," which has long kept agriculture on the down grade elsewhere, has never had a serious foothold in California. The sovereign truth that nothing pays worse than poor crops upon large areas of which the cultivation costs just as much as if it were yielding high returns, is quite generally appreciated here. Cultivating too much land poorly, and getting poor returns both as to quantity and quality, has been the bane of farmers all over the East, and has doubtless done at least as much toward "agricultural depression" as all other causes combined.

But whether fertilization will pay or not clearly depends directly upon the particular requirements of each soil. Unlike Europe, where long cropping has reduced all soils alike to a condition when they require an "all-around" fertilizer, the soils of California have mostly had only a *one-sided wear* from the constant succession of one and the same crop. In orchards and vineyards this state of things is unavoidable, since they are expected to last 20 to 40 years without renewal and possibility of rotation of crops. It is this one-sided wear, inseparable from the chief horticultural industries of the State, that requires special attention at this time; for it is clear that to apply "complete" fertilizers in these cases, would be to pay out a portion of their cost uselessly, since nothing can be gained by adding to the soil more of the ingredients that are already abundantly present in an available form.

In order to fertilize intelligently we must know, first of all, what ingredients are chiefly drawn upon by the crop sold off the land; secondly, we must know which of these ingredients are so abundantly present in the soil (or irrigation water, as the case may be) to render their replacement unnecessary for the present at least.

The subjoined table* gives some insight into the amounts removed from the soil by some of the chief fruit crops, of nitrogen, potash, phosphoric acid and lime; these being, according to all experience, the only ones of which the replacement need ordinarily be considered in fertilization. These amounts are expressed both with reference to 1000 pounds of fresh fruit, and to what, according to our best information, may be assumed to be a "fair crop" per acre. The latter figure is, of course, liable to great variations and differences of opinion: but by the aid of a little arithmetic each one can calculate for himself the data suitable to his own case or views. The crop assumed in the case of oranges is 325 boxes per acre of 15-year-old trees; that of grapes is intended to represent a mean between upland and lowlands.

QUANTITIES OF SOIL INGREDIENTS WITHDRAWN BY VARIOUS FRUIT CROPS.

Fresh Fruit.	Total ash, lbs.	Potash, lbs.	Phosphoric acid, lbs.	Nitrogen, lbs.
Grapes, 1000 lbs	3.8	5.0	1.52	1.70
Crop of 10,000 lbs. per acre		90.0	15.20	17.00
Oranges (seedless), 1000 lbs	6.07	2.78	.67	2.69
Crop of 20,000 lbs per acre		55.60	13.40	53.80
Pears, 1000 lbs	3.3	1.8	.5	6
Crop of 20,000 lbs. per acre		36.-	10.-	12.-
Plums, 1000 lbs	2.9	1.72	.41	4.2
Crop of 30,000 lbs. per acre		51.60	13.20	167.7
Apples, 1000 lbs	2.2	.80	.03	.6
Crop of 20,000 lbs. per acre		16.00	6.00	12.0

It will be seen that for equal weights of these fruits, *grapes* take from the soil by far the largest amount of mineral matter, of which nearly five-ninths is potash; they also carry off the largest amount of phosphoric acid. For seedless grapes the latter item, would, however, be considerably smaller.

Next in the drain of total mineral matter from the soil stands the *orange;* it also draws heavily on the potash, and also upon the nitrogen of the soil, but less than the grape upon phosphoric acid. This independently of the seeds, the analysis having been referred to seedless fruit; seed-bearing (seedling) fruit would draw more heavily both on phosphoric acid and nitrogen.

Pears come next as regards total mineral matter, but draw quite lightly on nitrogen.

Plums (including prunes) are conspicuous chiefly for their heavy draught on the nitrogen of the soil, greatly exceeding in that respect the orange for equal weights, and enormously for an (assumed) average crop.

The difference between *apples* and *pears* in respect to soil exhaustion for an equal weight of fruit is quite striking, the amount of potash in apples being less than half; the phosphoric acid only a trifle over half as much as in the pear; while nitrogen is equal in both and quite low as compared to the orange, which has over four times as much and must therefore be accounted relatively much more nourishing to man, as well as more exhausting to the soil.

While the data given above in relation to the "outgo" of soil ingredients through the harvesting of the several fruits may be considered as holding good, practically, in all countries and on all soils, the vast differences in the nature and composition of *different soils* introduce an element of uncertainty as to the need of returning to every soil the full amount of the outgoing ingredients. Few soils are about evenly constituted with respect to the four important plant-food substances; there is in most cases one or several of these present in superabundance, so that to replace the small amount carried off by the crop would be as useless as "carrying coals to Newcastle," at least for the present. *The analysis of soils and irrigation waters is necessary to gain information on these points.*

As regards waters, the information so obtained is positive and unimpeachable. Whatever is dissolved in the irrigation water is absolutely available to vegetation, and the amount annually so conveyed to the soil is capable of close calculation on the basis of the current practice of each irrigation district. If the amount of any substance so given to the soil approximates to, or exceeds the amount withdrawn by crops, it is quite certain that no money needs be expended in the purchase of that particular substance as a fertilizer.

As regards soils, the indications given by chemical analysis are not so definite, because the acids used in the laboratory are more powerful than those at the command of the roots of plants; although some of the latter (*e. g.* oxalic acid, that of sorrel, rhubarb, etc.) approximate closely to the same solvent power. Here experience must be our main guide; and this has shown that practically, soils containing (by the results of analysis) more than a certain percentage of a given substance, may be considered as abundantly supplied with the same; while if the percentage so indicated falls below a certain other point, such ingredient may be considered as being deficient. The crucial test in either case is the experimental use of that substance as a fertilizer on the soil in question; when if it fails to produce a definite favorable result it may beconsidered that the native supply is sufficient, and *vice versa.*

It is obvious that in order to secure to the farmer this saving of the purchase of superfluous fertilizing ingredients, a comprehensive system of investigation of soils and waters is necessary. This has been from the outset the central thread of the work of this station; the object being to obtain as quickly as possible the facts necessary for the compilation of a soil map of the State. For want of funds for field work, and too limited a force for the laboratory work, this fundamental plan has been carried out only to a limited extent and chiefly in certain regions where considerable interest in agricultural improvement was manifested. We are not, therefore, as yet, prepared to give information as to the entire State; and unless some special provision is made, it will be long before this can be the case. But so far as the work has gone, the following points may be considered as practically settled:

1. From climatic as well as geological causes, nearly all the soils of the State may be considered as abundantly supplied with *lime.* The chief exceptions occur in the higher portions of the foothills, where the rainfall is high and summer rains occur. In *all* the valley soils lime is abundant; and liming is therefore not among the means of improvement usually to be thought of in California. This applies to the use of quick-lime and ground limestone; not necessarily to the use of marls, which usually contain other ingredients besides lime to render their use valuable where it can be done with little cost.

2. Almost the same that is stated above of lime, may be said of *potash.* The great majority of soils in this State, more especially nearly all valley soils, and absolutely *all* soils in which there is the least manifestation of alkali, contain an abundance of available potash for all agricultural purposes; so much so that dissolved potash salts frequently circulate in the soil water. Most irrigation waters furnish an additional supply, sometimes enough of itself to make up for all that crops take away. Outside of the rainy belts of the Sierra and of the Northwest Coast, therefore, the addition of potash in fertilization must in general be considered in the light of "carrying coals to Newcastle"—superfluous and unprofitable at the present time; and farmers should object to paying for the potash in commercial fertilizers (put there under the Eastern idea of making a "complete" fertilizer), because the investment will pay them no interest. They should demand for their money the ingredients that will pay them for their use in this State, regardless of what may pay elsewhere.

The few cases in which at present the use of potash *will* pay, are those of intense culture in vegetable gardens and berry patches, where crops are grown continuously and successively throughout the season. Here the draft upon the soil ingredients is so heavy that within a few years *all* require current replacement.

3. Of *phosphoric acid*, an ingredient so im-

*The analyses of ashes here given are mostly those of European chemists, generally accepted as representing averages. California-grown fruits will be investigated at this Station the coming season for this purpose.

portant that even in Europe it is beginning to be claimed as the practical measure of fertility, analysis has shown an almost universal *scarcity* in the soils of this State; always excepting the alkali soils, in which it, or its compounds, frequently circulate in proportionally large amounts. Phosphoric acid is one of the substances to be first suspected of exhaustion in the non-alkaline soils of California; it is therefore an ingredient that should be prominent in *all* compound commercial fertilizers, and which will be found to "pay" in most cases of decreasing production.

4. As to the fourth of the critical soil and plant ingredients, *nitrogen*, its ordinary measure in soils is the vegetable mold or humus, the presence of which is generally manifested, and outside of "red" soils is fairly measured, by the more or less blackish tint when wetted. From climatic causes, humus is rarely abundant in the upland soils of the State, and very generally its amounts may be said to be small. This is especially true of the mesa soils of the South—those best adapted to the growth of the citrus fruits—and hence it is reasonable to suppose that *a lack of nitrogen* will be among the first things to be apprehended when that fruit shrinks in size, and production falls, on these soils.

Elsewhere stable manure is the ordinary source of this as well as of the other substances when required only in moderate amounts; but for many reasons stable manure is less available in the dry climate of California than elsewhere. It is produced only in small quantity in horticultural communities; and when put in the soil it is long in decaying and becoming effective. It should for our climates be systematically "cured" in the manure-pile before being used—a point of vantage which explains, in part, the good effects of sheep-corral manure.

By far the most convenient, and at present certainly the cheapest and most available source of nitrogen at command of the farmer is *Chile saltpeter*, which contains about 16 per cent of nitrogen, in its most effective form. From 150 to 200 pounds per acre is the usual dose; more than this will not be used by the crop plants in one season, and a surplus is likely to be washed out of the soil by the winter rains. Moreover, an excessive application might result in too much wood and too little fruit, and that fruit of a sappy, flavorless character, though of large size.

Sulphate of ammonia is the other most available source of nitrogen obtainable in commerce; a good commercial article contains 20 per cent and over, of nitrogen. It does not, however, act quite as rapidly as the Chile saltpeter.

To the citrus-growers, then, who at present appear to be most concerned about the fertilizer question, I would say that, well-cured stable and sheep-corral manure apart, their best resort at present is to the commercial phosphates and superphosphates of high and honest grade, mixed, either by themselves or by the manufacturer, with a proper proportion of Chile saltpeter or ammonia sulphate; and generally no potash whatever.

In order to cover approximately the ground of the questions most commonly propounded in our correspondence on the subject of fertilizers, the following points are briefly stated:

This station has no direct or definite knowledge of the quality or "trueness to name" of any of the commercial fertilizers now sold in this State. Analyses of mere samples sent by the manufacturers or others prove little or nothing, so long as no regular "fertilizer control" is established by State authority. That this should be done as soon as possible, in the interest both of the users and honest manufacturers of fertilizers, is manifest; and nearly all the older States have found this regulation of the fertilizer trade necessary long ago. At present this station declines to analyze and certify to the composition of fertilizer samples, except in cases of suspected fraud; for the reason that such samples prove nothing as to the general quality of the material put on the market, and their analyses have been used in advertising as though offering a kind of guarantee or recommendation on the part of the director. The latter disclaims pointedly any such responsibility and does not authorize the use of his name in connection with any fertilizer advertised. He has, however, no reason to question the *bona fide* character of the several fertilizers manufactured in this State. That in individual cases disappointment must often occur, is natural from the causes stated above and proves nothing against the honest composition of the goods. In this as in other cases, the right thing may be put in the wrong place. The useless addition of considerable potash is the objection lying against several of the brands in the market.

Farmers should be willing to pay a good price for a high-grade fertilizer, especially in the case of superphosphates. The only consequence of insisting on too low a price is that the manufacturer, in self-defense, adds to the active matters enough of some cheap, inert material to be able to afford the lower rate; the result being that the farmer pays freight, to say the least, on "dirt" which he might as well put in himself on the spot, if so inclined. "Spent refinery charcoal" in coarse grain is about as unprofitable an investment as a farmer can well make; he should be willing to pay enough to justify the manufacturer in reducing every grain of it to the soluble form by the use of enough sulphuric acid. It is not advisable for any one to attempt to do this at home.

In regard to the use of *bones*, it may be said that any one may with little trouble use all the bones accumulating about a homestead in either of three ways:

1. Bones put into a *well-kept* (moistened) *manure-pile* will themselves gradually decay and disappear, enriching the manure to that extent.

2. Raw bones may be bodily *buried in the soil* around the trees; if placed at a sufficient depth, beyond the reach of the summer's heat and drought, the rootlets will cluster around each piece and in the course of a few years consume it entirely. But it will not do to have these root-clusters broken up by cultivation every season.

3. Bones may be packed in moist wood ashes, best mixed with a little quicklime; the mass kept moist but never dripping. In a few months the hardest bones will be reduced to a fine mush, which is as effectual as superphosphate. "Concentrated lye" and soil may be used instead of ashes. In this process the *nitrogen* of the bones is lost, going off in the form of ammonia, the odor of which is very perceptible in the tank used.

For neither of these processes should the bones be *burnt*. The burning of bones is an unqualified detriment to their effectiveness, which can only be undone by the use of sulphuric acid.

4. Bones *steamed* for three or four hours in a boiler under a pressure of 35 to 50 pounds, can, after drying, be readily crushed in an ordinary barley-crushing mill, and thus be rendered more convenient for use. Practically very little of the nitrogen (glue) of the bones need be thus lost.

Very good *bone-meal* is found in the market at reasonable rates.

For information concerning the value and proper uses of *land plaster* or *gypsum* (also one of the inquiries continually made), I refer to pages 144 and 145 of the "*Report on the Experiment Stations*," lately issued, which will be mailed free to any one desiring it. It may here simply be stated that while gypsum is not a general fertilizer like the phosphates and nitrates, for the simple reason that it does not contain, and therefore cannot supply, the plant-food substances of which the withdrawal by crops causes sterility; yet its uses, especially in the irrigated regions and on alkali soil, are so many and so important, that it should be very widely used so soon as a reasonably cheap supply can be obtained.

Berkeley, Oct. 6. E. W. HILGARD.

FARMERS' INSTITUTES.

Report of Institute at Union, Oregon.

The Farmers' Institute, located at Union, Eastern Oregon, was carried out according to printed program, with the exception of the absence of some who were down for essays and addresses. The time was fully taken up from Wednesday evening at 7:30 o'clock until the close of the Friday-evening session.

Upon arriving at Union on the noon train on Wednesday, we found arrangements had been made by Mr. Shirley to have us visit his immense wheat farm to see the Harvest King cut, thrash and sack grain at the rate of 800 to 1000 bushels per day. This was a rare treat indeed. Twenty-two horses and six men were doing the cutting and thrashing. Several teams were engaged in hauling the grain away. This machine cleans the wheat perfectly and grades it into three classes. Six of our party, including two ladies, had the pleasure of riding around the field on the machine while it was at work. This made 12 grown people and a little girl on the machine at one time, yet there was room for more. It was wonderful how the machine would pass over rough, uneven ground without the least apparent effort and no cessation of its duty.

After taking several photos of the harvester and grain field, we were driven across this 800-acre field of grain and through other grain-fields to quite a watering-place known as Hot Lake. The lake covers two acres, I should think, and the water is comfortably warm throughout. At the spring the water is boiling hot and has a strong sulphurous taste and smell. We staid long enough to have an egg boiled in the spring, which took about eight minutes. At times the water is hot enough to cook eggs much quicker. On leaving the spring, we were driven six miles past grain and meadow fields back to Union, arriving in the early evening.

After eating supper hastily, we repaired to the courthouse, where the Institute was to be held. Here we found not less than 250 people awaiting the evening exercises. There was also on exhibition a fine collection of ores from Sparta mines and an exhibit of vegetables and fruits from Eagle valley that for quality and size could not be easily surpassed.

The evening session was begun at once by placing Hon. L. B. Rhinehart in the chair, and after a piece of music, calling upon Hon. W. T. Wright, who responded by an address of welcome, which was listened to with interest throughout. Mr. Wright made brief sketches of the history and improvement of agricultural industries. Many valuable and interesting points were touched upon in this first exercise of the session.

After another musical selection, Prof. Letcher responded to the address of welcome by giving a paper upon "The Proper Education for the Farmer and other Industrial Classes," with special mention of the course and plan of work at the Agricultural College. The paper was well received, showing the interest which is taken in the Farmers' School. This paper was followed in succession by a vocal duet, a declamation by L. J. Davis, and a piece of instrumental music, after which the evening session was adjourned.

Thursday forenoon was taken up in arranging and adding to the exhibit of mineral and farm products.

At 1:30 P. M., the afternoon session was called to order with the seats well filled with intelligent men and women, a large majority of whom were engaged in practical agriculture. The first exercise on the program was a paper by your humble servant on "Breeds of Cattle, and their Adaptation to Particular Uses." Much interest was manifest in this branch of practical agriculture in a discussion following the paper. There were farmers present who supported their favorite breeds with much earnestness. Shorthorns, Holsteins, Jerseys and Herefords were defended in an able manner.

After a piece of music, Hon. W. T. Wright read a paper on "Dairy Farming." Although Mr. Wright is engaged in banking, he takes great delight in looking after the welfare of a fine herd of Jersey cattle. Mr. Wright placed great stress upon performance. A cow that will not make seven pounds of butter per week should not be retained on the farm. Improvement in quality rather than quantity of milk should be the aim of the dairyman. Some fine representatives of Jersey cattle are found in Mr. W.'s herd. This paper was also followed by a discussion on practical butter-making, in which the ladies took part. Mrs. Eaton thought the men did all the talking and the women did the work in butter-making—a point well taken.

Mr. Selder gave his experience in practical butter and cheese making.

The afternoon session adjourned, and a half-hour was taken up in social greetings.

Thursday evening's session was opened with an anthem by the choir, followed by a declamation by Miss Belle Henderson of Sparta.

Prof. Letcher was the first on the program with a paper on "Roads and Road-Building." This paper was listened to with much interest, all seeming to realize the great importance of having good roads, and appreciating the suggestions offered. When we consider the fact that this country has the fewest roads of any country in the world, the subject becomes an important one, and one which every thoughtful man should study carefully. The professor truly said, the degree of civilization of any country is marked to a large extent by the condition of her thoroughfares.

Music followed the paper, and T. Oliver read a poem entitled "The Vale of Grande Ronde," written by Judge Brainard, with whom all were acquainted.

Miss Bertha Bloch then rendered a vocal solo, which was followed by Dr. J. G. Lewis of Sparta, who gave a very entertaining description of Eagle valley and the mining interests of Sparta and vicinity. The doctor upon closing his address presented the Oregon Agricultural College with a fine collection of minerals which were on exhibition at the Institute. The exhibit of fruit and vegetables from Eagle valley was presented to the members of the press and the big watermelon to Prof. Letcher.

After Dr. Lewis had finished, a discussion upon diseases of cattle was brought up with special reference to tuberculosis. There was some fear that the disease might spread throughout the State, but this fear was put to rest when the vigorous measures taken by the State Veterinarian were understood.

After a vocal solo by M. M. Hall and a piano solo by Miss Fanny Wright, the chairman announced that there would be a stock show in the courthouse yard in the morning and invited those present to bring in their blooded stock.

As a result of this announcement, on Friday morning there were assembled in the yard some 25 head of thoroughbred cattle and horses representing the dairy and beef breeds of cattle and the draft and trotting breeds of horses. The exhibit would have done credit to a county fair. Across the street Mr. Shirley exhibited some big steers and a hog weighing nearly 800 pounds and some very fine Shropshire sheep.

Mr. Neal of La Grande exhibited as fine a herd of young Shorthorns as is often seen in many of the older States. His herd contains representatives of the Rose of Sharon, Roan Duchess and Young Mary families.

Many interesting notes might be made regarding this most creditable exhibit of live-stock, but space forbids. Mr. Shirley exhibited a two-year-old colt, which would command a long price in trotting circles.

At 1:30 P. M., the people assembled in the courtroom again and Prof. Washburn presented an instructive and interesting lecture upon fruit pests and methods of collecting and studying habits of insects. This subject is not so important to the people of this valley, for the orchards are practically free from these pests. There was not a codlin moth to be found; only a few green aphis were noticed upon visiting several orchards. The people are wide-awake to keeping out the pests and were much interested in learning how to do this the most effectively.

Mr. Hendershot followed Prof. Washburn with an entertaining talk upon things of general interest, dwelling especially upon the horticultural interests.

After this, Judge Goodall made some remarks upon diversified farming, and a general discussion followed, with the majority favoring this system.

It was not our pleasure to be present at the evening session, which was the last one of the Institute, but from those who did remain we learned that the session was equally interesting with each of the others, and a permanent organization was left with the determination that one or more Institutes would be held the following year.

To those who may chance to have the pleasure of visiting this beautiful and productive valley, and to become acquainted with the pleasant people who reside there, our advice would be not to fail to embrace the opportunity, for it is a treat indeed. H. T. FRENCH.

Agricultural College, Corvallis, Ogn., Sept. 29, 1890.

THE FIELD.

The Beet-Sugar Industry.

FIRST PAPER.

EDITORS PRESS:—The passage of the Tariff bill has opened up new avenues of industry which it would be well for our farmers and capitalists to consider. One of the many industries to be benefited is the encouragement offered to the producer of sugar.

California is the most favored in the way of natural advantages of any country on the globe, and should be able to compete in sugar supply without the aid offered by Congress. The bounty of two cents per pound, however, is offered to the entire country, and California can add her own natural advantages and thereby compete successfully in the race for supremacy.

It will be the object of the writer in these articles to begin with the culture of the sugar beet, in order that those who may become interested will have the experience of others as a guide.

Soil.

Although beets will grow in a great variety of soils, yet all are not equally adapted to produce this crop to perfection. The best soils are those in which neither clay, lime nor sand predominates, but those which contain these constituents in fair proportion, together with corresponding proportion of organic matter so mixed that the land is neither too stiff nor too light, and crumbles down after being plowed into a nice friable loam. The land should be cultivated to a depth of 16 inches, as the beet-root grows entirely under the soil, and should attain an average length of 12 to 14 inches.

Lime in land is necessary to the perfect development of the sugar beet. Light sandy soils are not profitable for beet-root crop. Clay soils when well cultivated will raise a succession of beet crops, with a steady improvement of the yield for seven or eight years. Peaty soils produce large, watery roots unfit for use. Sediment lands are the best in California, speaking generally. The best soils for sugar beets are precisely those on which other root-crops can be grown to perfection—that is, land which is neither too heavy nor too light, which has a good depth, is readily penetrated by the roots, and naturally contains lime as well as clay and sand, as well as organic matter in such proportions as in good friable loams.

Soils unfit for beet crop, on account of injurious salts that enter into the composition of the beet juice, are new timber lands grubbed within 15 years, clover lands, sheep pastures, and lands near salt works, volcanic and saline soils of all kinds.

Sowing.

The best time to sow the beet-root seed should depend upon the late rains and frost. The tender beet plant is easily destroyed by frost; at the same time, to obtain a good crop, the plant should secure a good start before the moisture has left the ground. It should be borne in mind that beets require a good deal of water the first two months to insure good crops.

In Europe, from 12 to 20 pounds of seed are required per acre, but in this State from 4 to 6 pounds is all that is necessary or ever desirable. The beets should be planted from four to eight inches apart in the rows, and the rows should be from 15 to 18 inches spaced.

Never grow beet crop from newly manured land.

Never graze sheep on beet land.

Sow early; but if frost-bitten, cultivate old plants under and resow.

Sow in rows 16 inches apart and 4 to 8 inches between plants. This will give about 40,000 beets at an average of 1½ pounds, or 60,000 pounds per acre.

Remove weeds as soon as possible and keep the ground clean.

Never remove leaves during the growth of plant. Twenty-four thousand beet-seed will weigh one pound.

The system adopted in this country, and that has proved most successful, is for the farmer to prepare the land, sow the seed and do all the work that can be done by teams. By this time the young beet has become quite strong, and the farmer then makes a contract with Chinese, Portuguese or Italians to take care of and to harvest the crop from this time, delivering them on board the farmer's wagon at a cost of $1.50 per ton—thus giving a good profit to the farmer.

B. B. CHANDLER,
Alameda, Cal. Mechanical Engineer.

THE Phœnix *Herald* says 5000 acres will be planted to oranges in the Salt River and Gila valleys this fall and winter.

THE Russian Government is about to send an expedition to Mongolia to explore the desert of Gobi.

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

The State Grange in Session.

The 18 h annual session of the State Grange of California was opened in the Masonic hall, at Watsonville, on Tuesday, Oct. 7th, at 10 o'clock A M

The usual committees were appointed, and a recess taken till 2 o'clock.

The afternoon was spent in listening to officers' reports, which were referred to the appropriate committees.

In the evening there was held a public meeting at which County School Sup't Linscott, in behalf of the citizens of Watsonville, bade the State Grange welcome; Past Master I. C. Steele responded. The address of welcome in behalf of the Watsonville Grange was made by its Worthy Master, Edith Z Roache.

Tuesday night's dispatches state that the attendance was unusually large for a first day; that the local Grange is doing everything possible for the entertainment of its visitors, who cordially appreciate the hospitalities extended; that the session promises to be a very harmonious one, and the Grangers are apparently determined to do something for themselves.

The RURAL PRESS is duly represented at Watsonville by the Worthy State Secretary, who will render full reports later.

The Worthy Master's annual address is as follows:

Address of Worthy Master E. W. Davis.

Brothers, Sisters, Patrons Dear:—In bidding you welcome, it is proper to remind you that another year in the work of the California State Grange has passed. Another season of successes and disappointments is ours. Another turn of the great Grindstone of Time (which, while it may brighten at the same time cuts away) has moved us one year nearer the Great Change, and again we find ourselves in annual conference for the Good of the Order, for the love of home and friends, for the welfare of country, and in the interest of humanity. Of the successes of life, each thinks his share, alas! too small. Of the disappointments, each one feels his share all too large; and yet whatever our portion may have been, there is hardly one who would willingly exchange with his neighbor. For, as Shakespeare has well and truthfully said, 'tis better to "bear those ills we have than fly to others that we know not of." The Order of Patrons of Husbandry has, during the past 12 months, done much to increase our love for it; to strengthen our confidence in a farmers' organization; to convince all thoughtful people that the Order is not dead, nor sleeping, and to teach us *within* the gates that we must "Hope and Persevere." The work done by those sturdy Patrons and patriots, Bros. J. H. Brigham, John Trimble and Leonard Rhone, aided and encouraged by intelligent thousands, is enough of itself to keep up a growing love for the Grange. It is not worth while in this paper to review in detail the good work thus done for agriculture. To those *within* the Order it is known that many dollars have been saved and much knowledge given to the farmers of America by the Grange and its representatives. To those *without* the Grange gates, it is not yet their privilege to know when, or how, or by whom, this work is done. But it *is* their duty as loyal farmers, as co-tillers of the soil, as heads of thrifty, industrious, intelligent families, to identify themselves and their families in this work of political purification, of practical protection and personal education. For it cannot be truthfully asserted that the Grange does not do these things; ay, it does more than these.

The National Grange

Has anticipated our wants; knowing we wanted to build, it has given us material, tools, muscle, brains, and a keystone. That good things may be brought about, we are here to-day, and hundreds of thousands of sturdy and true Patrons in every State and Territory of this Union are laboring with us for the following objects: "To develop a better and higher manhood and womanhood among ourselves. To enhance the comforts and attractions of our homes, and strengthen our attachments to our pursuits. To foster mutual understanding and co-operation. To maintain inviolate our laws, and to emulate each other, to hasten the good time coming. To reduce our expenses, both individual and corporate. To buy less and produce more, in order to make our farms self-sustaining. To diversify our crops, and crop no more than we can cultivate. To condense the weight of our exports, selling less in the bushel and more on hoof and in fleece; less in lint and more in warp and woof. To systematize our work, and calculate intelligently on probabilities. To discountenance the credit system, the mortgage system, the fashion system, and every other system tending to prodigality and bankruptcy."

Those of us who have lived the most closely to this schedule, as propounded by the National Grange, have succeeded most liberally. Success hardly attends without management. True, now and then some one wins honor and wealth without apparent toil, but such an one is rarely ever a farmer. To the farmer, honest toil seems absolutely necessary if he will eat his bread and pay his taxes. But it is an admitted fact that *intelligent, honest* labor wins more laurels than ignorant, honest labor. Hence it is that Patrons ought to be more than ordinarily successful; for each Patron has *inside* opportunities for gaining both practical and theoretical information, and while "*Money* makes the mare go," *brains* move the world. To the Grange, then, may the agricultural world look with pride and hope for the relief which, as a class, they so much need. But you ask *how* and when can this be accomplished, and I answer,

By Organization—By Confidence.

We may have all the organization it is possible for man to suggest, but if we fail to have *confidence* in that organization and in the membership that compose it, little will be accomplished. On the other hand, we may have all the *confidence* it is possible for one human being to have and to place in another, and if we fail to have a compact, intelligent, harmonious organization, we will fall short in results.

Thus it seems that if we want to realize the greatest possible results, we must have a perfect, confidential organization. Such an organization the farmers of America have in the Grange. By it, through it, and with the Grange, we have scattered the seeds of social, political, financial, moral and individual reform in soil that is bearing a hundred-fold. The recent visit and session of the National Grange within the borders of our fair and fruitful State has done wonders for the Order. Those brothers and sisters who came from their far-away homes to join with us in the good work of reform have left, and received impressions which are growing and ripening into abundant harvest. From Maine to Georgia, and from the Atlantic to the Pacific, the voice of the farmer is being raised, to be heard, respected and obeyed. The demands of agriculture are listened to even in the halls of Congress. Ballot reform, legislative relief, and political position are now the promised panacea which the politician has ready to offer the sturdy farmer. Truly the world moves. But we of the Grange are not yet satisfied. There is more to be accomplished and *we* are to aid in the work, and *we* are to succeed.

Our Business Relations.

The Executive Committee has made an effora to assist the members of the Order in Californir in their purchases and in the sale of thei' products. Thus far the "Trade Card Plan' has not been as generally approved by the subordinates as was to have been expected. The further and definite consideration of that (or, if possible, of some better and more practicable) plan is hereby most respectfully brought to the consideration of this State Grange. Let the subject be considered in a spirit of fairness, and let no hasty, selfish or unwise conclusions be reached. Any business relations that may be assumed should be carried out in a just and honorable way by the members of our Order. If there is to be any bad faith, or any violation of agreement, let it come from those not members of an Order whose cardinal virtues are based on Faith, in Hope, in Charity and with Fidelity.

Grange Visitations.

At the April, 1890, meeting of the Executive Committee it was agreed to visit each subordinate Grange, if possible, by some one representing the State Grange. Accordingly, the State was districted and Deputies were appointed for each of said districts. The plan in the main has been successful, but owing to diffidence on the part of some of the Deputies (who have waited for *special* invitations from the Granges in the territory assigned and owing to the neglect of such Granges to send these invitations), there are a few Granges which have not been officially visited. The Worthy Master has gone to each and every Grange where invited, when health, weather and other engagements did not prevent. California is a large State. Most of the Granges meet on Saturday and not more frequently than twice a month. Hence it is absolutely impossible, on the theory of meeting with Granges at the *regular* meetings, for any one officer to meet with one-fourth of the subordinates during the year. In the hope that more and better work in the way of visiting subordinates may be done another year, it is suggested that at this session of the State Grange, a field program of dates and places be prepared for the spring campaign of 1891. Let the subordinates know just when the visitors are to be present with them. Let competent speakers be employed. Have open meetings wherever and whenever practicable, to be followed by a closed meeting. Put the responsibility of making these meetings a success right on each subordinate Grange and its officers. Surely they can't, for personal reasons alone if for nothing else, afford to let their own neighborhood be neglected. This plan will save much expense in the way of traveling and much time to the officers, and certainly, any subordinate is willing to have at *least one special* meeting during a year for the Good of the Order. Other fraternal Orders have found it necessary to adopt a plan similar to the plan herein briefly outlined. The further development of this suggestion is sincerely referred to this body either as a committee of the whole or through some of its special committees.

The Finances

Of the State Grange are in a fairly healthy condition. The Executive Committee, without being parsimonious, have tried faithfully and successfully to be economic. They have been willing to spend money whenever and wherever in their judgment it seemed the Good of the Order warranted such expenditure. They have allowed to organizing Deputies, or any one securing the names, the sum of $15 for a minimum charter list, and for all names up to and including 25 they have allowed an additional dollar for each name, thus making $25 for a new Grange with 25 or more charter members. The committee have also allowed the actual expenses of Deputies, but have in no case allowed any per diem to Deputies. For further and more specific information on the subject of Grange finances, your attention is directed to the reports of the Executive Committee, the Worthy Secretary and the Worthy Treasurer.

Lecture Fund.

The ten cents per capita, quarterly dues, paid by subordinates for the exclusive use of lecture expense has been carefully husbanded, and when spent has been economically expended. As a consequence, there was, Oct. 1st, $1200 29 on hand. If the plan heretofore proposed, or some better one, for reaching the subordinates can be adopted by this body, it seems to me that the State Grange of California will be able to show the farmers of the State how important is the work of the Order and that self-protection demands the organization of many new Granges.

Farmers have had heavy State and county taxes to pay for the past two years, and as their crops have been comparatively short and the prices not too high, it is important that they unite, to the end that each one's bank account may be swelled. In our desire to be economical and careful, we must not, however, cripple our organization by refusing the necessary sustenance. Let this subject receive your prayerful and thoughtful consideration and let not the action taken be such that we may be accused of being penny-wise or pound-foolish. In referring this subject to you, it is respectfully called to the attention of the Committees on Finance, on Constitution and By-laws, on Good of the Order and to the Executive Committee.

Amendments.

The Constitution of the National Grange has been so amended that each State Grange may regulate its own initiation fee, provided the fee be not less than $1 for a man and 50 cents for a woman. At this session the California State Grange may consider that subject, and the Committee on Constitution and By-laws ought to give the matter their thoughtful attention. Brother Past Master S. T. Coulter has presented an amendment to the Constitution of the State Grange. Due and legal notice has been given each of the subordinate Granges of this proposed amendment. This amendment ought to pass, for as it is, our Constitution, on the subject of dimits, is in conflict with the rulings and decisions of Worthy Master J. H. Brigham of the National Grange,

Education.

The Grange everywhere fosters the cause of education. The children, not of the farm alone but of the land, are our special wards. We of the Grange know full well that unless the softening, sweetening, elevating influences of education are liberally bestowed, fairly enjoyed and generously encouraged, our homes, our families, our country must perish. Hence it is we urge on the membership everywhere to interest themselves in maintaining good, efficient, free public schools. We don't want the young taken from the schoolroom before the mind has received that gentle care and training which will insure dignity in labor and honesty and virtue in manhood and womanhood. We want the public schools of California to be as good as—yes, the best of—any under the sun. We demand that the fountains of free education shall run clear and pure and bright from every hillside, through every valley and in every section of this golden sunset land—a land where sweet children are to be found and where father, mother, sister, brother, all who hold each other dear, find a home. We of the Grange are willing to be taxed heavily—ay, perhaps some think too heavily—that education may be as widely diffused as possible; and there be those in this Order who would make some reasonable educational test a basis for voting at general elections. Of the Agricultural College of the State University at Berkeley, I am unable to give any detailed information. Prof. E. W. Hilgard, in charge of that department, keeps each of you specially well informed by the publication of the agricultural bulletins.

There is one thing in connection with the University of California that is a source of regret to the alumni and many lovers of that grand educational institution. It is this: that the presidency of the University has been so many times made vacant. Though the University of California is less than a quarter of a century old, it has had no less than half a dozen presidents. It seems to many that this constant changing of the executive head is dangerous. Won't the Board of Regents get for us of California a big-hearted, broad-minded, sociable, educated, progressive president? The people will be loyal to such a man. We have had such men in the past. Other leading educational institutions have such men now. The University of California needs such a man. Where is the farmer's son who can fill the requirements? And right here it must not be forgotten that though the State Grange of California has passed its 17th birthday anniversary, not one of its leading members has ever been appointed to the office of Regent of the State University. Both of the great political parties have had Governors, but neither of them has been able to see a Patron who would make a competent Regent. The attention of the candidates for Governor, as well as the members of this Order, is hereby respectfully called to this (to farmers) important subject. Why should the farmers of California expect much from an institution *in* which, *about* which and *over* which they have no voice, vote or control? Let us look to and then patronize the University of California!

It is *our* Alma Mater. We pay for it; we must support it. Our boys and our girls need its influence, need its advantages, and need its facilities, to educate them for the duties which will devolve on those who are to live in the twentieth century, and who, while living, would honor father and mother.

Legislation.

No subject is of more importance to the members of this Order. Individually and collectively we need the helping hand of wise legislation. The farmers ask no special legislation for themselves as a class; but they do ask, yes, and they *demand*, such legislation as will place them and their vocation on an equal footing with all other men and with all other vocations. This they have not had. This they now demand. We need legislation on the question of insurance; we need it on the subject of taxation; we need it for the betterment of our public highways; we need it for the purity of the ballot and the freedom of the electoral right; we need it to be even with corporations who have had favorable legislation for a quarter of a century. That we may the more certainly secure some if not all of these things, it is sincerely hoped this body will send a most competent and energetic committee to Sacramento during the session of the Legislature. Such a committee will find ample field for all their talent and for earnest hard work. But I am sure good results will follow to the people of the entire commonwealth, regardless of party, politics or vocation. Surely we can prove to the world not only that we believe in co-operation, but that we practice and profit by it.

Grange Literature.

Nothing has done more to advance the cause of the Grange, and thereby the cause of humanity, during the past decade than the printed page. The orator and Grange speaker is a necessity. His voice, his gesture, his smile, his presence, add pleasure to the meeting and impart wisdom to the membership. But such information, however good, is only for a favored few. The speaker cannot be with you more than a small fraction of the time, for his work and yours prevent it. But the printed page is with you 52 weeks of the year. It is with you by night as well as by day. Its speech is silence, but its silence is golden. Every farmer ought to take one, two or three good Grange or agricultural papers. Have one for the boys, another for the girls, and the third for father and mother. There is little danger of getting too much good news. Welcome the *News*, for it comes from the North, from the East, from the West and from the South, and you know this Order recognizes no sectional lines. Our Grange organ, the PACIFIC RURAL PRESS, has done faithful work for the Order. It deserves a liberal patronage from the membership. Subscribe for it, if you do not now do so; read it and know that you can help the PRESS as well as be helped by it. In this connection I cannot refrain from asking (nay, I would beg of the membership) for correspondence to *our* paper. There are subordinate Granges in this jurisdiction from which not one word of correspondence has appeared in the RURAL during the past year. This seems to me to be wrong—not alone wrong to your own Grange, to the State Grange, to the Order in general, but to the general reading public, to the PRESS and to the cause of education. We must not put our light under a bushel. And, again, I do earnestly hope the Masters and Secretaries especially, and all Patrons, will furnish proper Grange news and items to their local papers. Newspaper men are our friends. They want news. We can furnish many "notes" that will be of interest and profit to readers, and in so doing help the local Grange, build up the Order and disseminate useful data. Try it.

Woman's Work

Is never done. At home, as well as in the Grange, there is no limit to the queenly, refining and purifying influence of woman. Our Order, chiefest among all Orders, recognizes this great power and influence. We accord all honor, all station, all right that we ourselves possess in the Grange, to woman. Her work and her presence in our council-room and at our annual conclave is not any less welcome nor any less appreciated than it is by the family hearthstone, at the Harvest Feast, or at the bedside of the sick. With us, she is always welcome; and it suggests itself to me that if the sisters of the Grange will but undertake the work at this session, they can devise ways and means for holding a series of district meetings, picnics and reunions that will both surprise and astonish the male members of the Order; in

fact I am sure they can plan, and carry out the plans, for a most successful State picnic and Grange reunion. The sisters can get better terms from transportation companies; they can secure and prepare better exhibits; they can carry to a success this line of Grange work. Of one thing you may be sure: wherever and whenever the sisters congregate, the brothers will attend, on short notice, if they are invited or even permitted. Sisters, don't you believe this field of work is waiting for your care?

Experimental Stations.

Every subordinate Grange in the United States is an experimental station; but unlike the stations supported by the General Government, our stations are experimenting, and successfully, too, with the elements of Nature and the brightest and best specimens of human nature. We deal with mind as well as with matter. We turn the clod of Ignorance with the lever of Intelligence, and warm to life the seeds of Development with the sunshine of Brotherly Love. We irrigate with the sympathetic tear, while the pulsations of charitable hearts, the gifts of willing hands, and the fidelity of pure womanhood and honest manhood are the outgrowth, the fruit-bearing and grain-producing results, of our experimental stations.

The Only Grange Hall

Dedicated in California during the year was built by the members of Two Rock Grange, in Sonoma county. The Patrons of that Grange deserve unstinted praise. Their example is worthy of all imitation. This new hall is especially adapted to the needs of the Grange. It is sufficiently large, very conveniently arranged, and is a standing monument of the Faith, Hope, Charity and Fidelity of the true and tried Patrons of Two Rock. The hall was dedicated, according to the rules and usages of the Order, on the 18th day of September, 1890. Long may it stand, a shelter and Grange Home for its members; an ornament to the quiet and orderly neighborhood which surrounds it; a granary for golden sheaves and golden thoughts. May its doors swing on noiseless hinges and always open to the mystic knock of Worthy Patrons. May storms of discord forever pass it by, and may its walls echo and re-echo with sweet songs, kind words fitly spoken, and the laughter of those who are really true, beautiful and good.

Our Dead.

While we, who sit here, have been working for the Good of the Order, that other messenger, Death, has stolen from among us some of our cherished ones. While we will miss their faces and will listen in vain for their familiar voices, we will not forget them. Though we cannot have them back, we can and will profit by their good words, spoken to us in days agone. While we know the silver cord is loosed and the golden bowl broken, never again to be united on earth, still we have that faith which teaches "The Lord is my Shepherd; I shall not want," and that we shall, if we live properly, join those who have gone to the Great Grange above and "dwell in the house of the Lord." We shed the silent tear and lament the death of Bros. L. H. Fassett, P. M. of Florin Grange; Morris Toomey, P. M. of Sacramento County Pomona Grange; O F. Alley, P. M. of San Jose Grange; S. H. McCrary, P. M. of Potter Valley Grange; W. D. Ashley of Stockton Grange, Samuel Myers of Stockton Grange, Julius Chester, P. Secretary of California State Grange and a member of Eden Grange; J. Jenks of San Miguel Grange; and Sisters A. Kane of American River Grange, Eliza Brooks (dear old Grandma Brooks!) of Temescal Grange, and Silas M. Martin of Two Rock Grange.

Appropriate resolutions ought to be reported, the memorial pages dedicated, and the solemn and fraternal ceremonies observed.

Grange Life.

During the year past the Order has grown in this jurisdiction; but the membership has not increased as it should have done. Stimulated and honored as the Patrons of California were by the meeting of the National Grange in our midst, in our fair capital city last November, we had hoped for a larger Grange harvest. In fact, the promises were very encouraging; but the horrid winter, the late spring, the shortness of many crops, the damage done to property, the heavy taxes and comparatively dull times (all of which we hope are over and past), conspired to keep many from uniting with the Grange who had decided to do so, and these facts also kept several sections from instituting new Granges. But despite it all, we are pleased to report Gridley Grange, organized by Bro. B. F. Frisble, Jan. 2, 1890, with 29 charter members; Selma Grange, organized Feb. 1, 1890, by Bro. A. P. Merritt with 21 charter members; Hanford Grange, organized by Bro. A. P. Merritt, March 22, 1890, with 16 charter members; Grimes Grange, organized April 10, 1890, by Bro. D. Flint, with 28 charter members; Waterloo Grange, organized April 14, 1890, by Bro. Wm. L. Overhiser, with 52 charter members; Orland Grange, organized April 15, 1890, by Bro. Dan'l Flint, with 22 charter members; Anderson Grange, organized April 16, 1890, by Bro. Flint, with 14 charter members. The following named Granges, formerly dormant, have been reorganized and are now in a thrifty and useful condition. They feel themselves a part of this great organization, and we may reasonably expect their valuable aid, advice and co-operation: Carpinteria Grange, reorganized by Bros. O. N. Cadwell and Delos Dimmick, Nov. 13, 1889, with 16 members; Millville Grange, reorganized by Bro. B. F. Frisbie, Jan. 18, 1890, with 31 members; Lockeford Grange, reorganized Feb. 13, 1890, by Bro. C. W. Norton, with 20 members. While this Grange harvest is not as large as we would like to have had it, yet, when we think of the many who have joined the Order by initiation into other subordinate Granges, and when the review of all the circumstances is made, there is much to be thankful for, and there is no reason to be afraid or discouraged. Let us, at this session, devise ways, provide means, secure persons, advertise our work, rely on justice and truth for fighting weapons, keep our Faith, renew our Hope, practice Charity, and with Fidelity, pull for the shore, and there plant the Grange banner. Do not, I pray you, cease in your work till every section of this great State where agriculture thrives and where agriculturists reside has a subordinate Grange.

A Glorious Gift.

Col. J. B. Armstrong, a Sonoma county citizen, proposes to give to the people, in perpetuity, 600 acres of redwood land, of which 400 acres are densely covered with a giant growth of timber, almost the last representative of these big woods on Russian river. The site is near the town of Guerneville, about 70 miles northwest of San Francisco. Two hundred acres are set apart for gardens, conservatories, etc., for propagating the flora indigenous to this coast, to be exchanged freely with other botanic gardens in this and other countries. The gift will be placed in the hands of six trustees, with an Endowment Fund of $100,000 cash, the increase from this fund to support the garden. The 400-acre forest will be jealously guarded for all time against the ruthless slaughter of the ax, and it will forever be kept as a forest in all its majesty and beauty, except for a few winding drives and now and then, in sunny spots, a cluster of flowers on a border. The donor is obliged to get an Act of the Legislature to legalize the gift to posterity, as it does not come under the head of a charity. All honor to the donor. The Grange is fully appreciative of such a donation, for it is sure to be one of the out-of-door attractions of our wonderful State. Generation after generation will venerate the giver, and our children and our children's children will seek health and inspiration at this natural laboratory.

Conclusion.

Without mentioning names, for there would be many, permit me at this time, in this way, with a sincere and devout heart and with emotions of deepest gratitude, to return thanks to all who have so kindly received me and so generously, patiently, promptly and faithfully aided in the work we found to do. For my many shortcomings you have had and shown abundant excuses; for any meritorious word or act you have been more than fully appreciative. And now as the labors of this session begin so auspiciously, may we, one and all, think wisely, act manfully, legislate discreetly, speak gently, live temperately and work faithfully; and when our life-work is done, may it be well done and as pure as the snow where our foot leaves a mark, but not a stain.

Fraternally submitted,

E. W. DAVIS, W. M. C. S. G.

The Grange and Politics.

[By M. WHITEHEAD, National Lecturer.]

In a number of the States of our Union the fall elections are drawing near and the campaign grows warmer as the day for casting the ballot approaches. The party lines are drawn as closely as possible by the party managers. The "machine" is kept in good running order, and citizens who "belong" will go through the form of depositing the ballot with little thought as to the qualifications of the candidates for the positions. Parties are all right in their places, and the more equally balanced they are the better, for it keeps them on their good behavior; but we should see to it that the people run the party and not the party the people. The voters are greater than any party. Mr. Emerson once said: "The great end of all political action is to secure morality as the basis of all political action," and Thomas Jefferson wrote: "The whole art of Government consists in the art of being honest." We need honesty in politics in these days, and honest men in all political parties. The Grange teaches the farmer to purify his own party, and not to believe the wrong is *all* on the other side. "It is his duty to do all he can in his own party to put down bribery, corruption and trickery, to see that none but competent, faithful and honest men, who will unflinchingly stand by our industrial interests, are nominated for all positions of trust." Here is a plain duty for all members of the Grange, for all farmers, for all good citizens.

So long as men serve their party in preference to their own sense of right and justice, so long we must suffer from unjust legislation. It lies with the people to demand that the best men be nominated for office, and then go to the polls with the determination to support the best men, without regard to their political beliefs. Farmers in the past have spent all their time in labor and producing crops, and have devoted too little time to studying what the laws and politicians are doing for them, but a change is coming, and thank the Grange for it.

And yet the Grange is not a partisan, political organization, and *cannot* and *must* not be used as such. Our laws plainly say: "No Grange, if true to its obligations, can call political conventions, nominate candidates, nor even discuss their merits in its meetings." Don't forget this and mix the Grange up with other farmers' organizations that do send delegates to nominating conventions and take partisan, political action. "And yet," says our Declaration of Purposes, "the principles we teach underlie all true politics, all true statesmanship, and if carried out will purify the entire political atmosphere of our country." How and why? By learning well in the Grange *school* the true lessons of political economy, and then going right out from that school, just as school children go out in the world of practical business life, and *applying* the lessons we have learned by affiliating with any political party that will best carry out our interests. This is being done more and more; and so the Grange, without being partisan, is having a grand, good influence on all political parties, and politicians quick to feel the pulse of *educated* public sentiment are more than ever willing to give agriculture its share of representation in the halls of legislation, and laws that will promote this greatest of all industries.

Our forefathers wisely established the free school at the same time that they established the free ballot. A ballot in the hands of an ignorant voter is as dangerous as a gun in the hands of a child—dangerous to himself and to those around him. As our population increases we must have an increase and not a decrease of intelligence, or our free institutions cannot be sustained. There are generals who can command a brigade who are failures in handling a corps. There are men who can conduct a small business in a country village who would fail in carrying on a large wholesale business in a city; men who would make excellent mayors of a city of a few thousand inhabitants who could not act as the Governor of a State. And so with our increasing millions of people and voters, we need more intelligence, higher statesmanship. The thousands of Granges scattered all up and down our land are the schools of political economy, the schools of citizenship, from which are going out more intelligent voters and legislators, State and National, prepared to grapple with the new issues that an ever-advancing age is bringing to the front.

What an important mission has the Grange! How can any farmer who loves his country any longer say "It is nothing to me"? He *has* a duty to unite with his neighbors for the good of his community, of his State and of his country. There *is* a responsibility here that no one can lightly pass by or attempt to shirk. We are held accountable for our sins of *omission* as well as those of commission.

The Grange growth of this year has been most satisfactory. Three hundred and seventy-two new Granges have been organized this year (to Sept. 1, 1890). Its growth is healthy, solid and sure. As other and temporary organizations pass away, the farmers having learned of some of the benefits of organization, take up the Grange and go forward "united by the strong and faithful ties of agriculture" to benefit themselves, their country and mankind.

Ballot Reform—An Object-Lesson.

The Ballot-Reform League, the Federated Trades and the Single-Tax Society held a joint meeting at Metropolitan hall in this city, Monday night, in advocacy of the Australian voting system. To an audience of about 2000 persons, Judge Jas. G. Maguire and T. V. Cator, Esq., explained and commended the new system, of which a practical exemplification was then given.

A row of little stalls had been erected on the stage for this purpose, with railing and ballot-box in the same positions as they would be in a real election. At one end of the railing was a table where sat the registration clerks and the keeper of the ballots; at the other end stood the ballot-box guarded by the proper officers.

In the illustration of the working of the system the voter stepped up to first table, where the registration clerk saw that he was on the voting list, and the ballot clerk tore a ballot off the pile of ballots bound in book form, and gave it to him. The voter then entered one of the little stalls back of the railing, marked his ticket where no one could see him, passed on to the ballot-box, deposited his ballot and went out. About 100 men voted within 15 minutes, thus refuting the allegation of its cumbersomeness.

After the voting, questions were answered as to the protection afforded the voter in various circumstances.

Notes on Fairs.

Stockton—2d District.

The 30th annual fair of the San Joaquin Valley Agricultural Association (2d district) opened auspiciously at Stockton, Tuesday, Sept. 23d. The pavilion, under the management of Mr. F. Arnold, had been decorated as never before, the whole interior being festooned with bunting of various shades—red, blue, orange, light green, white and pink. In the art gallery only white bunting was used, with a beautiful circular center-piece of pink drapery. In the western part of the building, on the lower floor, where the vegetable and fruit displays were located, corn was brought into requisition for decorative purposes with very pleasing effect. When lighted by electricity and thronged with visitors, promenading to the music of the Sixth Regiment band, the pavilion presented a scene of rare brilliancy.

The annual oration was delivered by the veteran journalist, Will S. Green of Colusa, who spoke admirably, not to say rapturously, of Californian agriculture.

In remarking on the agricultural exhibits in the pavilion, the *Independent* says: It has spread abroad that California is not a good corn country, but one would never suspect it from the great array on exhibition, the size of the ears and the plumpness of the grain.....The potato exhibits are of wondrous size, white, smooth-skinned, and in great variety, with a few red "merinos" to vary the color. Sweet potatoes keep the other tubers company, some of them nearly as large as the rutabagas that lie beside them.....Watermelons, that delightful product that gave Lodi fame, form a feature by themselves, while dried fruits, jellies and preserves look as inviting and tempting as the fresh product, and delight the eye almost as much. Another great product of San Joaquin county, the onion, is well represented in large red and silvery bulbs that look almost as tempting as the fruits. The squash, too, is there, not the mammoth, overgrown article, but the medium-sized, mealy Hubbard of from 60 to 100 pounds.

The olive is present as well as its product in oil, but the display of esculents is meager, very little celery, cabbage or lettuce being on exhibition.

In the Bahach display, about $2000 worth of products are gathered. Besides boxes of the prepared powder, there are great bunches of luscious grapes of over a dozen varieties, some of the largest quinces ever seen, and dried fruits, all grown on what was but recently a desert.

The silk products of the county are represented by a case full in various forms of beauty, in white and golden, yellow, and a quantity of cocoons.

Fresno—21st District.

The fourth annual fair of the 21st Agricultural District opened at Fresno on the 1st inst. with creditable displays and good attendance. The children of the public schools had a free day and were out in force, 3000 strong, viewing the exhibits and enjoying themselves highly. We glean from the *Republican* the brief notes which follow.

The stock parade in former years may have excelled in numbers, but never was so high a grade of horses or cattle shown. The horses included heavy Normans, English hackneys, Cleveland bays, roadsters, racers, draught horses and carriage horses, single and in teams, and they were a delight to look at. Then came the cattle, Polled Angus, Durham, Galloway, Herefords and humbler ungraded cattle of the local farms. The large crowd that witnessed the parade gave frequent evidence of their admiration of a showing which indicated that the farmers are on the up-grade in the rearing of both horses and cattle.

Poland-China porkers were exhibited by four persons.

The poultry department was full and exceedingly interesting, the display of pigeons being especially fine.

Under a tent, between the poultry and the pavilion, was housed a considerable display of vehicles and agricultural machinery, mainly made by two people, Mr. Porteous of the Fresno Agricultural Works and Scovel Bros. There were buggies, wagons, plows, reapers, harrows, cultivators, pumps, engines, etc., in profusion. This department was largely visited, the farmers taking an especial interest in the exhibits.

The second day of the fair was the most successful the company had ever known. The attendance was large and the various departments had filled up quite perceptibly. This was especially true in the pavilion, which proved very attractive.

The center of the building was occupied by a pyramid of raisins, intended to represent Fresno's leading industry. Mr. Denicke had a handsome shield of figs.

The display of apples, peaches, pears, quinces and prunes was the best ever seen at a fair here. W. E. Cowan showed 10 varieties of apples, 4 of peaches, 13 of pears, 2 of quinces, Japan plums, Japan persimmons, the Silver prune and Coe's late red plum; also some fine stalks of Egyptian and American corn.

A. Littlefield and Thomas Downey of Pine Ridge had outputs of apples that made the mouth water.

Mrs. S. C. Waltz made a very inviting display of preserves, jams, etc.

Mrs. W. N. Snow also had a fine lot of canned fruit, jellies and jams and the only exhibit of fresh grapes in the pavilion, including Zinfandels, Malaga and Muscats.

Mrs. J. O. Colwell had an interesting collection of botanical and mineral specimens, and some marvelously fine ferns were exhibited.

The vegetable exhibits of Vincent, Chittenden & Co. and J. H. Rogers of Oleander had the field exclusively to themselves.

Mrs. W. More Young made an admirable display of fresh-cut flowers, mainly roses.

Steve U. Mutrovich showed a case of silk cocoons raised in Fresno.

VICE-PRESIDENT MORTON has put a stop to the sale of wines and liquors at retail in the Shoreham at Washington.



A Reason.

Written for the RURAL PRESS by MARTHA T. TYLER.

Ten dolls had Mollie; in a row
She placed them all for my inspection.
This one was Mrs. So-and-So
And that, forsooth, a poor connection.

A boy, a baby and a nurse,
A pretty miss of sixteen summers;
A lady with a sealskin purse,
A sailor and a pair of drummers.

"Americans," said I, "all these—
Blue eyes and flaxen ringlets, Mollie;
Would you, dear, like a Japanese—
A little yellow, foreign dolly?"

"Not so? Now why?" "Because," said she,
Arranging Mrs. S.'s wrapper,
"Why only just because, you see—
Why *just* because I'm not a *Japper*."

The Right Will Right Itself.

When overcome with anxious fears,
And moved with passion strong,
Because the right seems losing ground
And everything goes wrong,
How oft does admonition say:
"Put trouble on the shel';
Truth will outlive the liar's day,
And Right will right itself."

By all the triumphs of the past,
By all the victories won,
The good achieved, the progress made,
Each day, from sun to sun;
In spite of artful ways employed
By perfidy and pelf,
Of one thing we can rest assured,
The Right will right itself.

Unshaken in our faith and zeal,
'Tis ours to do and dare,
To find the place we best can fill
And serve our Maker there;
For he is only brave who thus
Puts trouble on the shelf,
And trusts in God, for by His aid
The Right will right itself.

—*N. Y. Ledger.*

Courage and Chivalry.

Miss Comfort Walker went boldly ahead, opened a first-class boarding-house and made money.

"Men go on credit," said she, "and why shouldn't women? At the year's end, if I can't any more than pay expenses, I'll try something else."

But at the year's end there was a snug little balance in Miss Comfort's favor, so she took heart and continued.

"Oh, it's you, is it?" said Miss Comfort as she perceived Ellen O'Brien, the washerwoman, in the basement hall.

"Yes, it's me—worse luck, Miss Comfort," whimpered poor Ellen.

"And what's the matter?"

"It's me bill up-stairs, Miss Comfort—the boarder in the second story front, with the gay goold shirt studs an' the green and yellow stones in his sleeve buttons. Nine dollars and sivinty cents, Miss Comfort—six weeks' washing and ironing—and now, when I makes bould to ax him would he be pleased to pay me, he tells me it isn't convanient; and when I tells him how sore I need the money, he up and gets mad and says I shan't have it at all."

Miss Comfort stood listening with knitted brow and troubled eyes.

"Have you your bill with you, Ellen?" said she after a moment's hesitation.

"Jimmy wrote it out, all nate and proper," faltered Ellen, producing a crumpled slip of blue paper from her pocket.

"Give it to me," said Miss Comfort, "and you come here this evening at eight o'clock, and you shall have your money."

Ellen shook her head disconsolately.

"And thank you all the same, Miss Comfort, dear," said she, "but you can't get it no more'n we can get blood from a stone."

"We'll see about that," said Miss Comfort.

She went slowly up-stairs with the little piece of paper in hand.

"It's a shame," said Miss Comfort.

Leotard Carlyon was Miss Comfort Walker's best boarder, with the single exception that, up to the present moment, his twenty-five dollars a week had been in the future. Now it so chanced that one reason for her reposing so much confidence in Mr. Leotard Carlyon, the new boarder, was that he was the nephew and heir apparent of Caleb Carlyon, the rich banker from whom she rented her brownstone house at the trifling consideration of $3000 per annum.

"He can't be a thorough-going impostor," said she to herself, "with such a relation as that."

So she went bravely up to Mr. Carlyon's room and tapped at the door.

"Come in," he called out. "Oh, it's you, Miss Walker, is it?"

Miss Comfort advanced valiantly with the bill in her hand to where Leotard Carlyon reclined languidly amid a heap of sofa pillows with a newspaper in his hand.

"Don't you think you can settle this little account, Mr. Carlyon?" she said. "The poor woman needs it very much."

"She has been to you with her story, has she?" snarled he. "No, I can't settle it! And I wouldn't if I could. It's worth more than the money to me to be so badgered and beset. Have the goodness, Miss Walker, for the future to remember that I am able to attend to these little affairs for myself without any interference."

"That means that I am to attend to my own business," thought our little housekeeper, as she retreated, coloring and rather indignant. "Well, I will."

So Miss Comfort tied on a little brown velvet hat she had trimmed with scarlet poppies and brown autumn leaves, and set out bravely for the Mount Orient bank.

The clerks stared at her a little curiously as she was shown into the president's room at the back, where Mr. Carlyon sat, straight and upright, with blue eyes like a falcon's and hair slightly sprinkled with gray.

He elevated his brows at sight of Miss Comfort Walker.

"I believe your rent is not due for a month yet, Miss Walker," he said, with the cold courtesy which always made her feel as if he were incased in an armor of ice.

"No," said the little lady, courageously; "but it's about your nephew, Mr. Leotard Carlyon," and she told the story of Ellen O'Brien and her wrongs.

"He ought to pay the money," said Miss Comfort, excitedly. "He must be made to pay the money."

"May I ask, Miss Walker, why you interest yourself in this affair?" the banker asked, with a cold, measured calm that contrasted strangely with the little woman's heat and flurry.

"Another way of telling me to mind my own business," said Miss Comfort to herself. But she kept up a bold front and answered:

"Because I think no man has a right to cheat a poor woman out of her hard-earned money."

"Cheat is a strong word, Miss Walker," observed her landlord.

"It's the only correct word in the case, Mr. Carlyon."

"Perhaps he is owing something to yourself?" questioned the banker keenly.

"Yes, sir," Miss Comfort answered; "but it isn't that I came about. I am able to lose little if it should be necessary; but this poor woman is friendless and alone."

Mr. Carlyon glanced at his watch. Miss Comfort turned toward the door.

"I'm sorry that my time is no longer at my own disposal," said he courteously.

And Miss Comfort went away almost crying.

But that evening, just as Miss Comfort was beginning at her account-book, a ring at the door, and Mr. Carlyon, the banker, was shown in. Miss Comfort rose, confused and flattering.

"Miss Walker, pray don't let me disturb you," said the banker. "I have only dropped in for a little call. You showed yourself to me to-day as a true-hearted, noble-natured woman! You need no longer distress yourself. The bill is paid; and now, if you are at leisure, I'll just take my evening cup of tea with you."

How pleased Miss Comfort was as she poured the fragrant Young Hyson into her great-grandmother's china cup, decorated with butterflies and oblong scrolls of gilt and violet; and how she kept wondering all the while how Mr. Carlyon, the great banker, could take such an interest in her little affairs.

But if she had only known it, Mr. Carlyon seldom came across a true, real heart in his complicated business transactions.

* * * * * *

"It's not true," said Mr. Leotard. "My uncle would never make such a fool of himself at his age. Why, he's fifty if he's a day."

"Only forty-four," said Mrs. Creswick. "But of course it must be a great mortification to you, Mr. Leotard, who have always been looked upon as his heir, to think he is going to marry that little woman who keeps the boarding-house. But it is true! I saw the wedding-ring myself."

Leotard Carlyon gnawed silently at his mustache. If he had paid that washerwoman's bill, Miss Comfort Walker would not have gone to his uncle, and he would have been the rich banker's heir.

He wished he had paid the washerwoman.—*Hartford Times.*

CHARGES SUSTAINED.—Immigrant inspector: We have information that you come over here on contract. Lord Fitz-mud Fitz-mud (indignantly): Aw-what-er-er-er? Why you wude, impudent fellah! I come over here to marry Miss Angelina Goldust of New Yawk. Immigrant inspector (triumphantly): Well, what's the matter with yer—ain't marriage a contract? You'll have to go back.—*Life.*

"THE KING'S DAUGHTERS."—There are said to be now nearly 200,000 of the "King's Daughters" in the land. Mrs. Margaret Bottome of N. Y., their founder and president, has just become one of the editors of the *Ladies' Home Journal*, in which she will hereafter write and edit a department entirely devoted to the best interests of the Order.

Woman's Press Association.

A large number of ladies met Saturday afternoon, Sept. 27th, at the home of Mrs. Emelie Tracy Y. Parkhurst, 1419 Taylor street, for the formation of the Pacific Coast Woman's Press Association. Henry M. Clement presided as temporary chairman.

Mrs. Emilie Parkhurst delivered an address in which she set forth the objects of the association. In order to aid her to form a correct idea of the needs of those whose object it is to benefit, she has communicated with more than 800 journalists and magazine writers, of whom not more than one-third were women. Social, industrial, philanthropic and reformatory questions will be the main issues within their province, and if the movement is properly developed it will be a fellowship for concerted action, in which the heart and soul will be enlisted.

Mrs. Nellie B. Eyster of San Francisco was unanimously elected president; Mrs. Jeanne C. Carr of Pasadena, first vice-president; Mrs. Ella Higginson of the Portland *West Shore*, second vice-president; and Mrs. Sarah B. Cooper, third vice-president. Mrs. Emelie Parkhurst was elected corresponding secretary; Mrs. Sam Davis, recording secretary; Mrs. Mary O. Stanton, treasurer; and Mrs. M. H. Field of San Jose, auditor. The Executive Board was still further fortified by three members at large, Mrs. Hall Wood of the Santa Barbara *Independent*, Miss Andrea Hofer of the Salem *Journal*, and Miss Frances Bagby of the San Diego *Union*.

Mr. Clement conducted Mrs. Eyster to the chair. Her salutatory put the audience in excellent humor for the more serious business of the meeting. A vote of thanks and the Chautauqua salute was given to the temporary chairman, Mr. Clement, for his services in conducting the organization.

Mrs. Jeanne C. Carr then read a paper on "The Influence of the Printed Page," which called forth frequent applause.

In the social reunion which followed, the members were kindled into enthusiasm by discovering in each other mutual aspirations and aims in the prosecution of journalistic and other literary work.

Among those present were: Mrs. Emelie Parkhurst, Mrs. Nellie B. Eyster, Mrs. Jeanne C. Carr, Mrs. Sarah B. Cooper, Mrs. M. O. Stanton, Mrs. Caroline Severance, Mrs. Gertrude Atherton, Eliza D. Keith, Alice Kingsbury Cooley, Mrs. Eva Cook, Mrs. George Mitchell, Mrs. Hall-Wood, Mrs. Carrie Walker, Mrs. M. L. Hoffman, Mrs. Rosa Eigenmann, Mrs. Lillian Shuey, Mrs. Gelwicks, Mrs. M. G. C. Edholm, Mrs. M. B. Watson, Miss King, Miss Hanson, Mrs. Virginia Hilliard, Mrs. Mattie Owen, Mrs. Isabelle Raymond, Mrs. P. D. Campbell, Mrs. Oulton, Louise Humphrey Smith, Messrs. Henry Clement, John Swett and John W. Parkhurst.

A communication was read from Mr. Babcock of the Hotel Coronado, offering the association the hotel for the next meeting of the association. The invitation was referred to the Executive Board for approval.

A motion was made to elect as honorary members Helena Modjeska, Henry N. Clement and the *Western Journalist* of Chicago. The motion was carried, and after refreshments the meeting adjourned.

Among those who sent in applications for membership, but who could not be present, were: Rose Hartwick Thorpe, Evelyn Ludlum, Andrea Hofer, Josephine C. McCrackin, Mary Lambert, Mrs. Adolph Sanchez, Nettie Freeman, Mary V. Lawrence, Anna C. Murphy, Mary H. Field, Frances L. Mace, Frances Bagby, Flora M. Kimball, Adelaide Baker, Winifred Sweet, Adele Ohretien, Mrs. Sanford, Mary M. Bowman, Eliza A. Otis, Carrie B. Morgan, Genie Clarke Pomeroy, Edith A. Brown, Mrs. O. A. S. Beale, Miss Beale.

A vote of thanks was tendered to Mrs. Parkhurst, whose energy has resulted in the organization of the literary talent on this coast. The meeting then adjourned, subject to a call from the Executive Board.

Chaff.

"SARA CHEESEBROW'S BOY'S got back. He's been in the standin' army fur five years." "In the standin' army fur five years? Waal, I reckon he'll be glad enough to set down a spell now."—*Harper's Bazar.*

MRS. GRUMP: Bobby, I shall have to tell your father about you. You've been fighting. Bobby: Well, mum, hain't I been licked bad enough, now, without having another scrap with pa?—*Siftings.*

TEACHER: Now, children, here we have the word "intuition." Who can tell what it means? Phenomenally bright scholar: Intuition is that faculty of the human mind which enables a person to distinguish at a glance a patent-medicine advertisement from a real news article.—*London Tid Bits.*

SENATOR KENNA of West Virginia has been in the habit of smoking 10 to 20 strong cigars daily, and the practice brought on "tobacco heart." The doctors made him stop summarily, and thus saved him in the nick of time from nicotine.—*Lowell Courier.*

"UNCLE ABE, what is your idea for having the camp meeting held in another place this year?" "Wal, sah, the chicken cholera been ragin' pow'ful in de ole neighborhood."—*N. Y. Herald.*

Old Age.

Soon—but by gradual steps across the blue
The regal sun will steal from east to west,
And veil in clouded gold his flaming crest,
With all his fiery plumage drenched in dew.
Soon will the leaves of summer change their hue
And flutter down to earth's all-hiding breast;
And silent birds forsake their wind-swept nest
For distant climes and fields and woodlands new.
So, year by year, youth's brave morn and noon
Life cools into its sunset unawares.
And looking back across the long, long days
Eastward, where rose our sun, a spectral moon
Peeps through uncertain clouds, or dumbly stares
Upon an unknown grave in twilight haze.

This were a boon all others far excelling,
Could we attain that faith so near yet far,
In the deep inner world where naught can jar
The steadfast house and home, our chosen dwelling,
Or check the immortal fountain there upwelling,
And happy they to whom the gods unbar
The gates of night to greet their evening star
Ere vesper chimes are changed to funeral knelling.
Ye fellow-lingerers in the twilight gloom—
Ye who with me have lived through morning's glow,
And down life's darkening slopes have trod together—
This greeting take—this trust; that not to doom
But victory bound, our lives are pledged to know
Another morn in Heaven's uncloudèd weather.

—*C. P. Cranch in Scribner's.*

Fuss in the Clark Family.

Many will remember the fuss me and my wife had last spring. I wanted her to cook with green willow wood, and she just gave me "down the country." Well, when a woman will she will, and when she won't, you can bet she won't. I dried the wood, and then it was fine stove wood. I said: "We won't have any trouble," wood is a small item in the way of living. Water was the next thing. I have been hauling water sixteen and a half years here in Bell county. Some days wife would want to wash. It was often the very day that I wanted to go to the picnic or primaries, but the water must come or no clean clothes would come. I am very fond of clean clothes, especially on other folks. Well, this water-hauling was very worrisome. I would rail about it, and yell, and run half the children off to the field to work, and cut up in general. I determined to put a stop to that kind of fussing, for I always hauled the water when I cooled off, and then got to the primaries or picnic in time. But to completely beat this scheme I ordered me a 12 foot windmill and the fixtures. Wife smiled and said: "Yes, you are always going to do something smart!" I put it up, and now wife has all the wood she can use cut up and all the water by just turning faucets to let it run in the kitchen, in the dairy, in the gallery, in the yard lot, or anywhere else. I tell you that made peace for awhile. Up to that time none of us washed our faces more than once a day, and all in the same water, and then gave that to the hog. When I have to haul water I believe in economy in its use. Now every one of us can have a panful and wash three times a day, but I don't need but one wash a week myself. All have clean faces. Wife says I am an exception—but she's prejudiced because I'm popular with the sisters. I even give the hogs and calves all the clean water they want. This water comes through pipes over 300 yards without any help from me. You see Providence helps those who help themselves. The wind that runs this mill has gone to waste for over 16 years, and I hauled water! I thought peace and harmony would be ours, but the other day my wife told me that the meal, flour, coffee and the coffee-pot were out and that the children needed some clothes. "Well," I says, "I can't do everything. I will leave you what's here and go!" "Now, don't go off," says wife. "Yes I will. I will go, and see how you will get these things without me." So I got me some clean clothes. She says: "If you will go, I will take you to town in the wagon." "All right. If you like it, do so," says I. So we went to town, taking some of the little ones along. I bought my two little boys some new hats; then I had a few more words with my wife.

We divided the money, I taking about nine-tenths of it. Then I left. I went to the depot. The train was two hours late. By the time it came I was not so mad, but I was determined to go. So I went on until I came to Georgetown. When I got there, I stopped to stay all night and found that there was a farmers' institute, half used up. I was invited to stop and make them a speech on fine-spun agriculture. I accepted, and just such a speech they never heard. I kept the courthouse full of people in an uproar. They cheered me. "Put him out!" said one. "Hit him with a cabbage!" yelled another. "O rats!" said a third. That's the way they approve a fellow in these parts. When I was through and got my dinner, I felt better. Then I looked at my shirt. It was dirty. Where was the next clean one to come from? I turn for home in self-defense. When I got home it was night-time. I was glad of it. Wife kissed me and baby kissed me, and so forth.

Now everything is running smoothly.—*W. A. Clark in Texas Farmer.*

THE Woman's Christian Temperance Union will hold its State Convention at Stockton, Oct. 20th to 24th.

Young Folks' Column.

The Three Poets of the Seventh District of Hutchins.

[Written for the Rural Press by Katherina Bryant Nolan]

One very cold and frosty morning away back during the year of 1865 the boys and girls of the Seventh District of Hutchins hurried along the different roads leading to the old red schoolhouse that stood by itself just out of the village and looked deserted, except for the smoke pouring out of the chimney in great puffs.

Hutchins was in the northern part of New Hampshire and a new teacher was to open the school that morning. The master who began the term had been taken ill, and after a short vacation the Seventh District was to be taken in hand by a new pedagogue. This district had the reputation of being a hard one, and the scholars prided themselves on it and instilled their doctrines into all new-comers by precept and example year after year.

It was a bold man who undertook to train these worthy scions of the soil, and it was not the first time the master had been unable on account of sickness to teach the term through.

The red-hot stove was surrounded by a noisy group and every pupil joined this magic circle as soon as he reached the schoolhouse.

Several places had been breathed clear in the frosty window-panes, and at these trusty sentinels stood on guard, something after the manner of the lookout in old-time baronial castles through loop-holes.

"The teacher's a comin'," yelled the boy nearest the road.

"Yes, he's a turnin' in," cried the next, jumping up and down in his excitement.

"It's the teacher," screeched the third, and at that there was a grand rush for seats. A new master was always treated to a great show of order lest he might possibly have been prejudiced against them.

So when Mr. Hunt walked in they were all in their places, and beyond whisperings and gigglings and sly pokings from some of the more boisterous, appeared like extremely innocent and well-behaved youngsters.

The master was a tall, loose jointed fellow. His hair was red and he had big, uneven teeth and was not prepossessing in appearance. He stood somewhat uneasily by his desk and the younger ones looked at each other solemnly, as if they pitied the teacher rather than themselves. The large boys maintained a dogged look of martyrdom and the older girls put on a bravado air, as if they "did not care whether school kept or not."

Mr. Hunt called the school to order, took the names of pupils, read a short scripture lesson and led them in the Lord's prayer. He assigned their lessons in a business-like way that created a very good impression, and at four o'clock dismissed the afternoon session promptly. Two or three of the boys loitered behind and the master followed in their footsteps after locking the schoolhouse securely, but he did not overtake them.

A dead silence greeted Mr. Hunt the next morning when he entered the red schoolhouse. The scholars appeared cool and calm, but the stove was turned at right angles, and the stovepipe, which ran the whole length of the building, was twisted, and looked like a tortured thing. The smoke poured out of the joints thus opened in little fitful curls and rings, the blackboards were covered with mysterious characters, and everything was topsy-turvy. Two chairs—one for the master and one for any stray visitor—usually stood primly on the platform, but this morning they sat sociably near the stove and were adorned with dry branches. A few dead leaves clung miserably to them, as if they had wanted to live. On the blackboard behind the teacher's desk, in a free, bold hand, the following profane prayer was written:

"O Lord! have pity
On our committee!
They've hired a fool
To teach our school.
No matter what we suffer,
He'll be sure to have his supper."

"Masters Wood, Barnard, Hackett, step this way," Mr. Hunt called after surveying this poetry.

They came forward. These were the three boys who had staid behind in such earnest consultation the night before, and they stood quietly, with innocent faces, as if this sort of thing was a regular occurrence in the district.

"Wood, you and Barnard better fix that stovepipe; the smoke is really unpleasant. We shall not trouble about the stove this morning, as it would be uncomfortable to put the fire out, it is so cold. Master Hackett, you may hunt up the water-pail, if you please. Some of these scholars will be getting thirsty, shortly."

When it came to cleaning the blackboards, Wood took up the brush and started to rub out the poetry, but Mr. Hunt turned on him as quick as a flash and requested him to leave it.

"It is really satisfactory to know we have so able a poet, and as he is probably one of the pupils attending the Seventh District school, I shall endeavor to have him disclose his identity. Certainly such genius should be duly encouraged. I have always entertained a lurking suspicion that my talents would be appreciated sooner or later, and the hour seems to have arrived."

The big girls tittered and nudged each other at this speech, and a sort of low growl came from the back seats, where the boys were displaying some very even sets of teeth. They all paid more attention to their books that day than was usual, and no further reference was made to this escapade.

Within the next few days the three boys were interviewed separately by the master, and for the first time in their lives treated each other with distrust and scowling severity, and one night they gathered in the woodshed to have it out.

"Now look a here, Si Barnard, you peached on me on that poetry. You helped with it, and you've got to stand your share of the blame. I won't stand no foolin'," said Wood in a menacing tone.

"Who's a foolin'?" asked Si, hotly. "You've tried to make the teacher think I scrawled them blackboards, so he'd believe I wrote the poetry. You can't play no games on me."

"Now see here, boys, I ain't afraid of the teacher," said Bob Hackett from his seat on a log. His hands were clasped about his knees in a careless way, and he had listened to the conversation with an air of arbitration hanging about him. He interrupted boldly, as if he fully intended to settle the matter. "I'll take the blame," he continued; "you both said I was a coward because I sat on a desk and let you do the work. I planned it out so as to make sure of your doing something worthy of the Seventh District," he ended with a chuckle. "I'll take the blame."

"There's no use giving the thing away," growled the other two, scowling.

About this time Mr. Hunt whipped into the schoolhouse and a grim smile overspread his countenance, showing his uneven teeth. He put his desk in order, walked down the schoolroom and picked up a note here and there. Glancing at them hastily, he put on his hat, locked up the schoolhouse and went on after the boys once again, whistling cheerily as he did so.

The teacher boarded round, as that was the fashion in those days, so he was very well acquainted before the school was closed with as many different families as there were weeks in the term.

He made light of the trouble of the second morning when his boarding mistress mentioned the matter, and it is doubtful if he knew just what to do himself.

He might have felt constrained to lay the matter before that committee so seriously implicated but for an event that nearly proved a tragedy and caused the three conspirators to agree once more.

Mr. Hunt was a man who thoroughly believed in encouraging out-of-door recreations, so the third week of school, a gay party of boys and girls skated up Mill creek in the bright moonlight, and the master was the life of the crowd.

Wood and Barnard and Hackett found more comfort in being by themselves. There was a certain feeling of constraint when in the master's presence, although he singled them out especially and appeared to have great confidence in their loyalty. Perhaps they did not care to be conspicuous under the circumstances, but they were destined to become so on this bright night.

They skated well ahead of the rest, and finally Wood said:

"I tell you what it is, Bob. I'm sick of this thing. Are you going to make a clean breast of it to Old Gravestones?" This was a secret and descriptive name applied to Mr. Hunt when things were not going right. Bob laughed, but other than that his intentions were not expressed, and Bob's chuckles might mean most anything.

"I'll bet you the secret on the business that I'll get to the old mill first. If I win, there's no blabbin'," said Wood impatiently.

"That's fair," said Si Barnard, emphatically.

"All right; that settles it," said Bob; "call away."

"One, two, three," and they fairly flew up the river, which ran very straight at this point, but the race was short, for the ice cracked ominously, and instead of three bold skaters there were but two. Their startled companions gazed far up the stream, but only beheld two figures sharply outlined against the sky, and saw two shadows fall on the silvery ice instead of three.

The master said nothing. He went to the side of the river and seized a pole which happened to be there, and a few long strides took him to the brink of the treacherous air-hole. The girls huddled together and watched breathlessly and almost despairingly. There was silence, only for the wind sighing through the pine trees, stirring up the dry leaves, and the sharp cracks of the ice which now sent thrills of terror to their hearts. They watched the master carefully haul the half-drowned boy out to safety and life, and when they saw him lifted on to his feet and skated along toward them, they heaved a mighty sigh of relief.

"An air-hole," said the teacher to them as he came along holding Wood up by the shoulder with a strong grasp. "A narrow escape; we shall have to take him home."

Bob Hackett supported Wood on the other side, and they all moved on, a silent, thankful crowd. "Supposing he had been drowned," filled every heart with a pean of thanksgiving for this "deliverance from sudden death."

Wood's teeth were chattering like castanets, and he had a vague feeling that he had been all right, and he wished they had just let him alone. He was sure something terrible was at stake. There was a dreadful roaring in his ears, and his brain seemed on fire. He felt better when he was rubbed down and dressed out in the garments of the hired man at the farmhouse, which happened to be near by. The clothes were ill-fitting, but felt comfortable, so it was a goodly change from the wet ones which hung before the kitchen fire and were already beginning to steam in the ruddy glow of the firelight. The master had superintended all the details, and Wood might have been a prize-fighter preparing for some noted contest, Mr. Hunt was so arduous and solicitous and skillful.

The farmer's wife would have had the boy remain under her roof for the night, but he managed to express his wish to go home. Mr. Hunt did not leave him until he was safely stowed away between blankets in the midst of unnumbered hot bricks and bottles, and the next day Wood appeared at school as usual. He looked rather pale, but otherwise seemed in no whit changed by his cold bath.

The scholars had all gone home. The master sat by his desk in the glow left by the sun which had just set behind the distant mountains. He looked up as the door opened and the three conspirators walked in. They stood before him and he smiled kindly on them. Wood acted as spokesman and apologized for their frolic.

"I think I have at least three very manly chaps to help make this term of school a success," declared the master, shaking hands with each of them in turn.

"I am very sorry I wrote that poetry," said Wood.

"I'm sorry I told you to write it out; that was my doing," said Barnard.

"I'm sorry I made up those last two lines," chimed in Bob Hackett. "It's my fault. I planned it."

"Three poets," said the master, smilingly. "Instead of one I have three, and very brilliant ones, too." The boys laughed at that and helped Mr. Hunt shut up the schoolhouse and walked home over the crisp snow with brisk steps and light hearts.

The Seventh District was completely subjugated and a most successful term was the result, so that "committee" were highly honored in the minds of the town people and re-elected on town-meeting day.

Those three boys eventually became teachers themselves and always gave the discoverer of the three brilliant poets the credit of arousing their ambition to become scholars instead of idlers.

Domestic Economy

Peach Pudding.—A peach pudding made o fresh or canned fruit is delicious. For this is required about two-thirds of a can of fruit, and dough made as directed. Put the peaches with a little of the juice in a round tin mold; a cake mold, if not too large, will do. Drop the dough over the top in spoonfuls and set in a steamer over a kettle of fast-boiling water. Cover closely and cook one hour. This should turn out without breaking, when the peaches will be on top. Serve with a sauce made of a scant half cup of butter rubbed to a cream, one cup of powdered sugar and the yolk of one egg beaten very light, and a quarter of a cup of wine stirred in at the last. This sauce should be soft, but not liquid. If wine is not liked, the whole egg may be used and any flavoring preferred.

Superior Blackberry Wine.—Bruise the berries, measure them, and to every gallon add a quart of boiling water. Let this stand for 24 hours, stirring it three or four times during the interval. The third day strain off the juice, and to every gallon of this strained liquor put two pounds of refined sugar. Cork it tight and let it stand until cool weather, when you will have a wine that you will never voluntarily be without, as it will be found so efficacious in sickness, and a good and harmless tonic for the feeble and convalescent.

Cream Cakes.—One pint of boiling water in which is melted half a pint of butter; stir one pint of flour into the boiling water and set away to cool. When cool, add six well-beaten eggs, drop in a tin by spoonfuls and bake quickly. *Cream.*—Bring one pint of milk to a boil; mix together two cupfuls of sugar, one cupful of flour and four eggs; stir into the boiling milk, flavor to taste. When the cream is cool, with a sharp knife open the cakes on one side and fill with the cream.

Cheap Sponge Cake.—Three eggs well-beaten, one cupful of sugar, one cupful of flour, with one teaspoonful of cream tartar sifted with it; half a teaspoonful of soda dissolved in three teaspoonfuls of hot water. Dessertspoonful of extract of lemon or vanilla. Bake about one-half hour in not too hot an oven.

Peach Pie.—Line a deep pie-plate with a rich paste, fill with mellow peaches pared and stoned (I use canned peaches), sprinkle with sugar, a dredging of flour and two spoonfuls of water or juice if you use canned fruit; cover with pastry and bake, not too quickly.

Spiced Cookies.—One and a half cupfuls of sugar, half a cupful butter, three eggs, half a teaspoonful of ginger, cinnamon, cloves and half a teaspoonful of soda dissolved in warm water.

Good Health

Poison Oak or Poison Ivy.

The genus *Rhus* (sumac) is a genus of many species, with a habitat worldwide, and (as is not generally known) nearly every species will poison some persons cruelly, and if they do not soon get relief they will suffer terribly. Other people may handle nearly every species with impunity and then strike one, harmless to most persons, but capable of giving them a dose long to be remembered. Some persons may be poisoned by all except the white, or staghorn, sumac. This is the only species that I have not known to be poisonous.

Of the genus in North America, the swamp sumac, *Rhus venenata*, the climbing sumac, *R. toxicodendron*, and its variety or so-called species, dwarf sumac, *R. pumela*, and its variety on this California coast, *R. toxicodendron*, var. *Californica*, are the most to be dreaded. These last three are vulgarly called "poison oak" or "poison ivy," and the first is known in the Eastern States as "mercury."

While living in the East, up to the age of 30 years, our "poison oak" there was a fearful terror to me, and caused me a great amount of suffering. Then on until I was 50 it was innoxious. The variety on this coast is exceedingly plentiful on nearly all uplands, and is closely allied to ours, but is injurious to many more persons. The first time I went among it, it poisoned me from head to foot, and so it did a friend who was with me, also a new-comer here, who could handle without harm both it and *venenata* East. It laid him upon his back in great suffering for about a week. Pioneers here say that after a time the system becomes inured to it, and it does not injure them. But it does just rap it to the thin-skinned city dudes!

Remedies.

Many simple things will relieve and cure all forms of this poisoning, such as sugar of lead, sulphate of zinc, saltpeter, and muriate of zinc in solution with water. I do not know but I have discovered the best, handiest and cleanliest of these, to wit, a saturated solution of

Saltpeter.

I asked an old hunter what he used to cure poison oak with. He answered: "I wet some gunpowder and rub it on, and it kills it on me every time, if I put it on as soon as I feel it." Thinking that the only thing in the gunpowder that would do any good was the saltpeter, the next time I got a touch, all over my face, I tried it, and sure enough I felt the pain no more, when, in a few hours, if I had not got relief, my eyes would have been swollen shut. Now I keep a strong solution of saltpeter handy in my office all the time. Saltpeter is, of course, the nitrate of potash of the drug store. Nitrate of soda would probably be just as good or better, and borax, or borate of soda, should have the same effect. But the best thing of all is a certain simple preventive; this we have, I think, in the carbonate of soda, or

Common Baking Soda.

By washing the person in a solution of this before entering the "brush," or directly on returning, no injury will result from an exposure by the most sensitive. At least an old physician of 50 years' practice where these plants were common so informed me.

I have known men who through their whole lives dared not go into the woods in summer for fear of this plant, and others who were driven from comfortable homes by it. Therefore, I have undertaken the labor of this writing, for, as before said, any one may get cruelly poisoned by it when away off in the woods, far from medicaments, and if he knows all the simple remedies, he may save himself great suffering; for this reason every remedy and palliative should be yearly published.

The poison oak of this coast region is a very neat, pretty shrub, most abundant nearly everywhere. Its flowers are very rich in choice nectar for the honey bee; the honey from it is fine and wholesome, yet it poisons me and many others when riding along the road near the bushes.—*Cor. of Forest and Stream.*

Something About Wrinkles.—The general impression about wrinkles is that they are caused by worry, but the truth is that most of them come from laughing. To know how to laugh is just as important as to know when to do it. If you laugh with the sides of your face, the skin will work loose in time and wrinkles will form in exact accordance with the kind of laugh you have. The man who always wears a smirk will have a series of semi-circular wrinkles covering his cheeks. A gambler, who is accustomed to suppressing his feelings, generally has a deep line running from each side of his nose to the upper corner of his mouth, which in time extends to the chin, forming the shape of a half-moon. A cadaverous person is usually marked with two wrinkles, one on the jaw and the other under the eye, meeting at right angles at the cheek bones. The scholar's wrinkles form on his brow, while the schemer's wrinkles come around his eyes and look like spokes of a wheel.

Sitting Down.—An English scientific person has discovered that sitting down is an acquired habit. The majority of mankind do not sit, but simply squat, or, as it is sometimes said, sit on their heels. This position, the scientific person thinks, is the natural one, while sitting on a chair is an artificial one.

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Business Announcements.

[New this issue.]

Plows—Baker & Hamilton.
Auction sale of Cattle—Killip & Co.
Patent Fruit Truck—Smith McGarven, San Jose.
Plows and Harrows—P. P. Mast & Co
Poland China Hogs—Joseph Melvin, Davisville.
Trees—Japanese Tree Co.
Situation Wanted—Albert H Penson, Berkeley.
Land and Water Fowls—R. G Head, Napa.
Poultry—Madison H. Critcher, Alameda.

See Advertising Columns.

The Week.

The contrast between California and the East usually becomes more and more apparent as fall approaches winter. This year both natural and political affairs enter into the contrast. California adds to her usual autumn sunshine this year the heat of field and forest fires and the boiling of the political pot, which is displaying unusual ebullition for an "off year." At the East, "terrific storms and gales" are reported along the Canadian border, and with such a start the youngsters ought certainly to have "good skating for Thanksgiving"—a thing earnestly desired by the Eastern youth, if our memory correctly serves.

The new tariff is the leading topic in circles of producers and merchants. We give on another page the leading agricultural features of the now law, by which our readers may judge how their individual interests may be affected. The time for the discussion of the new measure has passed by only to return perhaps when the people have had a little experience in living and working under its provisions.

The proposed annexation of its suburbs would give New York an area of 400 square miles and a population of nearly 3,000,000. London includes nearly 690 square miles and over 5,000,000 population.

A Fine Advertisement Nevertheless.

The British Consul at Los Angeles has been guilty of the great indiscretion of reporting to his Government that possibly Southern California might be a good place to buy horses for the royal army and ship them to the old country via New Orleans. The *Yorkshire Post* rises in its wrath and smites the consul in this way:

Consular reports were intended to give information to the people of England as to the demand for their products, but if they are to be converted into vehicles for conveying to foreigners information as to how they can crush British industries, they advise that the sooner Lord Salisbury stops their publication the better.

After extolling the worth of the English-bred horse, the editorial says:

It would be well to suggest to the foreign office that we should have a different breed of the vice-consul at Los Angeles from one now on view there. A Chinaman could probably be got to do the work of the post at considerably less cost, and, to judge by the example before us, with quite as great concern for British interests. The present vice-consul states that horses can be raised at a much smaller cost in Southern California than here, as, owing to the mildness of climate, they can graze all the year round; and so, no doubt, a Chinaman as vice-consul would be economical, as he could vary his vice-consular duties by taking in washing. However, if these plains of Southern California can produce colts and fillies worth from £1000 to £4000, we would recommend breeders to stick to thoroughbred stock, for it is very rarely indeed that the War Office gives more than £1000 apiece for cavalry remounts; somewhere about £45 or £50 is nearer the limit.

It is perhaps quite natural that a journal representing the home-producers of Great Britain should resent the suggestion of buying Yankee horses for the royal cavalry. English producers are so hard-pressed by competition with American grains, meats, dairy produce, fruits, hops, etc., that it does seem rather adding insult to injury to suggest that American horses should prance in the parades and consume on British soil American feed grain—all at the expense of British taxpayers. It does not appear right that the consul at Los Angeles should be thus roasted for advising his Government candidly of the horse resources of California. The blame should rest, if anywhere, with the officials of the British Government, who could have used such unwelcome information quietly instead of putting it into hard type for local journals to injure their knuckles upon.

The sentiment of the Californian should be one of sympathy for the truth-telling consul in his plight. Many a frank individual has similarly suffered. There will also be satisfaction to the Californian that, although the ill-tempered publication of the British journal is intended to be a crusher for both the consul and the country to which he is accredited, it will serve as a more expressive and impressive advertisement of our resources and adaptations than any amount of fulsome eulogy can be. There is no intimation that what the consul said is not true. It is true, and it is to our advantage to have the world know it.

Fertilizers for Fruit.

Prof. Hilgard, in his University Bulletin, which appears in full upon another page, writes in a very clear and interesting manner upon a subject which is just now pressing itself strongly upon the attention of our fruit-growers. For the last few years the use of fertilizers has been increasing and the results attained have not always proved as satisfactory as desired. Probably this has been due in some cases to the use of poor material and in others to the application of material not needed in greater amount than the soil already offers. The perusal of the bulletin will afford suggestions in both these directions and in many cases point the way to more rational procedure. As this is a matter upon which much light can be thrown by discussion and relation of experience, we hope our fruit-growers will take part in such comparison of methods and results through the columns of the Rural. There is no question but the matter is becoming one of the greatest moment in our fruit-growing, and upon its elucidation depends in great measure the success of many growers. This fact should lead them to sharpen their wits and pencils and use up some writing paper.

"California on Wheels" continues to receive compliments from Eastern journals as it moves along. Over 600 such notices have reached the State Board of Trade headquarters.

Our Fruit at the East.

We alluded last week to the results of the wide distribution of California fruit at the East, and the subject is of such importance that it will bear frequent allusion. The New York *Sun* hints at a very promising state of affairs as follows:

Our native fruit is not holding its own against the Western invader. This is especially true of pears, which are much inferior to the luscious, clear-skinned California Bartletts that may be seen on hundreds of stands in tempting, picturesque pyramids of gold and rose. The peaches from across the continent don't come up to the best from near-by orchards, but they are big and juicy and fair to look upon.

But though our peaches do not strike the writer of the above paragraph as better than the best of the Eastern product, he must remember that our fruit has to be picked too soon to allow it to develop its highest quality. The Eastern peach-growers are, however, looking with much interest upon the peaches we are shipping, and probably appreciate the unavoidable effect of too early picking. A recent issue of the Wilmington, Del., *Republican* takes some of the big peaches shown in the cars of "California on Wheels" for a brief sermon on peach-culture, commenting upon the methods here and contrasting them with the soil-exhausting methods of Delaware growers. The writer of the article referred to charges, as do many of the best horticultural authorities, that the almost entire failure of the peach crop in that region this season is due to the non-progressive and impoverishing practices of the producers.

This quite accords with the conclusions of California peach-growers who have visited the New Jersey and Delaware orchards to inform themselves upon Eastern peach production. Mr. Flickinger, for instance, at a recent meeting of the State Horticultural Society, as reported in the Rural, took the ground that the weakness and short life, the yellows and all that sort of thing, of the peach was due to poor soil, poor cultivation and other conditions which do not exist to any extent in California. This conclusion may be too broad, and there may be failures there in spite of all efforts at fertilization, cultivation, etc., but the comments of the California visitors seem to be quite in accord with those with which the Delaware journal regales its peach-growing readers.

The Columbian Fair.

Satisfactory progress seems now to be making in preparation for the great World's Fair in Chicago. The Commissioners are in continual session this week, and telegrams show that preliminaries are being rapidly arranged. George R. Davis has been chosen director-general, and he issued on Tuesday of this week an address which gives official information concerning the enterprise as follows:

By an Act of Congress it is provided that the buildings for the World's Fair shall be dedicated on Oct. 12, 1892, and that the exhibition shall be open to visitors on the first day of May, 1893, and shall close not later than the 30th of October thereafter. Thus we have two years in which to arrange the grounds and erect the buildings, and seven months additional in which to receive and place the exhibits. So far as this country is concerned, the undersigned feels justified in the statement that the presentation of agricultural and stock products will be in every respect superior to any previous exhibition; also, that in inventions the progress of the United States will be indicated in a most remarkable manner. There is also every reason to anticipate exhibits in large numbers from every other nation on the globe, it being estimated by practical experts that the total number of exhibits will not be less than 50,000, divided equally among the United States and all foreign nations.

It is proposed to make this exhibition especially interesting in all that relates to manufactures by the presentation of the most important processes in active operation. In comparison with these will be presented the methods used in other countries for a hundred years past. Already there are indications that nearly every State and Territory in the Union will be fully represented and that large appropriations will be made at the approaching sessions of the different State Legislatures. Circulars and blank applications for space will be forwarded in due season to all intending exhibitors.

No doubt California will be creditably represented at this grand display, as probably she can invoke no more potent agency for the dissemination of knowledge of her unequaled resources and productions. An organization, as previously stated in the Rural, is now at work to this end, and the Legislature this winter will be called upon to furnish substantial and adequate aid. There seems to be general consent that the California display must be original in design, unique in development and striking in its impression. It will, of course, take time to determine how this can be done and at what outlay. We acknowledge that we have been very favorably impressed with a plan worked out by E. W. Keeler of the State Board of Trade, which is a happy combination of panoramic representation of characteristic California scenery, with display of material products in a way which it seems to us will give the visitor a realizing impression of California's charms and adaptations. No doubt due attention will be given to Mr. Keeler's proposition and to all others which may be presented.

Enforcing the Anti-Lottery Act.

A circular letter to postmasters containing explicit instructions as to the treatment of "lottery matter" under the recent anti-lottery Act, has been prepared by Assistant Attorney-General Tyner, under direction of the Postmaster-General. Portions of this circular read as follows:

Newspapers, pamphlets and publications of all kinds bearing the date of or since the 19th day of September, 1890 (at which date the Act took effect), which contain an advertisement of any lottery, gift enterprise or similar scheme, or the whole or part of the list of prizes awarded at the drawings of lotteries or similar schemes, are by the provisions of this Act denied carriage in the mails or delivery to subscribers' addresses or to any other person, or as "sample copies." Postmasters should refuse to receive them from the publishers, or deliver them if by an inadvertence they reach the office of their destination.

The term "lottery," as used in this Act, embraces all kinds of schemes, general or local, for the distribution of prizes by lot or chance, such as gift exhibitions, enterprises, concerns, raffles, or drawing prizes in money or property at fairs. Hence letters and postal cards and circulars concerning them, and newspapers, pamphlets and other publications containing advertisements of them, are unmailable.

About 5 o'clock last Sunday morning the issue of the S. F. *Examiner* for that day was sent to the city postoffice, in bags and bundles, addressed to its usual recipients in the country, Eastern States and foreign parts. The postmaster was soon apprised that on the eighth page of the paper was a list of prizes drawn recently at the fruit and flower festival held in Woodward's Gardens by the ladies of St. Joseph's parish for the benefit of the Youth's Directory. Although it was a lottery for charitable purposes, P. M., Backus felt he had no discretion in the matter. "The instructions which I have from Washington," said he, "point out to me that I must interfere in such cases, and I would be derelict in my duties if I did not obey these rules," and so the whole edition was refused transportation through the mails.

American Wild Flowers.—Those interested in the preservation and improvement of our wild flowers should join the American Wild-Flower Club. Information can be had by addressing Chas. S. Horn of Wilmington, Del. We have received from the club an interesting pamphlet explaining the purpose and methods of the club, which we presume will be mailed to all applicants who send a postage stamp. It is stated that at the East some of the most beautiful wild flowers are becoming exceedingly scarce, so much so that European visitors comment upon the paucity of the natural growths, and wild-flower lovers are appealed to to rescue and multiply desirable species. On this coast we have not reached such a state yet, but it is certainly time to increase an appreciation of our grand natural growths and to foster their growth. The Wild-Flower Club ought to have many local branches on this coast.

Ventura Grapes.—Cyrus Kenny of Fillmore, Ventura county, sent us last week a large box containing some of the finest Muscat grapes we ever saw or tasted. They were grown at Sespe and certainly demonstrate the grape resources of that locality. One cluster weighed 5¾ pounds. The berries of all the clusters were exceptionally large, thin-skinned and of delicious sweetness.

Puyallup is fast recovering from her recent conflagration. Insurance companies are paying losses promptly.

Public Affairs.

The New Tariff as Applied to Agricultural Products.

We give below the portions of the new Tariff law, approved last week by the President, so far as articles of agricultural produce are affected. This law has already gone into effect, as by its provisions it became operative within a few days after its enactment. We make compilation from the *Daily Commercial News* of Oct. 7. In the tabulated forms, the first column shows the rates on the articles under the former law and the second column shows the rates on the same articles under the new Tariff bill.

In cases where both rates are ad valorem or specific, the difference is readily seen, but where one is specific and the other ad valorem the dealer can calculate the amount of the change from the market value of the article. The letters "p. c." signify "per cent ad valorem," and the rates expressed in dollars and cents signify that that is the new duty per pound when ton or gallon or other standard of quantity is not expressed.

OILS.	Old Rate.	New Rate.
Castor oil, per gallon	80c	80c
Cod liver oil, per gallon	25 p c	15c
Cottonseed oil, per gallon of 7½ lbs. weight	25c	10c
Croton oil, per pound	50c	30c
Flaxseed, or linseed and poppyseed oil, raw, boiled or oxidized, per gal. of 7½ lbs. wt.	25c	32c
Fusel oil, or amylic, alcohol	10 p c	10 p c
Hempseed oil and rapeseed oil, per gallon	10c	10c
Olive oil for salad purposes, per gallon	25 p c	35 p c
Peppermint oil	25 p c	80c
ANIMALS, ALIVE.		
Horses and mules, per head	20 p c	$30 00
Horses valued over $150, per head	20 p c	30 p c
Cattle over one year, per head	20 p c	$10 00
Less than one year, per head	20 p c	$2 00
Hogs, per head	20 p c	$1 50
Sheep, one year old, per head	20 p c	$1 50
Less than one year old, per head	20 p c	75c
All other live animals	20 p c	20 p c
BREADSTUFFS AND FARINACEOUS SUBSTANCES.		
Barley, per bushel	10c	30c
Barley malt, per bushel	20c	45c
Barley, pearled, patent or hulled	½c	2c
Buckwheat, per bushel	10 p c	15c
Corn or maize, per bushel	10c	15c
Cornmeal, per bushel	10c	20c
Macaroni, vermicelli	Free.	2c
Oats, per bushel	10c	15c
Oatmeal, per bushel	½c	1c
Rice, cleaned	2½c	2c
Uncleaned	1½c	1¼c
Poudy	1¼c	¾c
Rice flour, meal and broken	20 p c	¼c
Rye, per bushel	10c	10c
Rye flour	½c	½c
Wheat, per bushel	20c	25c
Wheat flour	25 p c	25 p c
DAIRY PRODUCTS.		
Butter and substitutes	4c	6c
Cheese	4c	6c
Milk, fresh, per gallon	10 p c	5c
Preserved or condensed	20 p c	20 p c
Including weight and packages	20 p c	3c
Sugar of	Free	8c
FARM AND FIELD PRODUCTS.		
Beans, per bushel	10 p c	40c
Beans, peas and mushrooms	35 p c	40c
Broom corn, per ton	10 p c	$8
Cabbages, each	10 p c	1c
Cider, per gallon	20 p c	5c
Eggs, per dozen	Free	5c
Yolk	20 p c	25 p c
Hay, per ton	$2 00	$4 00
Honey, per gallon	20c	20c
Hops	8c	15c
Onions, per bushel	10c	40c
Peas, green, per bushel	10 p c	40c
Dried, per bushel	10 p c	20c
Split, per bushel	20 p c	50c
In papers or small packages	10 p c	1c
Plants, trees, shrubs and vines	Free	20 p c
Potatoes, per bushel	15c	25c
SEEDS.		
Castor beans, per bushel	50c	50c
Flaxseed, linseed, poppyseed, oilseed, per bushel	20c	25c
Garden seeds	20 p c	20 p c
Vegetables, prepared or preserved	35 p c	45 p c
In natural state	25 p c	10 p c
Straw	Free	30 p c
Teazles	Free	30 p c
FRUITS.		
Apples, per bushel	Free	25c
Dried, desiccated, prepared	Free	2c
Grapes, per barrel of 3 cubic feet	20 p c	60c
Plums and prunes	1c	2c
Figs	2c	2½c
Oranges, lemons, limes, in pkgs. of 1½ cu. ft. or less, per pkg	13c	13c
1½ to 2½ cu. ft., per pkg	25c	25c
2½ to 5 cu. ft., per pkg	50c	50c
Over 5 cu. ft., for every additional cu. ft. or fraction	—	10c
Oranges in bulk, per thousand	$1 60	$1 50
Lemons and limes in bulk, per M	$2	$1 50
Olives	Free	Free
Raisins	2c	2½c
Comfits, sweetmeats and fruits preserved, jellies	35 p c	35 p c
Fruits preserved in their own juices	20 p c	30 p c
Orange peel and lemon peel, preserved or candied	35 p c	2c
NUTS.		
Almonds, not shelled	5c	5c
Shelled	7½c	7½c
Filberts and walnuts, not shelled	3c	3c
Shelled	3c	6c
Peanuts, unshelled	1c	1c
Shelled	1½c	1½c
Nuts not specially provided for	2c	1½c
MEAT PRODUCTS.		
Bacon and hams	2c	5c
Beef, mutton and pork	1c	2c
Meats not specially provided for	25 p c	25 p c
Extract of, not specially provided for	20 p c	35c
Extract, fluid	15c	15c
Lard	2c	2c
Poultry, live	10 p c	8c
Dressed	25 p c	5c
Tallow	1c	1½c
Wool grease, including degras	½c	½c
MISCELLANEOUS PRODUCTS.		
Chicory root, prepared	2c	2c
Chocolate	2c	2c
Cocoa	2c	2c
Cocoa butter	25 p c	3½c
Dandelion root and acorns, substitutes for coffee	2c	1½c
SPIRITS.		
Anhydrous alcohol, per gallon	$1 00	$2 50
Brandy and spirits distilled, per gallon	$2 00	$2 50
WINES.		
Champagnes and sparkling wines in bottles from 1 pint to 1 quart, per doz	$7 00	$8
One-half pint to 1 pint, per doz	$3 50	$4
One-half pint or less, per doz	$1 75	$2
More than 1 quart, in addition, on quantity in excess, per gallon	$2 25	$2 50
Still wines in casks, per gallon	50c	50c
Ginger wine in casks, per gallon	20 p c	50c
Still wines in bottles, per case of 1 dozen quarts or 2 doz n half-quarts	$1 60	$1 60
Any excess found on such excess per pint	5c	5c
Cherry juice, prune wine, fruit juice, not containing more than 18 p c of alcohol, per gallon	20 p c	60c
More than 18 p c of alcohol, per gallon	20 p c	$2 50 25 p c
BAGS, TWINE, ETC.		
Binding twine of manila or sisal grass	—	7-10c
Of hemp	35 p c	2½c
Tarred	3c	3c
Hemp and jute carpets and carpetings, per square yard	6c	3c
Burlaps, flax, jute and hemp, except for cotton bagging	30 p c	1½c
Bags for grain, of burlaps	40 p c	2c
Cotton bagging, valued at 6c or less per square yard	1½c	1 6-10c
More than 6c per square yard	2c	1 8-10c

Wools.

All wools, hair of the camel, goat, alpaca and other like animals shall be divided for the purpose of fixing the duties to be charged thereon into the three following classes:

Class 1, that is to say, merino, mestiza, metz, or metis wools, or other wools of merino blood, immediate or remote down clothing wools and wools of like character with any of the preceding, including such as have been heretofore usually imported into the United States from Buenos Ayres, New Zealand, Australia, Cape of Good Hope, Russia, Great Britain, Canada and elsewhere, and also including all wools not hereinafter described or designated in Classes 2 and 3.

Class 2, that is to say, Leicester, Cotswold, Lincolnshire, down combing wools, Canada long wools, or other like combing wools of English blood, and usually known by the terms herein used, and also hair of the camel, goat, alpaca, and other like animals.

Class 3, that is to say, Donskoi, native South American, Cordova, Valparaiso, native Smyrna, Russian camel's hair (free), and including all such wools of like character as have been heretofore usually imported into the United States from Turkey, Greece, Egypt, Syria and elsewhere, excepting improved wool hereinafter provided for.

The standard samples of all wools which are now or may be hereafter deposited in the principal custom-houses of the United States, under the authority of the Secretary of the Treasury, shall be the standards for the classifications of wools under this Act, and the Secretary of the Treasury shall have the authority to renew these standards and to make such additions to them from time to time as may be required, and he shall cause to be deposited like standards in other custom-houses of the United States when they may be needed.

Whenever wools of Class 3 shall have been improved by the admixture of merino or English blood from their present character as represented by the standard samples now or here after to be deposited in the principal custom-houses of the United States, such improved wools shall be classified for duty, either as Class 1 or as Class 2, as the case may be.

The duty on wools of the first class which shall be imported washed, shall be twice the amount of the duty to which they would be subjected if imported unwashed; and the duty on wools of the first and second classes which shall be imported scoured, shall be three times the duty to which they would be subjected if imported unwashed.

Unwashed wools shall be considered such as shall have been shorn from the sheep without any cleansing—that is, in their natural condition. Washed wools shall be considered such as have been washed with water on the sheep's back. Wool washed in any other manner than on the sheep's back shall be considered as scoured wool.

The duty upon wool of the sheep or hair of the camel, goat, alpaca and other like animals which shall be imported in any other than ordinary condition or which shall be changed in its character or condition for the purpose of evading the duty, or which shall be reduced in value by the admixture of dirt or any other foreign substance, or which has been sorted or increased in value by the rejection of any part of the original fleece, shall be twice the duty to which it would be otherwise subject, provided that skirted wools as now imported are hereby excepted. Wools on which a duty is assessed amounting to three times or more than that which would be assessed if said wool was imported unwashed, such duty shall not be doubled on account of its being sorted. If any bale or package of wool or hair specified in this Act imported as of any specified class, or claimed by the importer to be dutiable as of any specified class, shall contain any wool or hair subject to a higher rate of duty than the class so specified, the whole bale or package shall be subject to the highest rate of duty chargeable on wool of the class subject to such higher rate of duty, and if any bale or package be claimed by the importer to be shoddy, mungo, flocks, wool, hair or other material of any class specified in this Act, and such bale contain any admixture of any one or more of said materials, or of any other material, the whole bale or package shall be subject to duty at the highest rate imposed upon any article in said bale or package.

	Old Rate	*New Rate.*
Wools and hair of the first class	10c	11c
Of the second class	12c	12c
Of third class, value 13c or less per pound	2½c	32 p c
Of third class, camel's hair, value 13c or less	Free	32 p c
Of third class, value over 13c	5c	50 p c

Wools on the skin shall pay the same rate as other wools, the quantity and value to be ascertained under such rules as the Secretary of the Treasury may prescribe.

The Sugar Bounty.

That on and after July 1, 1891, and until July 1, 1905, there shall be paid from any moneys in the Treasury not otherwise appropriated, under the provisions of Section 3689 of the Revised Statutes, to the producer of sugar testing not less than 90 degrees by the polariscope, from beets, sorghum or sugar-cane, grown within the United States, or from maple sap produced in the United States, a bounty of two cents per pound; and upon such sugar testing less than 90 degrees by the polariscope and not less than 80 degrees, a bounty of one and three-fourths cents per pound, under such rules and regulations as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, shall prescribe.

The producer of said sugar to be entitled to said bounty shall have first filed, prior to July 1 of each year, with the Commissioner of Internal Revenue, a notice of the place of production, with a general description of the machinery and methods to be employed by him, with an estimate of the amount of sugar proposed to be produced in the current or next ensuing year, including the number of maple trees to be tapped, and an application for a license to so produce, to be accompanied by a bond in a penalty, and with sureties to be approved by the Commissioner of Internal Revenue, conditioned that he will faithfully observe all rules and regulations that shall be prescribed for such manufacture and production of sugar.

The Commissioner of Internal Revenue, upon receiving the application and bond hereinbefore provided for, shall issue to the applicant a license to produce sugar from sorghum, beets or sugar-cane grown within the United States, or from maple sap produced within the United States, at the place and with the machinery and by the methods described in the application; but said license shall not extend beyond one year from the date thereof, and no bounty shall be allowed or paid to any person licensed as aforesaid in any one year upon any quantity of sugar less than 500 pounds.

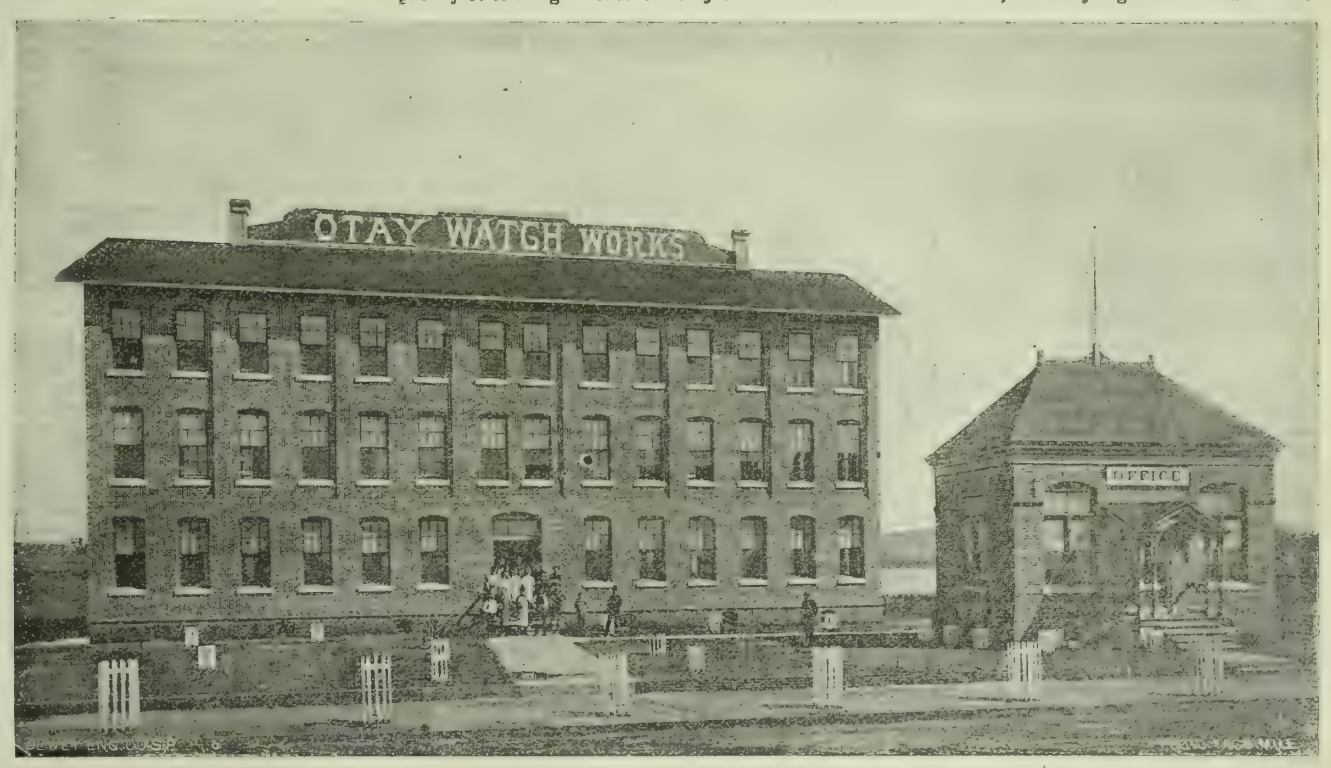
Tin Plate.

There shall be allowed on the imported tin plate used in the manufacture of cans, boxes, packages and all articles of tinware exported, either empty or filled with domestic products, a drawback equal to the duty paid on such tin plate, less one per cent of said duty which shall be retained for the use of the United States.

Breeding Animals

Any animal imported specially for breeding purposes shall be admitted free. Provided, that no such animal of the female sex shall be admitted free unless pure bred of a recognized breed, and duly registered in a book of record established for that breed.

Animals brought into the United States temporarily for a period not exceeding six months, for the purpose of exhibition or competition for prizes offered by any agricultural or racing association, free.



THE OTAY WATCH FACTORY, OTAY, SAN DIEGO COUNTY.

A Visit to the Otay Watch Factory.

EDITORS PRESS:—Leaving San Diego over the National City & Otay railroad, in a few minutes we reach National City (which I will describe in a future letter), and continuing, cross the rich valley of the Sweetwater. Here the N. C. & O. R. R. branches, one line going to the famous Sweetwater dam, the other to Tia Juana. Taking the Tia Juana line, we find ourselves a mile farther or ten miles from San Diego at Chula Vista. This in a few years will be one of the finest suburban towns in Southern California. Here are 5000 acres divided into 5-acre villa sites. The price of lots and cost of building as required by terms of sale preclude the possibility of an undesirable class settling here. The town is laid out on a beautiful stretch of land in full view of ocean and mountains, and is already well dotted with homes. Passing on three miles, we come to Otay, the home of the Otay Watch Co. By courtesy of Mr. P. H. Wheeler, the superintendent, I had the pleasure of seeing a California watch in all stages of its makeup from the crude material in the material-room to the finished watch ticking the tick of Otay. I give the following notes of the works, which, while brief, may be of interest to the PRESS readers:

The Otay Watch Works are situated in the flourishing young village of Otay, San Diego county, Cal. The works commenced building machinery a little over a year ago, and turned out their first watches May 17, 1890. The watch was a success from the very start, and it is truthfully said that it is the handsomest watch made in America, and for time it has no equal, thus speaking volumes for the great Pacific Coast. The watches may be found in all

jewelry stores in California, Oregon, Washington and Nevada. Many have been shipped to Yokohama, Japan. The factory is on a very successful basis, at this time carrying a surplus to its credit each month. It is said beyond question that this has been the most successful start that has ever been made in America. The factory is three stories high, built of fine red brick, 100 feet long, 40 feet wide, with office, boiler and engine rooms separate. Fine green lawns are laid out in front of main building, covered by growing tropical vegetation of all kinds.

The experts came from Eastern factories at Elgin, Ill.; Springfield, Ill.; Columbus, Ohio; Waltham, Mass. The factory is under the supervision of P. H. Wheeler, the superintendent, who is the originator and designer of the Otay watch and the patentee inventor of all the inventions in use by this company. The factory is equipped with the finest kind of modern machinery, and the departments are run by skilled experts of the highest order and most successful in the watch business in the United States.

The company at present employs over 90 people, and is constantly adding to the number. To Frank A. Kimball, general manager, may be given much of the credit of establishing the company on a solid basis. In its early days before the first wheel turned, the company having underestimated the size of the undertaking, scarcely knew whether to continue or to retire. In this predicament Mr. Kimball, with the same enterprise that has ever distinguished him, came forward and personally set the company on the solid footing it now enjoys.

Otay, Cal. J. B. H.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

A FRUIT CLEANUP.—Haywards *Journal*, Oct. 4: It is reported that W. C. Blackwood made a "ten-strike" on apricots this year, cleaning up from 20 acres something like $10,000, or about $500 an acre. We know a number who did well on pears, the Bartletts bringing them over $100 an acre, and still they say there is no money in fruit.

Colusa.

HONEY.—Colusa *Sun*, Oct. 4: Robert Alexander of Grand Island was in town Wednesday afternoon with a large load of honey, which he soon disposed of at very reasonable rates. He has about four tons to sell this fall.

Contra Costa.

SQUIRRELS AS GRAPE GATHERERS.—Martinez *Gazette*, Oct. 4: It is not the wheat-raisers alone, as has been demonstrated to the sorrow of orchardists and vineyardists, who pay heavy toll for the support of the vast army of squirrels that infest the agricultural portions of the State. Fruit and grapes are equally suited to their appetites, and they are not slow to help themselves extensively. H. Raap, near Martinez, has a vineyard of about 35 acres of six-year-old vines, which bore 60 tons of grapes this season. He harvested one-third; the squirrels had previously done the rest, and relieved him of the other 40 tons.

Fresno.

FRESNO'S RAISIN PACK.—*Expositor*, Oct. 1: T. C. White, the grower and packer, placed the total shipment at 1,000,000 boxes. In this estimate are included those shipped in boxes and those in sacks. The former will probably amount to 800,000 boxes, provided, of course, the weather does not change for the worse. At $1 50 a box, this would represent a value of $1,200,000—quite a respectable sum. I do not think this is an excessive estimate, for a large acreage came into bearing the first time this year, and the old vines and those planted a few years ago are more heavily loaded than they ever were before. The cheerful part of the whole business is that every berry has been placed; in fact, the pack will not supply the demand by a good deal. Yes, the raisins are being packed better this year, but there is still room for improvement in many cases. I have also observed that the shipments of dried grapes are considerably in excess of last year's shipments.

WINE VS. RAISIN GRAPES.—*Expositor*, Oct. 1: "It is a fact," said a gentleman connected with one of the largest wineries in the county, "that the immense number of grapes being dried will affect the vintage in this county to a considerable extent. The decrease in the acreage in wine grapes is another factor worthy of consideration. It is only natural that vineyardists will prefer to dry their grapes to selling them to a winery when they can get 3½ cents a pound for them, and just as natural is it that those who have wine grapes will replace them with raisin grapes when they see what a great difference there is between the profits from each."

THE DRIED FRUIT INDUSTRY.—Fresno, Sept. 30: Next year a number of the packing-houses which now put up raisins only will also pack and ship dried fruits. The industry gained quite an impetus this year and will become one of the most important in the county—indeed it is already such. The prices paid for dried fruit have been quite high and will always remain at a figure that will make the industry a profitable one. B. F. Whitmer, freight and ticket agent of the Southern Pacific Co., says that the shipments in carloads of green fruit, dried fruit, dried grapes and raisins up to date are as follows: Number of carloads of green fruit shipped, 138; dried fruit, 62 carloads; dried grapes, 78 carloads; raisins, 88 carloads.

DRYING GRAPES ARTIFICIALLY.—Selma *Irrigator*, Sept. 29: W. S. Sanders of Clifton has been traveling through the colonies to learn how to take care of his grape crop, and thinks he has found a solution of the problem. West of Fresno he found people putting their fruit into close rooms and heating the rooms by means of stoves. They raise the temperature to 90° and keep it there till the moisture is pretty well evaporated from the fruit, and then raise it to about 125°. Mr. Sanders says the colony people dry their fruit in this way, and he is going to try it. He has bought two stoves and will put one in each end of a room 18x18 feet, letting the pipe from each stove extend across the room and pass out at the opposite end.

Inyo.

HONEY SHIPMENT.—Bishop *Register*, Oct. 2: Henry Trickey expects to start Saturday for the East with a carload of honey, chiefly from his own apiary. Over ten tons of honey, all in pound sections, and nearly all first grade, will constitute the lot, and is destined to New York or Boston. This will be the largest single shipment yet made from this valley to any distant point.

Kern.

GOOD RETURNS.—Bakersfield *Echo*, Oct. 2: Lowell Bros. have received returns from the first carload of peaches sent East from their orchard. There were 1000 20-pound boxes in the car, and they were sold in New York at a figure that netted them $1008.41. Their crop from 15 acres amounts to 8000 boxes of shipping fruit.

Lake.

DOGS KILLING SHEEP.—Lower Lake *Bulletin*, Oct. 4: What is to be done for the protection of our sheep? Dogs have almost annihilated the sheep business in Lake county. Frank Hanson has lost between 250 and 300 head since last April, Mr. Stubbs has lost in proportion; so has Mr. Keatinge and D N. Hanson. Now all the ready money in the county is derived from wool and mutton. About eight or nine years ago the yield from those flocks of sheep, not to say anything of the rest of the sheep in the county, amounted to from 28 to 30 bales each yearly, and to-day the whole of them will not amount to any more.

Napa.

WAITING FOR RAINS TO PLOW.—Carneros Creek, Oct. 2: Our farmers are making preparations for winter and are patiently waiting for early rains. As soon as the ground can be plowed, many teams will be put to work. Much of our land has been resting for a year or two and ought to bear good crops another season, providing the Hessian fly does not visit us.

DAIRY FARM.—Carneros Creek, Oct. 2: B. H. Bentley has moved on to Jas. Dealey's dairy ranch near the tules, below Jas. Duhig's place. He will devote his attention to dairying for the next year or more.

DEMAND FOR FRUIT TREES.—Napa *Register*, Oct. 3: The supply will not equal the demand by a million trees, says Max Crow, book-keeper for Leonard Coates, nurseryman and fruit grower. The greatest demand, Mr. Crow says, is for French prunes, with peaches, plums and pears coming next in the order named. Growers in the southern portion of the State, principally in Los Angeles and San Diego counties, are the largest and most urgent buyers. The growing of deciduous fruits has proved such a success in the citrus-fruit country that many orchards are being set out there. The causes for the great demand of trees are the prevailing high prices for green and dried California fruits in the East, the scarcity of this year's crop, and the fact that many trees were killed by the rainy winter. In the vicinity of Vacaville and Winters, in some orchards not more than 10 per cent of the trees survived the ordeal. In Napa valley the loss was not so great, but all orchardists lost more or less heavily. Mr. Coates, however, lost only 200 trees out of 4500, and these were on low ground which could not be well drained. He attributes his good fortune to the fact that he plowed the orchard *to* the trees, leaving a furrow in the center of the rows, which drained the water away from the trees. The loss was chiefly to apricot and peach trees, which will not thrive in wet land.

Placer.

ONLY FOUR YEARS OLD.—Colfax *Sentinel*: Among the many fruit-raisers of Placer county who had a place in the Auburn pavilion last week was Mr. Gaylord, who has a ranch two miles south of Auburn. The fruit that occupied his space was principally oranges and pears, besides quite a number of black walnuts. In size and quality of the fruit there was none that could excel his in the pavilion. The reason that we are making special mention of this particular display is because we want to show that Placer county land is peculiarly adapted for fruit raising. Just four years ago Mr. Gaylord began to clear the undergrowth from the land where his ranch now stands. It was nothing but a thick mass of chaparral and poison oak. After getting it all cleared, he set out fruit trees of different kinds and planted from the seed some black walnuts. To-day many of the trees are from 20 to 30 feet high and are loaded down with fruit and nuts.

Sacramento.

FAST-HORSE NOTES.—*Record Union*, Oct. 6: Mention was made a couple of months ago of the fact that the young Electioneer stallion Alaska, on the Rancho del Paso, had trotted a mile in 2:20 on the home training track. In all probability Alaska will be given a record at the Breeders' meeting at Napa, and it is thought he will cut his record down considerably. Trainer McConnell went out to Rancho del Paso recently, and was so pleased with the looks of Albert W. that he asked John Mackey to let him take him for a few months and give him the mark he is entitled to. McConnell says 2:15 would not stop him. Mr. Reavis shipped Vic H. to Chico after the State Fair, and will not trot her again. She will be sent East at the head of the long string of Blackbirds, Monroe Chiefs, etc., that Mr. Reavis intends selling in New York this fall.

San Benito.

IRRIGATION CANAL WORK.—Hollister *Advance*, Oct. 3: The Irrigation Co. will shortly commence work on the branch canal leading northwest over the lands of Ladd, Nash, Gury and others. It is the intention of Mr. Gury to set out a large tract of land in alfalfa and fruit trees. The branch canal will run through the land of J. B Swan into the San Juan valley. Property-owners are waking up to the importance of the irrigation project to this county.

LAND FORFEITURE BILL.—Hollister *Free Lance*, Oct. 3: The Land Forfeiture bill has passed both houses of Congress, has been signed by the President, and is now a law. This will affect thousands of acres of land in this county. Filings will be received probably in about 60 days.

San Diego.

THE HONEY SEASON.—S. D *Union*, Oct. 2: The prospect for early fall rains is encouraging the apiarists to hope for a largely increased yield of honey next year. When the rainy season begins early, is fairly continuous, and falls until late in the spring, a large crop of honey results. This was the case in 1884, when 3,000,000 pounds were secured, the largest yield the county ever made. One of the head men in the business says that this year's crop will be but little over half that figure, or 1,750,000 pounds, which is 750,000 pounds greater than last year's crop. This season the northern part of the county is furnishing most of the honey—from San Jacinto, Fallbrook, Temecula, etc. This is because the hot weather did not have a chance to powder up the bee plants as it did in lower regions where the development was more advanced. The only section still making honey for this crop is around Campo, where the plants being at higher elevations, have matured later. Many who have honey to sell also are holding it for a better market, though prices have been good through the season.

WHEAT NOTES.—S. D *Union* Oct. 2: C. F. Smith, who for several years has been in charge of one of Senator Hearst's fine stock ranches at San Luis Obispo, has made arrangements to sow 4000 acres of wheat on the Pauba ranch, just east of Temecula. In the valley land on this ranch are about 5000 acres of level, rich soil. It is to be turned over and prepared for sowing by a large traction engine, which will move from 16 to 20 plows. The sowing of 4000 acres of wheat in one field will greatly increase the acreage of San Diego county. There seems to have been quite a revival in the wheat-growing industry of this county, and as a result there will undoubtedly be a large increase in the wheat shipments next year from San Diego. Mr. Spreckels this year commenced buying wheat with the intention of shipping one cargo to Liverpool from San Diego. He has been so successful in his purchases that instead of one he will send two cargoes from San Diego this year.

CHINESE PHEASANTS.—*San Diegan*, Sept. 29: An organization of sportsmen was formed Saturday evening for the purpose of introducing Chinese pheasants into this county. Chinese pheasants are about the size of Leghorn hens, and 400 or 500 pairs will be secured. Some time since pheasants were introduced in Northern California and Oregon, and reports show that the birds have increased and are becoming plenty. The experiment has even gone further, and the birds have been tamed and raised as domestic fowls.

Santa Clara.

ORCHARD ITEMS.—Los Gatos *News*, Oct. 3: Large additions will be made to acreage of orchards the coming winter. Especially is this true of French prune, which have no pests and are regular bearers. One year ago Col. Slaughter grafted 600 old peach trees with Silver prune scions. They have made a most remarkable growth and are far ahead of anything in the vicinity, having made the past season six to eight feet growth.

San Luis Obispo.

FARM NOTES.—"Pioneer" writes to the S L. O. *Tribune*, Oct. 3: J. B. Meacham lives about 18 miles above the town of Arroyo Grande, on the Arroyo Seco. He has watermelons by the hundreds, and such ones! Some of them would weigh between 40 and 50 pounds. I saw there a fine crib of corn raised this season. Close by the crib was growing some massive corn, tasseling out and silking, some 11 or 12 feet high, planted in June; also some broomcorn, the brush fully two feet in length. He gave me an apple he called a fall pippin that measured 10⅞ inches in circumference. There were peaches, apples, plums, apricots and prunes, all growing and flourishing. Never had had a drop of water and never needed it. In addition to the above are as fine and large blackberry vines as any that are grown in the county. I find the bean farmers very uneasy about the rain. They told me yesterday that the beans were not injured so far, and informed me that they have a good average crop.

San Joaquin.

CATTLEMEN PROSECUTE HUNTERS.—Stockton *Independent*, Oct. 3: A New Hope farmer says hunters are annoying stockmen of that section, and in self-protection land-owners will prosecute sportsmen as trespassers. Last week, men hunting on Sargent's land, near New Hope, stampeded a band of cattle, and some of the frightened animals ran into the Mokelumne river. Farmers on Staten island, opposite the Sargent ranch, pulled out several cattle, but it is known that a number floated down the river and were lost.

Solano.

ONION FARM.—Wheatland *Four Corners*, Oct. 4: John Scott informs us that the Granger Store garden will have 10 acres planted in onions in December. The plants are sprouting finely at this time.

Sonoma.

GRAPE-PICKING.—Sonoma *Index-Tribune*, Oct. 4: The rains of the past week have had a tendency to hurry up our vineyardists in gathering the grape crop. Last Wednesday it cleared up, since which time large gangs of grape-pickers can be seen in many of the vineyards. The early rains of last season destroyed the entire crop in many of our vineyards, while all suffered more or less. With last season's experience so vividly impressed on the minds of the grape-growers, it is safe to assert that with favorable weather the next two weeks almost the entire crop of wine and table grapes will have been gathered.

A FINE YOUNG ORANGE GROVE.—Sonoma, Oct. 4: Jas. McMackin, who resides at Shellville, a few miles south of Sonoma, has one of the thriftiest two-year-old orange groves that we have ever seen. The grove contains over 200 trees, the whole being irrigated from an artesian well to which is attached water pipes which lead up to the base of each tree, thus insuring thorough irrigation without waste of water.

THE VINTAGE.—Santa Rosa *Democrat*, Oct. 4: Grapes mature fully 15 days earlier at Cloverdale than elsewhere in this county. E. G. Farber, a well-known wine-maker, states that the grape crop this year is a full average in quantity, and better in quality. There are no losses from sunburn as last year. The quality is good, there being plenty of sugar for fermentation. About 1500 tons are being dried. These were engaged early at from $8 to $10 per ton. At present the prospect is for a very successful outcome of this venture, and it presages good for the future. Muscats are selling for $17 per ton, and the prices for other table grapes are $10 to $12. The parties who dry grapes in this portion of the valley are benefited by the large amount of saccharine matter that goes into sugar and increases the weight; consequently Cloverdale grapes should fetch good prices. In consequence of the quantities going into dried grapes, the wineries have no surplus and they easily handle the crop.

GOOD YIELD OF HOPS.—Santa Rosa *Republican*, Oct. 2: From 6½ acres of land, Anthony McPeak, who resides near Guerneville, has harvested 73 bales of hops. This is equal to about a ton to the acre.

Sutter.

ONE ACRE'S YIELD.—Y. C. *Farmer*, Oct. 3: We give the following figures of the yield of one acre in the orchard of G. F. Starr above Yuba City, for the season. The figures are correct, even if they do appear large. From 100 peach trees of the Salway and George's Late varieties, planted on one acre, Mr. Starr received 273 pounds of peaches to the tree, making 27 300 pounds, which were sold to the cannery for 3¼ cents per pound, making the receipts for the acre $887.25.

Tehama.

SEEDING GRAIN.—Red Bluff *People's Cause*, Oct. 4: Farmers are busy putting in their grain. Warned by last year's experience, they intend this year to be ready for wet weather, whether it comes or not. Last year hardly any had all their grain sown, and a great many were without wood part of the time, though it was growing around them.

STOCK NOTES.—Red Bluff, Oct. 4: Most of the farmers are disposing of their hogs, although at not very remunerative prices. Shearing is nearly over. The wool is fully up to the average.

Tulare.

VOLUNTEER GRAIN.—Visalia *Times*, Oct. 2: The late rains will undoubtedly cause the grain now lying in the ground to sprout, and should a dry spell of considerable duration ensue, the sprouted grain will then die out. This would probably work no detriment to the farmer, as it is only about one time in ten that a volunteer crop proves of enough value to pay for cutting and sacking it.

Yolo.

TREE PLANTING.—Woodland *Mail*, Oct. 4: It is good to begin the preparing of the ground for transplanting trees and to do it thoroughly. If it is done in a careless manner, the trees will make but a feeble growth and you will think orcharding a failure. If the trees are to be set in the ground that is too rough to plow and cultivate, dig the holes at least five feet square, remove the turf and pile on one side, also remove all stones and trench the soil thoroughly to at least a foot and a half, and throw it into the center in the shape of a cone, so that the frost cannot penetrate it during the winter.

State Fair Awards.

The following awards, made at the State Fair lately held at Sacramento, are of special interest to stockmen, farmers, and horticulturists:

County Exhibits

Sacramento county, 1st premium ($500 cash); Colusa, 2d; Humboldt, 3d; Yolo, 4th.

Horses.

THOROUGHBRED STALLIONS.—4 yrs old & over, 1st premium, Prince of Norfolk, W. B. Todhunter, Sac.; 2d, Imp. Cheviot, W. G. Ross, S. F.; 3 yrs old, 1st, Flambeau, L. Stanford; 2 yrs old, 1st, Power, Wm. Murry, Sac.; 2d, Aristocrat, same; 1 yr old, 1st, sorrel colt, Wm. Murry; 2d, Laurelwood, W. L. Appleby, Sac.; colts under 1 yr, 1st, bay colt by Hidalgo, C. Halverson, Routiers; 2d, Golden Eagle, W. F. Smith, Sac.

MARES.—4 yrs old & over with suckling colt, 1st, Maggie S., C. Halverson; 2d, Nellie Fashion, Mrs. Alice Cutter, Sac.; 4 yrs old & over, 1st, Isabella, C. Halverson; 2d, Annie Laurie, W. F. Smith; 3 yrs old, 1st, Minuet, L. J. Rose, San Gabriel; 2d, Fabiola, C. Halverson; 2 yrs old, 1st & 2d, fillies by Hindoo, L. J. Rose, San Gabriel; 1 yr old, 1st, Blondinette, W. F. Smith; 2d, filly by Pat Malloy, L. J. Rose.

STANDARD TROTTERS.—Stallions—4 yrs & over, 1st, Eros, F. H. Burke, Menlo Park; 2d, Clay Duke, J. W. Martin, Woodland; 3 yrs, 1st, Falrose, F. P. Lowell, Sac.; 2d, Proof-reader, Dr. Hicks, Sac.; one yr old, 1st, Saucelito, La Siesta Ranch; 2d, Kebir, W. F. Smith.

MARES. — 4 years & over with skg colt, 1st, Oleta & colt, F. H. Burke; 2d, Pansy & Sarge, W. F. Smith; 4 yrs & over, 1st, Sylvia, & 2d, Lady Grosvenor, E. Topham, San Jose; 1 yr old, Luck, F. H. Burke; 2d, Remora, W. F. Smith; skg colt, 1st, Abacca Wilkes; J. P. Callundan, Sac.

NORMANS, PERCHERONS AND CLYDESDALES.—Norman st, 4 yrs & over, 1st, Beaufort, J. P. Rodehaver; 2d, Des Champs, same; Percheron st, 4 yrs & over, 1st, Utile, Voorhies & Barney; 2d, Cinq Mars, Geo. McElroy; Per st, 3 yrs, 1st, Oregon, & 2d, On Siso, J. C. Smith, Oakland; Per st, 2 yrs, 1st, Magnet, J. C. Smith; Per st, 1 yr old, 1st, Harrison, Voorhies & Barney; Per st, under 1 yr, 1st, Prince A., & mare, 4 yrs & over, with colt, 1st, Perinette & colt, Voorhies & Barney; P. m, 4 yrs old, 1st, Laura; 2d, Theresa, & 1st, P. m, 1 yr old, Maud, J. C. Smith; 1st, P. m, under 1 yr, 1st, Princess A., Voorhies & Barney; Clydesdale st, 4 yrs & over, 1st, Prince, John Coakley; 2d, Black Champion, C. W. Bennett; C. st, 3 yrs old, 1st, Douglas Dale, Stoddardt & De Gomez; C. st, 2 yrs old, 1st, Plunger, John Coakley; C. st, under 1 yr, 1st, Clyde Boy, T. A. Neeper; 2d, Annodale, C. W. Bennett; C. mare, 4 yrs & over, 1st, Queen, Henry Pierce, S. F.; 2d, Blanche, same; C. m, under 1 yr, 1st, Adelaide, C. W. Bennett; 2d, Addine, same.

DRAFT HORSES, (OTHER THAN PERCHERONS, NORMANS AND CLYDESDALES.)—Stallions—3 yrs old, 1st, Franklin, H. Ehrhardt; 2d, Birney, R. J. Merkeley, Sac.; 2 yrs old, 1st, Lothair 4th, Parsons & Griffith; 2d, Prince, Geo. McElroy; 1 yr old, 1st, California Tom, Parsons & Griffith; under 1 yr, 1st, Blarney, W. J. Prather.

MARES —4 yrs & over, 1st, Lady B., Parsons & Griffith; 2d, Lady Lomond, same; 4 yrs old, 1st, Fanchon, R. J Merkeley; 2d, Langtry, Parsons & Griffith; 3 yrs old, 1st, Puck, F. N. Midgley; 2d, Black Bess, R. J. Merkeley; 2 yrs old, 1st, Queen, R. J. Merkeley; 2d, Estredo, J. B. Harris; 1 yr old, 1st, Mollie (black), R. J. Merkeley; 2d, Mollie (gray), F. W. Midgley.

ROADSTERS.—Stallions—4 yrs & over, 1st, Somerset Prince, C. H. Carson, Lodi; 2d, Comet, J. R. Jacobs, Knight's Landing; 3 yrs old, 1st, Duke Cameo, A. Herold, Sac.; 2d, Belvidere, Matt. Storn, Sac.; 2 yrs old, 1st, Willard Wilkes, J. B. Ramsey, Meridian; 2d, Sid, W. F. Smith; 1 yr old, Wood Vernon, J. A. McCloud, Stockton; 2d, Hickorynut, E. Pickett, Elk Grove; skg colt, 1st, Douglas, B. C. Harris, S. F.; 2d, Chico, R. McEnespy, Chico; gelding, 1st, Little Phil, G. C. McMullen, Sac.; 2d, Dexter, W. Gardiner, Sac.

MARES.—4 yrs & over with skg colt, 1st, Lena Bowles, B. E. Harris; 2d, Juno, A. D. Miller, Walsh's Station; 4 yrs old & over, 1st, Belle Patchen, W. J. Irvine, Sac.; 2d, Maid of Killarney, Miss N. J. Ryan, Sac.; 3 yrs old, 1st, Marina, W. F. Smith; 2d, Adiba, T. C. Snider, Sac.; 2 yrs old, 1st, Daisy Vernon, J. A. McCloud, Stockton; 2d, Hattie Vernon, same; 1-yr old, 1st, Sidena, B. F. Harris; second, Rose, J. C. Perkins, Perkins; skg colt, H. S. Beals, Sac.

CLEVELAND BAYS AND FRENCH COACH.—Stallions, 4 yrs & over, Lord Huntington, W. J. Prather, Fresno; 3 yrs old, 1st, Loyalty, Wm. Wilkinson, Fresno; 2d, Scamper Swell, W. J. Prather.

MARES —4 yrs & over with colt, Rose Leaf, W. J. Prather; 4 yrs old & over, 1st, Queenie, Prather; 2d, Phantom, Wilkinson; 3 yrs old, Rellington Lassie, Prather.

CARRIAGE TEAMS.—Matched span, owned and used as such by one person, 1st, Jas. McNasser, Sac.; 2d, E. M. Leitch, Sac.

ROADSTER TEAMS. — Double-team roadsters owned and used as such by one person, 1st, J. H. Barnard, Chico; 2d, A. L. Nichols, Chico.

HORSES OF ALL WORK.—Stallions—4 yrs & over, 1st p. C. Patchen, C. Kincaid, Davisville; 2d, Davie Crockett, W. Ober, Sac.; 3 yrs old, 1st, Selby, J. Heintz, Sac.; 2d, Hugo, B. C. Harris; 2 yrs old, 1st, Tom Shields, J. B. Ramsey, Meridian; 2d, Selmi, J. Heintz, Sac.; 1 yr old, 1st, Hamilton, B. M. Lovejoy, Perkins; 2d, Stockton Vernon, J. A. McCloud, Stockton; under 1 yr, 1st, Colonel, B. M. Lovejoy; 2d, Donald Card, G. Lessner.

MARES.—4 yrs & over with colt, 1st, Flora, B. M. Lovejoy; 2d, Colley, H. H. Wilson, Rocklin; 4 yrs & over, 1st, Luella, A. D. Miller, Walsh; 2d, Daisy, W. M. McIntosh, Roseville; 3 yrs old, 1st, Nellie, A. D. Miller, 2d, Nell, H. H. Wilson; 2 yrs old, 1st, Alice Vernon, J. A. McCloud; 2d, Lucy C., B. Harris, Nicolaus; 1 yr old, 1st, Ella B., G. Lassner, Freeport; 2d, Orphan Girl, G. Lassner; skg colt, 1st, Bessie, Voorhies & Barney; 2d, Flora, H. H. Wilson.

FAMILIES.—Best thor'bred dam, with 2 colts, all thor'bred, Maggie S and colts Isabella, Friablo & Daniel S, C. Halverson, Routiers; best stallion, other than thor'bred, with 5 colts, Director & 7 colts, Pleasanton Stock Farm; 2d best, Eros and 5 colts, La Siesta Ranch; best dam, other than thor'bred, with two colts, Lady Nutwood & 4 colts, E. Topham, Milpitas; 2d best, Brown Jennie & 3 colts, J. H. McCord, Sac.

SADDLE HORSES.—1st, J. D., J. M. Dixon; 2d, E. A., Ed. Bridgford, Colusa.

SWEEPSTAKES.—Stallion, Kebir (1 yr), W. F. Smith, Sac.; mare, Sidena, B. E. Harris, S. F.

Jacks, Jennies and Mules.

JACKS.—4 yrs & over, 1st, Alfonso, H. W. Jeans; 2d, Black Jeff, Chas. Studarius; 3 yrs old, Longfellow, E. S. Driver; 1 yr-old, Moses, J. H. Harlan.

JENNIES.—4 yrs & over, Laura, C. Studarius; 1-yr-old, Belle, same.

MULES.—Matched span, 3 yrs & over, California bred, 1st, Pet & Mell, H. H. Wilson; 2d, Sally & Beck, H. W. Jeans; skg, C. Studarius.

Cattle.

DURHAMS.—1st, 28th Duke of Gloster, Heilbron Bros., Sac.; 2d, 26th Kirklevington of Forest Home, C. Younger & Son, San Jose. Bulls—2 yrs & over, 1st, 44th K. of F. H., Younger & Son; 2d, Cavalier, James Jones, Pleasant Grove. 1 yr old, 1st, Manemga Duke, P. Peterson, Sites; 2d, 2d Duke of Wild Flower, Heilbron Bros.; b calf, 1st, Heilbron Bros.; 2d, P. H. Murphy, Brighton. Cows—3 yrs & over, 1st, 21st Rose of F. H., Younger; 2d, Hattie, P. S Chiles, Davisville; 2 yrs old, 1st, Bonnie Belle 6th, Younger; 2d, 3d Rosoly K., P. Peterson; 1 yr old, 1st, Duchess of Wild Flower, Heilbrons; 2d, Jessie Maynard 6th, Younger; h calf, 1st, Lady Alice, P. H. Murphy, Brighton; 2d, 5th Duch. of Aberdeen, Heilbrons.

JERSEYS AND GUERNSEYS.—Bulls—3 yrs & over, 1st, King of Y. B., W. C. Smith, Florin; 2d, Duke of Alameda, S. A. Hoxby, Alameda; 2 yrs old, 1st, Alameda Chief, T. Ward, Oakland; 1 yr old, 1st, Bob Mercury, L. F. Eaton; 2d, Onandago, T. Ward; calves, 1st & 2d, W. C. Smith. Cows—3 yrs & over, 1st, Queen of Sacto, W. C. Smith; 2d, Bonita, T. Ward; 2 yrs old, 1st, Lady Wells, P. Stanton, Sac.; 2d, Nona of Florin, W. C. Smith; 1 yr old, 1st, Maud S. of Florin, W. C. Smith; 2d, Xariffa Baker, L. F. Eaton; h calf, 1st, Frankie Baker, L. F. Eaton; 2d, My Own, P. Stanton. Herds—Best herd of thoroughbred Jersey or Guernsey cattle, 1 male and 4 females, W. C. Smith; young herd under 2 yrs, F. L. Eaton. Sweepstakes—Best bull any age, King of Y. B., W. C. Smith; best cow any age, W. C. Smith.

DEVONS.—All awards (bulls, cows, herd and sweepstakes) to R. McEnespey, Chico, except one, viz., for best 3-yrs-and-over bull, Landin Duke, Boon Jones, Chico.

AYRSHIRES.—All (11) awards to Geo. Bement & Son.

HEREFORDS.—All (11) awards to Heilbron Bros.

HOLSTEIN-FRIESIANS.—Bulls—3 yrs & over, 1st, Egmond Pride, G. B. Polhemus; 2d, Mousell, T. B. Hall, Sac.; 1 yr old, 1st, Fanjo 2d Pride, Polhemus; 2d, Troy Sedro, F. H. Burke, Menlo Park; b calf, 1st, Model of Bonnie Brae, Bonnie Brae Cattle Co., Hollister; 2d, Sam Rucker, Polhemus. Cows—3 yrs & over, 1st, Anna Egmond, & 2d, Autocrat Poel, both Polhemus; 2 yrs old, 1st, Aggie Leila 2d Precious & 2d, Bontie Lincoln 2d, both Burke; 1 yr old, 1st, Alexia 2d, T. B. Hall, Sac.; 2d, Dominita of Bonnie Brae, B. B. Co.; h calf, 1st, Tryntje Lincoln 4th, Polhemus; 2d, Bonita of Bonnie Brae, B. B. Co.; herd, 1st, Polhemus: herd under two years, T. B. Hall, Sac.

ANGUS OR GALLOWAYS.—Bulls—3 yrs & over, 1st, Kier's Knight, J. E. Camp, Perkins; 2d, Wanda, W. B. Gibson, Woodland. 2 yrs old—1st Brilliant, Dr. G. M. Dixon, Sac. 1 yr old—1st, Wanda 4th, W. B. Gibson; 2d, Egbert Laird, J. E. Camp. B calf—1st, Nero of Argonaut, Dr. Dixon; 2d, Pacto, same. Cows—3 yrs & over—1st, Coquette 2d of Lake Forest, Dr. Dixon; 2d, Nevada, W. B. Gibson. 2 yrs old—1st, Lady Whitmore; 2d, Lady Melve, both Dixon. 1 yr old—1st, Dorcas of Argonaut Dixon; 2d. Gretchen Hass, J. E. Camp. H calf—1st, Annie Unice, Gibson; 2d, Lady of Brighton, Camp. Herd—Best herd of thoroughbred Angus or Galloway cattle 1 male and 4 females, J. E. Camp, Perkins. Sweepstakes—Best bull, any age—Wanda, W. B. Gibson. Best cow, any age—Coquette 2d of Lake Forest, Dr. Dixon.

GRADED COWS.—3 yrs old—Gilley Flower, R. Ashburner; 2 yrs old, Pauline, Younger; 1 yr old, Fawn, S. Tryon; h calf, Margery, R. Ashburner.

HERD SWEEPSTAKES.—Beef Breed—best herd, 1 bull and 4 females of the following ages: 4 yrs old or over, 3 yrs old, 2 yrs old, 1 yr old, 1st premium, Younger & Son.

MILK BREEDS.—Best herd, 1 bull and 4 females of the following ages: 4 yrs old or over, 3 yrs old, 2 yrs old, 1 yr old, Polhemus.

Sheep.

SPANISH MERINOS.—All (7) awards, for rams, ewes & lambs, to F. Bullard, Woodland.

FRENCH MERINOS.—All (7) awards to J. H. Glide, Sac.

SHROPSHIRES.—Ram, any age, 1st & 2d, J. H. Glide, Sac.; pen of ewes (5), any age, A. Smith, Redwood City; ram and 5 lambs, 1st, Royal Duke of California 2d, and 5 lambs, A. Smith; 2d, Jumbo and 5 lambs, J. H. Glide; 3 ram lambs, 1st, Smith; 2d, Glide; pen of 5 ewe lambs, 1st, Smith; 2d, Glide.

Angora Goats.

THOROUGHBREDS.—Buck, 2 yrs & over, 1st, Gov. Helm, Jr., J. H. Harlan; 2d, Soledad, C. P. Baxter; buck under 2 yrs, 1st, Oasis, J. H. Harlan; 2d, Mariposa, C. P. Bailey; pen of 3 does, under 2 yrs, 1st, Bailey; 2d, H. H. Harlan.

GRADED.—Pen of 3 does, 2 yrs & over, H. H. Harlan; pen of 3 does, under 2 yrs, same.

HERD.—Herd, not less than 10, any age or breed, 1st, J. H. Harlan; 2d, C. P. Bailey.

Swine.

BERKSHIRE.—Boars—2 yrs & over, 1st, A. Smith; 2d, J. Waite; 1 yr old, 1st, Smith; 2d, Waite; 6 mos. old, 1st, Waite; 2d, Smith. Sows—breeding sow 2 yrs old, 1st, Waite; 2d, Smith; 1 yr & under 2 yrs, 1st & 2d; also 6 mos. old & under 1 yr, 1st & 2d; also sow and 6 pigs under 3 mos., 1st & 2d; also pair of pigs under 6 mos., 1st & 2d, A. Smith. Sweepstakes—Boar, any age, Smith; sow, any age, Waite; pen of 6 pigs under 6 mos., & family, A. Smith.

ESSEX.—All (7) awards to Geo. Bement & Son.

POLAND CHINA.—Boars—2 yrs & over, J. Melvin, Davisville; 1 yr & under 2 yrs, 1st, Smith; 2d, Melvin; 6 mos. old & under 1 yr, 1st, Smith; 2d, P. H. Murphy. Sows—2 yrs & over, 1st, A. Smith; 2d, J. Melvin; 1 yr old & under 2, 1st, Melvin; 2d, Smith; 6 mos. old & under 1 yr, 1st & 2d, Melvin; sow & 6 pigs, Smith; pair of pigs, 1st, Melvin; 2d, Smith. Sweepstakes—Boar any age, Smith; sow any age, Melvin; 6 pigs under 6 mos, Smith; family, Melvin.

Poultry.

FOWLS.—Light Brahmas—Cock and hen; breeding pen, 1 male, four females, T. Waite; cockerel & pullet, C. J. Cox. Dark Brahmas—3 premiums, E. H. Freeman. Langshans—3 premiums, G. E. Duden. Buff Cochins—ck & hen; breed pen, C. J. Cox; ckrl & plt, T. Waite. Partridge Cochins—3 prems, E. H. Freeman. Plymouth Rocks— 3 prems, E. H. Freeman. Black Leghorns—3 prems, C. J. Cox. Brown Leghorns—ck & hen, T. Waite; ckrl & plt, b pen, C. J. Cox. White Leghorns—ck & hen, b pen, E. H. Freeman; ckrl & plt, C. J. Cox. W. F. Black Spanish—ck & hen, ckrl & p, T Waite; b pen, G. E. Duden. Houdans—ck & hen, E. H. Freeman; ckrl & p, T. Waite. Silver-Spangled Hamburgs—ck & hen, b pen, C. J. Cox; ckrl & p, T. Waite; best ck & hen, C. J. Cox. Polish—3 prems, T. Waite. Wyandottes—3 prems, E. H. Freeman. Seabright Bantams—E. H. Freeman. B. B. R. Game Bantams—ck & hen, T. Waite; b pen, E. H. Freeman.

TURKEYS —Pair Bronze turkeys, T. Waite.

GEESE.—Pair Toulouse geese, P. Stanton.

DUCKS.—Rouen ducks, T. Waite; Pekin ducks, 1st, T. Waite; 2d best, E. H. Freeman.

GUINEA FOWLS.—Best pair, T. Waite, 2d best, E. H. Freeman.

Farm Products.

GRAIN, SEEDS, ETC.—Best sample Australian wheat, not less than one sack, C. Studarius, Routiers; 40 sheaves grain, sample Sonora wheat, do small white club wheat, do Proper wheat—all to W. H. Jones, Colusa; sack yellow corn, Acusa, Camp Grant; sample timothy, do mesquit grass, do orchard grass seed, John Miller, Rohnerville; sack oats, J. W. Oliver, Alton; box garden seeds (40 var.). Mrs. Geo. Muddox, Sac.; sk barley, W. S. Shaffer, Union House; display of millet, J. Hamilton, Sac.

VEGETABLES, ROOTS, ETC. — Crooked-neck squashes, C. Studarius; licorice root, Isaac Lee, Florin; Hubbard squashes, Centennial potatoes & cucumbers, M. Mento, Sac.; pumpkin, P. H. Murphy, Perkins; cantaloupes, A. A. Krull, Sac.; red potatoes, sweet potatoes, long blood beets, drum head cabbages, red Dutch cabbage, cauliflower, broccoli, lettuce, celery, Lima beans, white dry beans, kidney beans, pole beans in pod, field peas dry, garden peas dry, castor-oil beans, best and greatest variety of peas dry & table collection vegetables—all to F. Grabrielle, Sac.; white potatoes, parsnips, carrots, sugar beets, white onions & yellow onions—all to Chauncey Langdon, Rohnerville; mountain sweet watermelon, watermelons, any other variety, salsify, turnip beets, purple egg plants, ears sweet green corn, Morrow squashes, peppers for pickling & tomatoes—all to Bowden & Burkey, Colusa.

Miscellaneous.

BUTTER.—Humboldt Creamery, 1st; Alton Creamery, Humboldt Co., 2d. Fruit trees, Ingleside Nursery Co., Sac. Cayenne peppers, Joe Tash, Sac. Dried tomatoes, J. P. Odbert, Sac. Lard, royal brand, W. S. Merry, S. F. Gen. display lard, Mohr & Yoerk, Sac. California cotton, Sylvester Tryon, Sac. California Cotton Mills, East Oakland, display towels and table-cloths, dressed flax, cloth of flax cotton, linen sack twine, Cal. manufacture, kersey, cotton duck and toweling, Cal. manufacture, stocking yarn, carpet warp. Cocoons, W. B. Ewer, National City. Ramie plant, W. H. Murray, S. F. Olive oil, Mrs. E. Roberson, Auburn. Blackberry cordial, J. P. Odbert, Sac. M. J. Bobo, veterinary medical chests. L. A. Box Co. fruit baskets. C. T. Bailey, San Jose, Angora goat robes. H. H. Harlan, Venado, mohair mats. Berry and vegetable wine, Mrs. Geo. Muddox, Sac. Apple cider, S. Martinelli, Watsonville. Honey vinegar, glutena, horse hair, and canned fruits, W. H. Jones, Colusa. Sugar made from sugar beets, sugar made from cane and syrup made from either above-named articles, W. H. Murray, S. F.

Ladies' Tournament.

Prizes for the ladies were awarded as follows: 1st; Miss LeMay; 2d, Mrs. J. M. Collier; 3d, Mrs. B. C. Trefry; 4th, Miss Grace Dixon; 5th, Miss May Foss; 6th, Miss Anna Kemler; 7th, Mrs. W. A. Stephenson; 8th, Miss Laura Aubertus.

Prizes for misses were arranged as follows: 1st & 2d divided between Miss Effie Klemp and Miss Bradley; 3d, Mabel Fay, aged ten years; 4th, Bessie Quarrels; 5th, Miss Logan.

A special extra prize offered for expert riding, was won by Miss LeMay, winner of the tournament prize.

Fruits, Grapes, Nuts, Etc.

GREEN FRUITS.—Best display & variety of pears, do of apples, A. Hansell & Sons, Camp Grant; 2d best display apples, J. B. Smith, Camp Grant; best display & var peaches, G. W. Threlkel, Newcastle; 3d disp & best var pears, J. P. Odbert, Sac.; 3 kinds green figs, & 2 kinds quinces, J. P. Odbert, Sac.; disp pears, E. L. Hawk, Rocklin; disp peaches, Geo. Perkins, Newcastle; box Sicily lemons, Geo. Rich, Florin; 2 var peaches, Mrs. E. Shields, Routiers; disp figs, R. Greer, Sac.; Silverskin prunes & Winter Nelis pears, Dr. Manlove, Perkins; Freestone seedling peaches & Tragedy prunes, J. L. Stubbs, Sac.; Jap persimmons, A. A. Krull, Sac.; pomegranates, Jos. Sims, Union House.

HONEY, PRESERVES, ETC. — Strawberry jelly, Mrs. F. T. Robinson, Florin; fruit in glass, pickles, jams in glass, black currant jelly, seedless blackberry jam, raspberry jam, Mrs. J. P. Odbert, Sac.; quince jelly, blackberry jam, 2d disp jams & jellies, in glass, honey, Mrs. Geo. Muddox, Sac.; red currant jelly, blackberry jelly, C. Langdon, Humboldt.

DRIED AND PRESERVED FRUITS, NUTS, ETC.—Dried pears, J. E. Clanton, Sac.; bleached figs, unbleached figs, E. B. Beecher, Auburn; dis dried pears, J. P. Odbert, Sac.; dried raspberries, A. Hansell & Sons, Camp Grant; 4 kinds prunes, Mrs. E. Shields, Routiers; wash for trees, Calton Bell, S. F.; soft-shell almonds, Isaac Lee, Florin; disp same, R. Greer, Sac.

GRAPES AND RAISINS.—Display of Thompson's seedless grapes, J. P. Onstott, Yuba City; table grapes, 6 var wine grapes, 1 var wine grapes and grape syrup, Mrs. Joseph Sims, Union House; gen display Muscatel raisins, E. J. Clanton, Woodland; best var table grapes, P. H. Murphy, Perkins; 3 var table grapes, James Harris, Roseville; 6 var table grapes, J. M. Davis, Florin; display Muscatel raisins, J. P. Odbert, Sac.; 6 var table grapes, general display of grapes by the producer and 1 var of wine grape, E. L. Hawk, Rocklin; 6 var table grapes, 3 var wine grapes, Rob. Greer, Sac.; display and var of grapes, Dr. Manlove, Sac.

BRANDIES AND WINES.—H. W. Crabb, Oakville, Napa county, 8 premiums.

FLOWERS AND PLANTS.—Best and largest collection of flowering plants in bloom, coll ornamental foliage plants, display of cut flowers, coll new and rare plants, display colens in vat, roses in bloom, fuchsias in bloom, tube-roses, ferns, bouquets, coll plants for greenhouse conservatory, hanging baskets containing plants, pinks, Bell Conservatory, Sac.

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The Whole Country Needs Fertilization

ADMONITION TO FARMERS!

GUAYMAS, MEXICO, September 9, 1890.

R. B. CUNNINGHAM, ESQ., Agent Mexican Phosphate and Sulphur Company—DEAR SIR: In answer to your inquiries as to the value of phosphates for worn-out lands, I will state that it is my opinion the lands of the older settled portions of California afford a good field for the use of phosphates. These lands have been cropped for years without any restoration of the chemical constituents necessary for an abundant crop. They therefore show plainly that they need assistance artificially to produce crops good in quantity and quality, let the crop be whatever it may.

Take, for instance, San Joaquin and Santa Clara valleys, and what do you see? Many crops that are so imperfect in quantity and quality that the eye at once detects the defect. The only relief that can be resorted to must be infused into the soil to replace the chemical properties that have been extracted by previous crops, and the writer is of the opinion that a liberal supply of phosphates will accomplish this.

The attention of the cultivators of the soil is sharply turned to rotation of crops, hoping thereby to get wealth out of their lands without fertilization. Some have turned their attention to beet cultivation in soil worn out by other crops. Beet or other seeds will not grow successfully unless the soil will nourish them.

This summer I saw several crops of beets on excessively cropped lands, the majority of which showed that there was something wanting to complete the plants to ample size and in quantity that should be expected of sugar beets under favorable circumstances. If a good crop is not obtained, there is deficiency in profit. It costs as much to cultivate soil deficient in chemical properties as it does if ample nutrition was in the soil. Under the former condition a deficient crop is certain, while under the latter condition he may reasonably expect an ample crop with profit.

Fields often are allowed to go to weeds, supposing thereby to enrich the soil. This is an uncertain method and not profitable. Your weeds have grown up and seeded; the dead stems can only add a limited addition to fertilize the soil, while the seeds of the same will cause much expense to exterminate them from the future crops. Besides, while thus only weeds as a crop, no profit was realized, while if a supply of phosphates had been applied to the soil, a profitable crop of beets or corn would be had. Besides, the weeds would have been exterminated during the cultivation of the said crop. I am, Sir, your obedient servant,

EDWARD PALMER, M. D.

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Potash	9 to 10 "	2 "	5 to 6 "
Ammonia	3 to 4 "	2 "	3 to 4 "

And will sell in lots to suit.

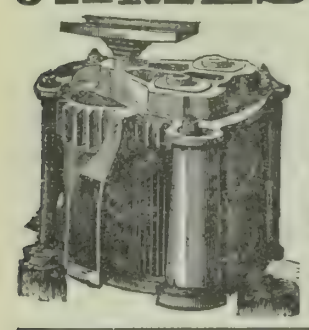
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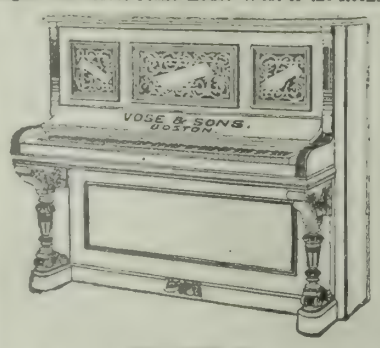
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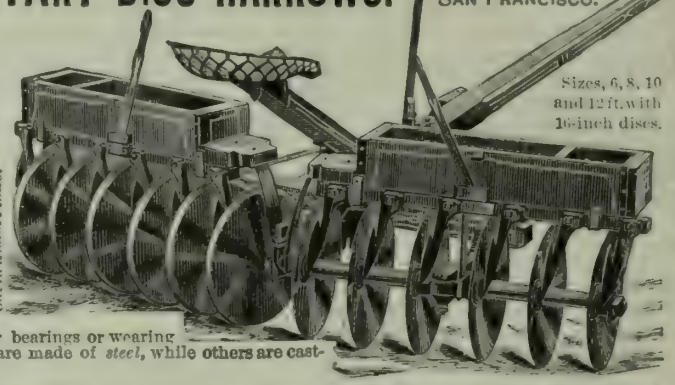
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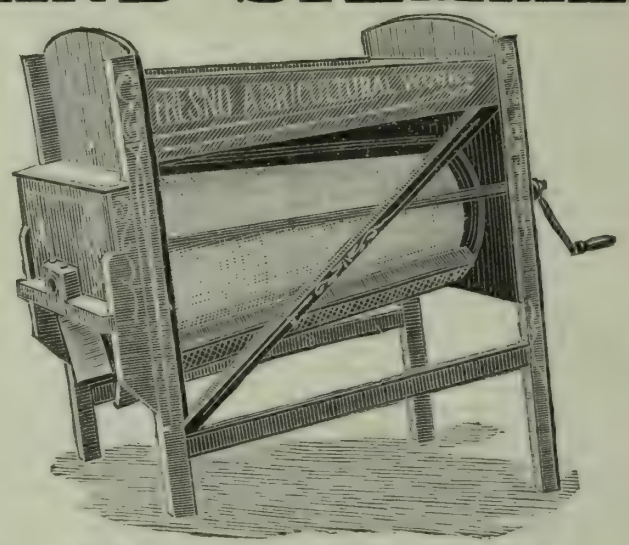
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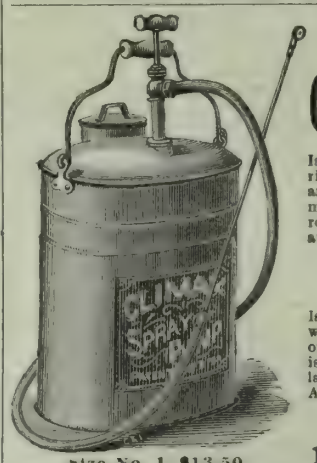
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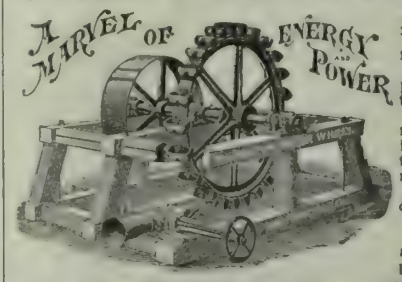
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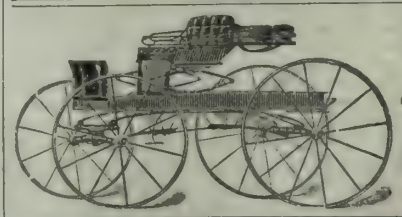
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HORTICULTURE.

State Horticultural Society.

The September meeting was held on the 26th in the elegant new Assembly hall of the State Board of Horticulture adjoining the offices of this body at 220 Sutter street. Secretary Lelong has shown a praiseworthy appreciation of public needs in securing this excellent place where all meetings of horticulturists may be held, and he has shown good taste in fitting it up.

At the meeting on the 26th, President Hilgard occupied the chair. Alexander Craw, the new Quarantine Guardian of the State Board, and E. W. Maslin, the well-known fig grower of Placer county, were proposed for membership.

Mr. James Shinn of Niles exhibited specimens of the following apples: Lawver, Walbridge, Minister, White Pippin and Stark apples, which were examined. John Rock of the California Nursery Co. showed good samples of the Fox seedling pears—Col. Wilder, B. S. Fox and P. Barry. Joseph Sexton showed his new apple, "Sexton's Seedling," a handsome pure yellow with red cheek, crisp and delicious fruit, which was greatly admired. Dr. Gibbons of Alameda showed a seedling peach originating on his place.

As the October meeting is the annual meeting, the following nominations for offices to be filled at that time were made as follows:

For president, Prof. E. W. Hilgard; vice-president, S. J. Stabler; secretary, E. J. Wickson; treasurer, R. J. Trumbull, A. T. Perkins; Directors—Leonard Coates, A. L. Bancroft, B. M. Lelong, W. C. Blackwood, I. A. Wilcox, G. P. Rixford, S. J. Stabler.

Nomenclature of the Prune.

Under the head of correspondence, the following letter from Felix Gillet, a regular member of the society, was read as follows:

Edward J. Wickson, Secretary of State Horticultural Society — DEAR SIR: I see by the proceedings of the last meeting of the society, as published in the RURAL PRESS, that the prune nomenclature, which is yet in a rather confused condition, is threatened by some members of the society to be made still more confused by giving the name "Robe de Sergent" to a prune called in its very home "False Robe de Sergent." Now, and before the society takes any action in the premises, I would like to lay before it all I know, and I know a great deal, I believe, about that very prune.

At the time that we started in California (six years ago) the discussion of that prune question with a view of straightening up our prune nomenclature, and when we were yet in doubt whether we had the true d'Este or Robe de Sergent of the French, under the name of Petite d'Agen or French prune, I ordered from *five* different places in France trees of the d'Este or Robe de Sergent, so as to compare them with our Petite or French prune here. I got trees from Clairac, the center of the great prune district in the southwest of France, right in the valley of the Lot; from Agen, farther up in the same valley; from Prof. Baltet's large horticultural establishment away in the northeast, in Champagne; from Croux & San's well-known nurseries near Paris; and last from Doue & Tours, in the valley of the Loire, where are also situated Orleans and Angers, from which places some nurserymen in California imported what they thought surely to be the true Robe de Sergent.

From all these various places the trees I ordered were sent to me as the true d'Este or Robe de Sergent. However, as soon as I got the trees, I was struck by the great difference in the wood and buds of the trees from the Loire district, when compared to those I obtained from the Lot. I inquired how that was, but was told that that Robe de Sergent had been propagated in the Loire for years and years, and certainly was true, though it was admitted that the prunes when cured were much inferior to those from the Lot, which was attributed to the difference in soil and climate. That was far from being satisfactory to me, but when spring came there was no doubt in my mind that that "Loire Robe de Sergent" was altogether a different prune from the true one which I got from the Lot and Prof. Baltet, which were exactly like our Petite or French prune. The bearing of the trees afterward dispelled the last doubt in my mind, if such doubt there was, about the identity of that prune.

Mr. Coates in his paper, as read at the last meeting of the society, gives a very clear and correct description of that "False Robe de Sergent," the fruit being on the average larger and more round (with no pear-shape about it) than the Petite or French prune of ours; and I will add, it is also much darker in color, almost blue, and ripens two or three weeks before the French prune. It bears as heavily, and the fruit is certainly more juicy and acid than the French. It dries darker (a dull black, though) than the French, but is less shiny. What is quite remarkable with that variety, and which distinguishes it so widely from the true Robe de Sergent or French prune, is its foliage, the leaves being longer and more narrow and very shiny. As Mr. Coates says, in nursery rows the trees are easily distinguished by their characteristic foliage. As to the young wood, it looks more like that of the Duane's Purple than that of the Robe de Sergent, with the buds set close against the wood, while those of the true Robe or French prune are sticking out at an angle of 45°.

This "False Robe de Sergent" has, however, a fine appearance, though being greatly inferior in quality to the true one. The pit is of the same shape as that of the true Robe, but with a much coarser surface. That prune is certainly a parent, though a distant one, of the d'Este or Robe de Sergent.

Well, when in 1885 I had got unmistakable evidence that that Loire Robe de Sergent was such a different type from the true one, as is found all over the valley of the Lot, I wrote to the nurseries of Doue & Tours about it and called their attention to their type of that famous prune, which I maintained was a false one, and suggested to them to send to the Lot for trees of the true type, which they did; and on inspection and comparison of the wood, they admitted that I was right, and when in the summer they were able to compare the growth and foliage of both kinds, they did not hesitate a moment in propagating the Lot type as the true Robe de Sergent. Since the trees imported from the Lot produced fruit with them, they could not comprehend how at a comparatively short distance from the great prune district of the Lot, they could have propagated for so many years the wrong type of that famed prune. The nurseries of Doue & Tours were frank enough to admit that it was rather provoking to be told from six thousand miles away, and conclusively shown, that they had been propagating right along for years the false Robe de Sergent for the true one. They therefore named that old type of them "False Robe de Sergent" to distinguish it from the true Robe.

On my inquiries I was told that the nurseries of Orleans and Angers, in the same valley, were in the same fix and had been propagating that false type for the true one.

Now when Messrs. Coates and Rock ordered their Robe de Sergent from nurseries in that valley, as I believe they did, they surely thought, and they had no reason to believe differently, that they had the true Robe de Sergent, and they could not be blamed in propagating and advertising that type as the true one. I would have been misled in the very same way if I had not at the same time I ordered trees from the Loire nurseries ordered some also from the *Lot*. But since those gentlemen themselves admit that that variety is so different from our French prune, so much so that it is proposed to create two main divisions of the French prune, I do not see how they can consistently keep on naming this false type Robe de Sergent. But as that new type of prune (new to us) may have something to recommend it to prune-growers, it would be well to give it a distinct name. It would not be wise, however, to call it Robe de Sergent because it was sent to us as such, for it is proved all around that it is not such a prune. If the generic name of the French prune, d'Este, had been adopted in California, as it should be, there would be no trouble in giving that prune a clear and distinct name. The French prune, or Robe de Sergent, or d'Este, has no other commercial name in France and all parts of the world to which it is exported than that of "Prune d'Este," so I have called the different varieties of that prune that I have introduced from France as follows: Lot d'Este, Mont Barbat d'Este, and that type from the Loire, "Loire d'Este." If Messrs. Coates and Rock wish to retain for that prune of theirs the name of Robe in lieu of d'Este, why not call it "Loire Robe" or "Loire Robe de Sergent"? In that way every one would understand that the Loire d'Este or Loire Robe is a different type of the Lot d'Este or California d'Este (French prune)

Mr. Coates further said: "The question arises: Can the Robe be grown to make a prune to go in the trade as a French prune as a larger grade? If so, it may prove very valuable."

I will give that query the same answer I did to that from a correspondent in Oregon who wrote asking if I thought that he could pass on the London market Silver prunes of his, which were as large as Imperials, for *Imperials*. Yes, I replied, just as easy as you could pass on that same market *cotton* for *silk* goods. FELIX GILLET.

Nevada City.

Mr. Gillet's letter was heard with interest and referred to the special prune committee, which has the subject in hand, for future report.

There were a few figures of yield of the French prune given by different members as follows:

W. C. Blackwood of Haywards reported 56 tons from 1100 seven-year-old French prunes. E. H. Ehrman of Mt. View reported 40 tons from 700 trees six years old. These figures were for fresh fruit.

Discussion on Fig-Growing.

There was a long and interesting discussion of the fig in its various aspects, of which we will give an outline next week.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING SEPT. 30, 1890.

437,322.—LAWN-SPRINKLER—R. Addison, Pasadena, Cal.

437,548.—PACKAGE TIE—W. H. Anderson, Riverside, Cal.

437,558.—WHIFFLETREE HOOK—C. W. Blackburn, Tombstone, A. T.

437,565.—FLOWER-POT—Amanda J. Byrne, Tuscarora, Nev.

437,576.—CHECK BIT—Harris G. Cox, San Jose, Cal.

437,293.—COIN-ACTUATED TELEPHONE ATTACHMENT—H. F. Dugan, S. F.

437,300.—AIR BRAKE—L. Guillemet, S. F.

437,599.—ASTHMA REMEDY—Iselin & Callahan, Riverside, Cal.

437,494.—LIMEKILN—Wm. Jones, S. F.

437,213.—HOSE-COUPLING—B. F. Levet, San Diego, Cal.

437,499.—EXPLOSIVE COMPOUND—D. Mendeleff, S. F.

437,510.—TELEGRAPH KEY—A. F. Purdy, Lawrence, Cal.

437,511.—WATER-POWER—Quinn & Warner, Albany, Or.

437,634.—CAR COUPLING—Strathmeier & Gutenberger, Sacramento.

The following brief list by telegraph, for Oct. 7, will appear more complete on receipt of mail advices:

Arizona—John A. Boyon, Phœnix, gate. California—Henry Egbers, S. F., harness tool; Charles O. Farciot, S. F., burglar alarm attachment for alarm clocks; B. Grider, La Grande, grain-cleaner attachment; Peter H. Jackson, S. F., basement and sidewalk construction; Elias Jacobs, Petaluma, safety-pocket for garments; Frank Kelly and W. A. Williams, S. F., plasterers' tools, Patrick J. Moore, S. F., oil can; Theron Palmer, San Bernardino, desk, toilet and display bottle; Francis Speed, S. F., pipe machine: William Schwabel, S. F., assignor of one-half to W. H. Holmes, Stowe, Cal., attachment for lathes; Philo N. Tyron, S. F., hat-fastener; Marshal Wheeler, S. F., mounting terrestrial globes; William H. H. Wright, S. F., assignor of one-half to T. E. Johnson, San Jose, school-ruler. Oregon—Evan T. Davies, Portland, sawmill set works; Andrew T. Gilbert, Salem, hose-coupling; William H. Kaseberg, Wasco, vehicle-brake; Frank S. McKibben, Joseph, valve-gear; Charles W. Tremaine, Portland, ore concentrator; William . Walton, Mayville, barbed wire. Washington—Charlie A. Palquist, Spokane Falls, device for transmitting motion.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Public Documents.

EDITORS PRESS:—Can one procure, and in what manner and place, the reports of the University Department of Agriculture? Also those of the Government Department of Agriculture. I believe there are such reports and that they cannot fail to be of great value to farmers. H. W.

Contra Costa Co.

The publications to which our correspondent refers can be had free of charge. For publications of our State University Agricultural Department, address Prof. E. W. Hilgard, Berkeley; for the United States reports, address Hon. J. M. Rusk, Secretary of Agriculture, Washington, D. C.

California's Stallions.

I beg to announce that, with a view of perpetuating the forms and characteristics of the leading stallions of California, I am issuing a series of lithographic likenesses. Each portrait issued will be an acknowledged likeness, the result of a close study of the horse and an artistic treatment of the subject. In order to secure for the series an immense advertising value, from a breeder's point of view, 4000 copies, at least, of each portrait will be issued.

Terms, $100 for first issue of 100 copies. In quantity, for advertising purposes, copies will be furnished at low rates.

H. BOYD, Artist.

268 Golden Gate Ave., San Francisco.

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Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to soliciting subscriptions and advertisements for this journal and other first-class popular newspapers. Apply soon, or address this office, giving address, age, experience and reference. Special inducements to old agents.

DEWEY & CO., Publishers,
No. 220 Market St., S. F.

"Battle of Gettysburg."

The celebrated Panorama of the Battle of Gettysburg and Museum, corner Market and Tenth Streets, San Francisco, is a wonderful production. It has captured the entire State, doing a great deal of good. There is no better way of passing an hour or so, and in studying American history, than by visiting this Grand War Panorama. If any of our readers have not seen it, it will pay them well to do so.

RANCH MANAGER OR FOREMAN.—Albert H. Benson, Berkeley, Cal., advertises in another column for a position as manager or foreman of a ranch. He is practically acquainted with farming and has had wide experience in responsible positions, as his references show.

A COLONY of Nationalists, with 40 members, has been formed at Highlands, San Bernardino county.

DR. T. J. FRAZER, Dentist, Room 54, Flood Building, Market and Fourth Streets, San Francisco, Cal.

DEMOCRATIC STATE TICKET.

For Governor,
EDWARD B. POND of San Francisco.

For Lieutenant-Governor,
R. F. DEL VALLE of Los Angeles.

For Chief Justice,
JOHN A. STANLEY of Alameda.

For Associate Justices,
JACKSON HATCH of Santa Clara (Short Term).
JAMES V. COFFEY of San Francisco.
GEORGE H. SMITH of Los Angeles.

For Secretary of State,
W. C. HENDRICKS of Butte.

For Controller,
JOHN P. DUNN of San Francisco.

For Treasurer,
ADAM HEROLD of Placer.

For Attorney-General,
WALKER C. GRAVES of San Francisco.

For Surveyor-General,
STANLEY C. BOOM of Humboldt.

For Superintendent of Public Instruction,
H. C. HALL of San Mateo.

For Clerk of Supreme Court,
J. D. SPENCER of Stanislaus.

Congressmen,
First District—THOMAS J. GEARY of Sonoma.
Second District—A. CAMINETTI of Amador.
Third District—JOHN P. IRISH of Alameda.
Fourth District—.....
Fifth District—THOMAS J. CLUNIE of San Francisco
Sixth District—W. J. CURTIS of San Bernardino.

Board of Equalization,
First District—.....
Second District—JAMES BRADY of Alameda.
Third District—RICHARD H. BEAMER of Yolo.
Fourth District—JOHN T. GAFFEY of Los Angeles.

Railroad Commission,
First District—ARCHIBALD YELL of Mendocino.
Second District—C. H. HASWELL, JR., of San Francisco.
Third District—LAWRENCE ARCHER of Santa Clara.

NOTICE.—"The polls must be opened at sunrise of the morning of the day of election, and must be kept open until five o'clock on the afternoon of the same day, when the polls shall be closed."—(Section 1160 Political Code, Statutes 1889, page 209.)

GRANGERS' BANK

OF CALIFORNIA,

SAN FRANCISCO, CAL.

INCORPORATED APRIL, 1874.



Authorized Capital	$1,000,000
Capital paid up and Reserve Fund	800,000
Dividends paid to Stockholders	627,500

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I. C. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

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July 1, 1889. A. MONTPELLIER, Manager.

ON TOP OF ALL.

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Cures Stomach, Liver, Kidney Troubles, Rheumatism, Etc.

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For all Aches and Pains. Relieves Pain in One Minute.

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For all Coughs and Colds.

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For Burns, Bruises, Cuts, Old Sores, Piles, Etc. Sure Cure.

INDIAN WORM DESTROYER!
For Tape Worms, Pin Worms and all kinds of Worms.

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Every Remedy guaranteed to do the work or money refunded.

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A THOROUGHLY EDUCATED MAN WITH WIDE farming experience desires a place as manager or foreman of a stock or fruit ranch. Highest references. Address ALBERT H. BENSON, Berkeley, Alameda Co., Cal.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

PURE-BRED HOLSTEIN FRIESIAN Cattle for Sale. Bonnie Brae Cattle Co., Hollister, Cal.

P. PETERSEN, Sites, Colusa Co., Importer & Breeder of registered Shorthorn Cattle. Young bulls for sale.

JOHN LYNCH, Petaluma, breeder of thoroughbred Shorthorns. Young stock for sale.

JERSEYS—The Best Herd, all A. J. C. Registered, is owned by Henry Pierce, San Francisco.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

M. D. HOPKINS, Petaluma, importer and dealer in Eastern registered Shorthorns, Red Polled Cattle, Holsteins, Devons and Shropshire Sheep.

GEO. B. POLHEMUS, Coyote, Cal. Holstein-Friesian cattle, comprising males and females on advanced register. First premium in great milking test at State Fair, 1889, was won by a member of this herd.

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HENRY HAMILTON, Westley, Cal., breeder of Kentucky Jacks and Jennies, Draft Horses and Holstein Cattle. Jacks, Horses and Mules for sale.

JERSEY BULL No. 468 P. C. J. C. C. for sale cheap. A fine four-year-old animal. Address Dellwood Poultry Yards, Napa, Cal.

IMPORTED REGISTERED CLYDESDALE Horses and Holstein Friesian Cattle from the most noted families. H. P. Mohr, Mt. Eden, Alameda Co., Cal. Visitors welcome. Correspondence solicited.

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CHARLES E. HUMBERT, Cloverdale, Cal., Importer and Breeder of Recorded Holstein-Friesian Cattle. Catalogues on application.

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THOROUGHBRED Light Brahmas, Black Minorcas, Barred Plymouth Rocks and Brown Leghorns. All settings guaranteed. Madison H. Critcher, 1851 Santa Clara Avenue, near Walnut St., Alameda, Cal.

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IF YOU KEEP ANY KIND OF FOWLS, Pet Stock, Dogs, &c., it will pay you to send your address at once to C. R. Harker, Santa Clara, Cal. You cannot afford not to do it. It will cost you but one cent and you will receive something worth ten times that.

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J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Cross-bred Merino and Shropshire Sheep Rams for sale.

R. H. CRANE, Petaluma, Cal., breeder and importer. South Down Sheep from Illinois and England for sale.

KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

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ANDREW SMITH, Redwood City, Cal.; see adv't.

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JOSEPH MELVIN, Davisville, Cal., Breeder of Poland-China Hogs.

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San Francisco, Cal., Oct. 22, 1888. **PETER SAXE & SON, Lick House, S. F.**

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High Bred and Standard Trotting Stallions

Fillies and Brood Mares,

— BY DIRECTION OF —

WILFRED PAGE, ESQ., Cotate Ranch, Penn's Grove, Sonoma County,

— At 10 A. M. on —

THURSDAY, OCT. 17 and FRIDAY, OCT. 18

(During Meeting of Trotting Breeders' Association),

At FAIR GROUNDS, NAPA CITY.



The offering will consist of over 40 head. There are Stallions by Alexander 490, Le Grande 2868, Admont 5349, and Stallion Colts by Mortimer 5346 and Eclectic 11,321, standard sons of Electioneer. The Mares offered are by Elector, Mohawk Chief, Satellite, Alexander, Ethan Clay, Sportsmen, &c., &c. The Fillies are out of these Mares by Admont (son of Piedmont), Mortimer and Eclectic. The mares have been bred this year to these horses and are believed to be with foal. We have Mr. Page's assurance that every animal offered will be sold absolutely, without limit or reserve, thus placing the sale entirely in the hands of purchasers.

Catalogues are being prepared giving full description and pedigrees, together with details regarding each animal. They will be sent only on application.

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D. J. MURPHY OF SAN JOSE and HON. HARRY I. THORNTON OF SAN FRANCISCO.

— TO TAKE PLACE AT —

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On TUESDAY, OCTOBER 28, 1890, at 11 A. M.

The sale will comprise about 50 head of Stallions, Mares, Colts and Fillies. The get of Electioneer, Soudan, Alexander, Whipple's Hambletonian, Geo. M. Patchen Jr., Director and most of the Noted Stallions in the State will be represented. Catalogues will be issued in a few days, giving full description and pedigrees. Apply to

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REGISTERED HOLSTEIN CATTLE



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THE CELEBRATED CERRO ALEGRE HERD

—OF—

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Sale to take place immediately after the sale of horses, of Messrs. Murphy and Thornton. **SEVENTEEN HEAD OF CHOICE BULLS,** from three-year old to yearlings, will be offered. Catalogues ready October 4th.

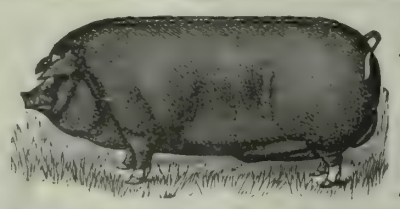
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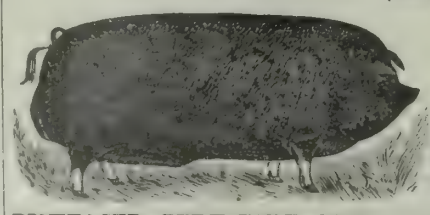
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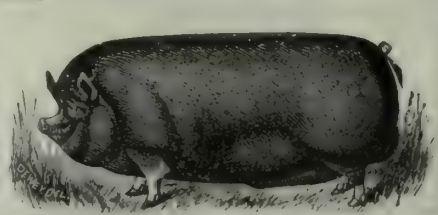
At the head of the herd stands PERFECTION KING, No. 7579; KING OF THE WEST, No. 8921; HOOSIER BOY 2d, No. 8923. Breeding Sows as fine individuals and as strictly bred as any in the land; also recorded in the C. P. C. R. record with pedigrees full to standard. Breeders for sale at all times. I have first-class Pigs of both sexes at reasonable prices. Residence 1¼ miles northeast of Davisville, Cal. Personal inspection solicited. All inquiries promptly answered. Yours truly, JOSEPH MELVIN.

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Young Stock for sale at reasonable prices. Every animal guaranteed.

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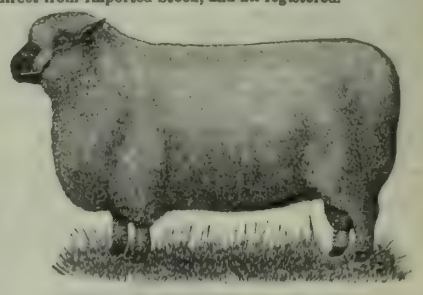
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They were all imported from England in '83, or bred direct from Imported Stock, and all registered.



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American Merino Sheep Without Horns.

The only flock in the United States. When we bought our sheep East 20 years ago, among them was a ram without horns. He grew to be a large fine sheep, shearing at 2 years old, a 12 months' fleece, 35 lbs. of long white wool.



I have bred from him and his get ever since and have never made an out-cross and never used the same ram but one year on the same flock. My rams at 2 years old will weigh from 160 to 180 lbs.; have a strong constitution, without wrinkles, and will shear on an average about 25 lbs., a 12 months' fleece, of long white wool. Rams and Ewes for sale. **P. O. Address:**

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—A—
NON-POISONOUS
SHEEP DIP.

A Safe and Certain Remedy against Parasites of all kinds.
One Gallon will make sufficient Dip for 100 Sheep at a cost of 75 cents per gallon.
Write for circulars and samples.

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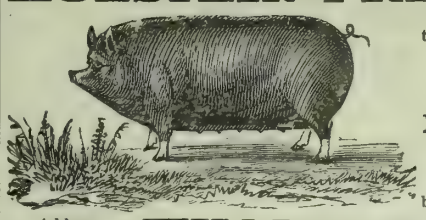
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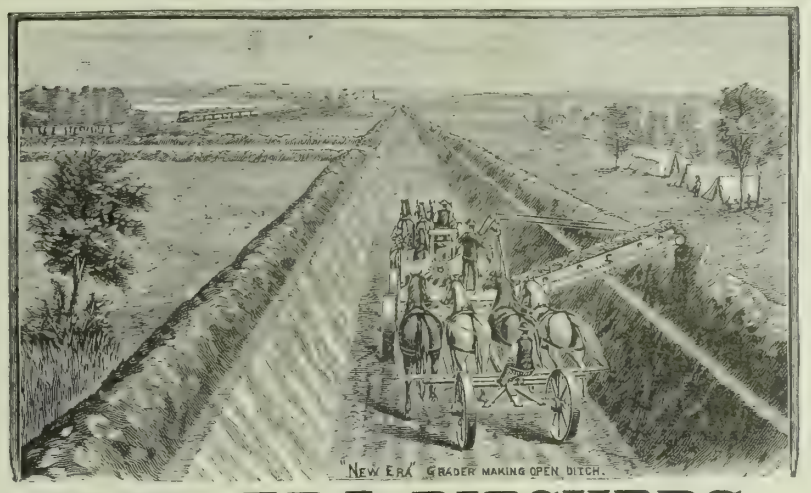
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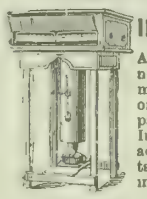
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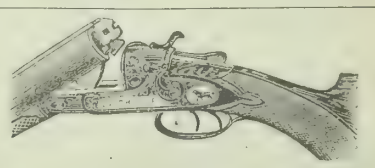
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Oct. 8, 1890.

Trading in farm products has been more or less active. Although the weather has remained clear, yet producers are fearful of more rains, and consequently they are warehousing their grain, hay, etc., and marketing their fruits, vegetables, etc., as fast as possible. The local money market is easy, but at the East it is reported close, which is against some lines of produce. Wheat has been quiet with us, but active at advancing prices at the East and abroad. The following is to-day's cablegram:

LIVERPOOL, Oct. 8.—Wheat—Firmly held. California spot lots, 7s 1½d to 7s 4½d; cargoes off coast, 36s 6d@37s; just shipped, 36s 9d; nearly due, 36s 9d; cargoes off coast and on passage, firm; Mark Lane wheat, quiet but firm; English country markets, firm; wheat and flour in Paris, steady.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Thursday	7s2d	7s3d	7s4d	7s4½d	7s4½d	7s5d
Friday	7s2½d	7s3½d	7s4½d	7s4½d	7s4½d	7s5d
Saturday	7s2½d	7s4d	7s4½d	7s5d	7s5½d	7s5½d
Monday	7s3d	7s4d	7s5d	7s5d	7s5½d	7s5½d
Tuesday	7s4½d	7s5d	7s6d	7s6½d	7s6½d	7s6½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	37s3d	37s3d	37s3d	Steady.
Friday	37s3d	37s3d	37s3d	Steady.
Saturday	37s	37s	36s9d	Firm.
Monday	37s	36 6d	36 6d	Steady.
Tuesday	37s	36s9d	36s9d	Firmer.

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per bushel:

Day.	Oct.	Nov.	Dec.	Jan.	May.	June
Thursday	101½	10[illegible]	104	....	108¾	..
Friday	0[illegible]	102⅝	103⅞		108½	..
Saturday	102⅝	....	104⅞	....	109	..
Monday	105	....	107⅝	....	111⅝	..
Tuesday	106¼	107⅜	108½		112	..

The closing prices for wheat have been as follows at Chicago for the past week, per bushel:

Day.	Oct	Dec.	May.	June.
Thursday	96⅜	97½	104½	..
Friday	96¾	100	104⅝	..
Saturday	....	101⅜	106	..
Monday	100	103⅜	107½	..
Tuesday	100⅞	104½	108⅝	....

NEW YORK, Oct. 8.—Wheat—$1.07½ for cash, $1.08⅛ for December and $1.11¾ for May.

CHICAGO, Oct. 8.—Wheat—$1.03¾ for December and $1.07¾ for May.

Foreign Grain Review.

LONDON, Oct. 6.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: Fine weather favors threshing. The local markets are well supplied and millers are buying English wheat steadily. Red is quoted at 31s and the finest White at 38s 9d@39s. Foreign wheat is 6d lower; the depression was largely owing to the extremely low freights. English grinding barley and oats are 3d lower and foreign 6d lower. The imports of barley are heavy. The Swedish oat crop is heavy. Maize is 6d lower; the inquiry is poor. At to-day's market wheat was steadier. The inquiry for flour improved. Maize was firmer.

Honey.

NEW YORK, Oct. 6.—A carload of half light Amber and half White honey sold at 6½c.

Eastern Wool Markets.

BOSTON, Oct. 3.—Wool is in good demand. Sales amount to about 7,001,000 lbs of all kinds. Territory wools are active; sales of 2,340,000 lbs, including fine on a scoured basis of 60@62c ₩ lb; fine medium, 59@60c; medium, 55@57c. Eastern Oregon is selling freely at 17@22c; California is quiet at 16@24.

NEW YORK, Oct. 3.—*Bradstreet's* says: Manufacturers are buying wool moderately in the seaboard markets and prices are firm in every particular. The recent advance has been held and the upward movement in some lines is still in progress. Reports from Texas say that the fall clip is coming in in unusually good condition.

NEW YORK, Oct. 6.—Wool maintains a brisk movement with hardened prices. Buyers are anxious to secure all desirable parcels, and in this way important negotiations at the West are in treaty. The seaboard stock is much reduced. Primal point reserves and Southwestern fall clip have been assured a good outlook. In New York, good blocks of carpet, foreign, are taken and all prices are quoted crisply.

Boston reports more active trading, though the assortments were much broken last week. The prices were one-half to one cent higher. The demand is largely for worsted mills. Sales of 141,500 lbs foreign, 5 583,400 lbs domestic, including 243,000 lbs California, 16@24c.

Philadelphia reports a strong, active market, with a considerable New England attendance. The price advanced 1c on sales and holdings.

Hops.

NEW YORK, Oct. 6.—The interest being chiefly in new hops, the spot trade is light. The interior buying for direct export is fairly active. London, 5s advance; Germany, 5 marks. London reports 200s to 220s paid for Pacific; 240s for State; 150s for Pacific sold here at 38c. About 1200 bales go out this week. The last prices are generally strong.

NEW YORK, Oct. 4.—Private cables say Pacific Coast hops have been sold in Europe at £10 to £11 per cwt. (112).

NEW YORK, Oct. 3.—Five thousand bales of new hops were purchased in the interior markets of this State and brought 40@45c ₩ lb. The latest authentic quotations for German hops are: Bavarian, 63@68s ₩ lb; Bohemian, 65@70c, duty paid.

NEW YORK, Oct. 7.—A cablegram from London gives another rise of 10 shillings in English hops and 10 marks in German hops.

Local Markets.

BARLEY.

	Buyer Season. H.	L.	Seller 1890. H.	L.	Buyer 1890. H.	L.
Thursday	149	148	...	...	141	140
Friday	147½	147	..	..	140½	140
Saturday	....	....	...	...	....	....
Monday	149	148	...	...	141½	141½
Tuesday	149½	149⅜	..	..	142¼	142

WHEAT.

	S. S. Nov.	B. '90.	B S.	S. '90.
Thursday h.	...	136	144	....
Thursday l.	..	135½	143½	....
Friday h.	..	136½	144½	....
Friday l.	..	135½	143⅜	....
Saturday h.	..	136⅜	....	....
Saturday l.	..	136⅛	....	....
Monday h.	..	137¼	145	....
Monday l.	..	136¾	145	....
Tuesday h.	....	137½	145⅛	....
Tuesday l.	..	137	145¼	....

BAGS—The market for standard size is dull at 6½@7c.

BARLEY—The market for sample parcels has made quite an advance, closing strong. In futures, trading has been fair at higher prices. The following are to-day's reported sales on Call:

Morning Session: Buyer 1890—100 tons, $1.42½; 100, $1.42⅜; 300, $1.42¾. Buyer season—300 tons, $1.49⅝. No. 1 Brewing, buyer season—200 tons, $1.54¼ ₩ ctl. Afternoon Session: Buyer 1890—100 tons, $1.42½. Buyer season—500 tons, $1.49¼. No. 1 Brewing, buyer season—100 tons, $1.54¾; 100, $1.54⅞ ₩ ctl.

BUTTER—The market does not show any material change. The heavy supplies of pickled and threatened liberal shipments of creamery from the Central States are against any decided advance.

CHEESE—The market is reported firmer for the more choice. The demand is good.

The receipts of cheese at San Francisco during the past nine months were as follows:

Months—	California.	Eastern.	Oregon.
January, lbs	293,1[illegible]0	60,300	6 0
February	314,000	129,400	300
March	478 300	98,800	100
April	624,000	135,700	2,900
May	761 900	47,000	200
June	469,500	98,400	800
July	483,800	103 700	3,700
August	484,600	187,100	4,700
September	383,000	101,000	1,700
Totals	4,292,200	961,400	15,000
1889	3,538,000	1,054,100	59,400
Increase	754,200	.....	.....
Decrease	.....	92 700	44,400

The total for the present year is 5,268,600 lbs., as against 4,651,500 in 1889.

EGGS—The more choice, fresh-laid large-sized are scarce and fetch good prices. The entire line shows more strength.

FLOUR—The market is easy. Free shipments are being made to foreign ports.

WHEAT—The market has exhibited more strength toward the close, notwithstanding export buyers' bearish news. The markets at the East and abroad have made substantial gains. In futures, trading on Call is more active toward the close. The following are to-day's reported sales on Call:

Morning Session: Buyer 1890—300 tons, $1.36⅞. Buyer season—100 tons, $1.44⅞; 600, $1.45⅜; 400, $1.45 ₩ ctl. Afternoon Session: Buyer 1890—200 tons, $1.36½; 600, $1.36¾. Buyer season—500 tons, $1.44⅝; 1700, $1.44½ ₩ ctl.

[COMMUNICATED.]

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Oct. 7th, were as follows:

Flour, qr. sks	78,656	Middlings, sks	3,026	
Wheat, ctls	196,341	Alfalfa, "	....	
Barley, "	65,866	Chicory, bbls	73	
Rye, "	934	Broomcorn, bdls	....	
Oats, "	20,206	Hops, bls	815	
Corn, "	5 037	Wool, "	3,256	
*Butter, "	1,146	Hay, tons	1,531	
do bxs	478	Straw, "	24	
do bbls	75	Wine, gals	164,710	
do kegs	55	Brandy, "	17,180	
do ½ do	90	Raisins, bxs	6,025	
†Cheese, ctls	653	Honey, cs	323	
do bxs	216	Walnuts, sks	200	
Eggs, doz	52,700	Flaxseed, sks	1,439	
do " Eastern.	43,350	Mustard, sks	64	
Beans, ctls	9,336	Almonds, sks	619	
Potatoes, sks	26,857	Peanuts, sks	565	
Onions, "	1,136	Popcorn, sks	168	
Bran, sks	8,838	Beet sugar, bbls	132	
Buckwheat, sks	....	do do sks	1,573	

*Overland 106 ctls. †Overland 296 ctls.

Cereals.

There is some talk about the influence of the price of silver on the price of wheat. A London letter says: "The exchange value of the ruble to-day is quoted at over 30d, against only 25½d at the beginning of April, and 24½d a year ago. This depreciation of the ruble in Russia quite prevents Russian shippers from fulfilling their engagements, no less than 4s per qr having by this means been added to the cost price of wheat since April, while, compared with last year, there is a difference of 5s per qr against the shipper. In other words, at the present rate of exchange, 30s per qr paid by English buyers represents in the Russian price and measure only about 80 copecks per pood, while last year the same price was equal to 100 copecks or one ruble. Thus the Russian producer loses 20 per cent. Two to three years ago, however, the ruble exchange on London was as low as 19d, so that at that time, if 30s per qr in English money was obtained, it represented 125 copecks per pood. This state of things cannot fail to have an effect upon prices, for we cannot have both Russia and the Atlantic ports holding back their wheat for any time without sending up values." If the United States had free coinage for silver, then the Russian ruble and the Indian rupee would be still higher.

The local wheat market has held dull throughout the week. As far as we can learn, farmers are not in the market as sellers, except at higher prices. The sales that are reported are said to be made by speculators who are tired of holding. The tonnage in port under charter is not receiving quick dispatch. The rains reported in our last week's issue did not wet the ground to sufficient depth to admit of plowing, but in many localities they have caused volunteer grains to sprout, and unless more rains fall soon the plant will not have rooted enough to withstand the absence of moisture. Very little, if any, damage to exposed grain was done by the late rains.

Barley has held to strong prices under a good demand and firm holding. The situation is confirmatory of our previously expressed view on the market. There can be no doubt but the supply is short of requirements. Oregon may possibly have some to send to us. More was exported the past week than for some time past.

Oats show a stronger tone, notwithstanding freer receipts. The strength exhibited by barley, no doubt, causes oats to sympathize.

Corn is reported unchanged. Buyers do not appear disposed to bid up, fearing that new crop corn will come in too freely with prices advanced in the commencement of the season.

Rye is essentially unchanged.

French crop reports show the size of the crop and the imports for a series of years:

Cereal year.	Acreage.	Crop, Qrs.	Net Imports, Q s.
1890-91	17,650,000	*41,000,000	.....
1889-90	17 655,000	39.346,000	4,163,000
1888-89	17.235,000	33,251,724	6,4[illegible]0.000
1887-88	17,492,000	38,777,968	4,832 000
1886-87	17,181,0.0	36,996,442	4,753,000
1885-86	17,180,000	34,026 691	2 249,000
1884-85	17,418,000	39,389,992	4,967,000
1883-84	16,803,000	35,777,043	4,453,000

*Measured quarters—likely to be reduced to qrs. of 480 lbs. weight. 38,500,000

While the English trade papers are all giving estimates showing a deficiency in the world's crop of wheat, the *Bulletin Des Halles* gives the following:

	Yield. qrs.	Imports. qrs.	Exports qrs.
Europe	156,062,000	42,420,000	26 640,000
America	19,090,000	.....	11,343,000
Asia	35,578,000	.....	4.125 000
Africa	5,020,000	.....	1 410,000
Australasia	4,984,000	.....	1 647,000
Totals	260,734,000	42,420,000	45,065,000

It is seen by the above table that we estimate the total world's wheat production at 758,000,000 hectols (2,145,140,000 bushels). The countries which have not sufficient wheat for their own requirements will have to import 123,400,000 hectolitres (42,420,000 quarters) and the exporting countries can dispose of 131,100,000 hectolitres (45,065,000 quarters). The difference in favor of exports is then 7,700,000 hectolitres (22,791,000 bushels). When the general production is viewed, this difference is insignificant.

In view of the difference in the crops this year, the origin of the supply of wheat imported into the United Kingdom for the past eight months is a matter of interest. It shows as follows:

	Eight months ended Aug. 31. 1890.	1889.
Russia	12,033,728	14,347,653
Germany	727,749	1,853 915
France	880	105,298
Turkey	529,295	420,9 3
Roumania	713,936	1,009,610
Egypt	221,124	309 182
U. S. Atlantic ports	5,130,986	2,272,886
U. S. Pacific ports	7,860,443	8,859,875
Chili	24,000	552,893
British East Indies	5,801,338	5,509,708
Australia	1,724,902	1 268,811
British N. America	446 555	462 354
Other countries	2,74 ,730	948,316
Total cwts	37,955,641	31,861,422
Flour.		
Germany	432,875	850,595
France	59,109	50,562
Austrian Territories	845,789	1,366 345
United States	8,718,314	5,858,923
British N. America	362,413	384,537
Other countries	242,270	280,263
Total cwts	10,660,770	8,791,225
Oats, cwts	7,896,868	10,833,546
Corn, cwts	33,820,744	25,975,371

The Cincinnati *Price Current* says that there is an indicated corn crop of 1,565,000,000 bushels, 548,000,000 bushels below last year. The seven surplus States are deficient 474,000,000 bushels. The old supply is said to be low in Ohio, moderate in Missouri and Nebraska, much reduced in Iowa, fairly good in Illinois, and rather liberal in Kansas. The old supply is estimated at 250,000,000 bushels.

Feedstuff.

Bran and middlings have held steady, as has feed-meal. Ground barley is higher. The demand for the latter is reported quite active.

Hay shows more strength, with the more choice fetching an advance. Clear weather, no doubt, causes the market to show considerable strength, for its continuance up to the usual run of seasons will cause the supply of hay to run short, particularly so if we should have a hard winter.

Fruits.

The effects of the rains are witnessed in the general rush of perishable fruits to the market, with a large proportion being more or less moldy.

Berries are more or less soft, causing commission merchants to force sales.

Pears are slow at quotations. Apples are cleaning up better, owing largely to fewer poor trashy coming in. The latter sell at the best prices obtainable, generally from 20c to 50c a box. A good choice article fetches $1.25. There is an increasing demand for shipment. Peaches are stiff for canning varieties.

Grapes are being rushed into market. It looks as if the late rains prevent as much drying as was expected, and consequently the fruit not being suitable for that purpose is marketed green. Large quantities of wine grapes are coming in, which has also a bad effect on the market. Some over-ripe, moldy and otherwise defective grapes are placed at buyers' prices so as to clean up.

Melons show more strength, due to a better demand.

T. L Gates of Vacaville sent in the first persimmons of the season. They were placed at $1.50 a box.

Dried grapes are stronger, owing to rains having prevented free drying.

In dried fruits, apricots and plums show more strength. Prunes are easy under offerings of parcels varying from ⅛ to 1 ton each. The quantity offering is not large, but some holders get two or more brokers to try and sell the fruit and buyers are thus led to believe that more is offering for sale than there really is, Peaches are easier. Chinese dried peaches are in liberal offering, which causes buyers to bid down. Peeled peaches are scarce.

Raisins are in good demand. The market is very firm at full prices. Fears that the damage to the crop is greater than was expected is a bull factor in the market. So far as we can learn by private telegrams and other sources, the advanced duties on foreign raisins do not cut any figure in our market. It is the overland freights on fruit that do, and not the tariff. The railroad gets all the advance in the tariff.

Vegetables.

Garden truck is in fair supply, with prices fairly steady.

Tomatoes are in free receipt, keeping canners busy.

Corn is going out, as are beans. Cucumbers are in liberal supply as are summer squash, egg plant and other summer varieties.

Cabbages continue to meet with a good home and shipping demand.

Onions are coming in sparingly, barely enough to meet current requirements.

The receipts of potatoes are not over large, which keeps the market fairly firm. There is some complaint regarding the quality of river potatoes. Sweet potatoes are in good supply, with the market favoring buyers.

Live-stock.

The market for bullocks, mutton sheep and hogs is easy. Offerings continue free. The former are coming from Nevada and Arizona, and are in most excellent condition. As fall shearing progresses, more sheep are offered to slaughterers. Hogs are in good supply. The crop this year is the largest on record, which will admit of more being packed. For horses and milch cows the market does not show any material change.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4@4½c ₩ lb; dressed, 7@8c ₩ lb.; heavy, 3½@3⅝c ₩ lb.; dressed, 6@7c ₩ lb. Stock hogs, 3¼@3½c ₩ lb.

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¼@5½c ₩ lb.; second quality 4¾@5c ₩ lb.; third quality, 4c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6@8c ₩ lb.; large, 4@6c.

MUTTON—Wethers, 7½@8c ₩ lb.; ewes, 7@7½c ₩ lb.; lamb, spring, 9@10c.

Miscellaneous.

Poultry has held to steady prices. Game has fluctuated to lower prices.

Nuts show more strength under an active demand. It is feared that the late rains discolored some kinds. The first chestnuts of the season came to hand on last Tuesday. They were sent in by W. Meek of San Lorenzo. They were sold at 20c.

Honey appears to have a stronger tone. Interior advices report free shipments overland.

Beans fluctuate. Prices appear to be governed from day to day by the receipts and demand. The weather is quite an important factor in the market.

Hops are strong. It is said that some are realizing sales, which are against the market for the time being.

Wool shows considerable strength. It now looks as if the market at the East has been glutted by heavy importations of woolen goods, which will tend to keep wools down after the first result of the new tariff is worn off. If luster goods still hold fashionable, then fine wools will not appreciate much, only luster-goods wools will advance materially. This ought to help Angora wool still more.

There is an improving demand for grass seed. Quotations are, as yet, nominal.

Exports by sea the past week are as follows: Wheat, ctls, Queenstown, 58,161; Liverpool, 9201. Flour, bbls, Sligo (Ireland), 19,796; Honolulu, 1095; Central America, 7782; Tahiti, 1143; South America, 2000; Kahului, 450; China, 10,115; Japan, 4188; Vladivostock, 125; Manilla, 500; Liverpool, 5600. Barley, ctls, Honolulu, 1212; New York, 47.816; Liverpool, 4075; Tahiti, 579; Kahului, 798. Rolled barley, lbs, Kahului, 68 968; Honolulu, 70,000. Mustard seed, lbs, New York, 29,534. Beans, lbs, Victoria, 1268; Honolulu, 31,571; New York, 37,108; Nanaimo, 1500; Panama, 1040; Tahiti, 5706; Kahului, 6865. Cotton, bales, 133 to Liverpool. Wine, gals, New York, 66 844; Central America, 788; Panama, 2412; Tahiti, 2056. Bran, sks, Honolulu, 1885; Kahului, 750. Hay, bls, Honolulu, 612. Brandy, gals, Liverpool, 1838. Dried fruits, lbs, Honolulu, 750; Victoria, 4580. Canned fruits, cases, Melbourne, 50; China, 55; Japan, 183; Liverpool, 7800. Apples, bxs, China, 330; Japan, 130.

From the *Commercial News* of Oct. 8th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	272 695	218,350
On the way to neighboring ports	21,763	16,619
In port, disengaged	11.042	26,371
In port, engaged for wheat	55 587	78,090
Totals	361,087	339,430

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Oct. 1, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	2,581 315	2,709 483
Flour, bbls	285,835	215,284
Barley	70,821	407,098

Dried Fruits, Etc.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations.

Prices named, unless otherwise specified, are for fruit in sacks. Add for 50-lb. boxes ¼c per lb., and for 25-lb boxes ½c to 1c per lb.

Apples, sun-dried, quarters, common	7	@	—
" " " prime	8	@	—
" " " choice	9	@	—
" " sliced, common	9	@	—
" " " prime	9½	@	—
" " " choice	10	@	—
" Evap. bleached, ring 50-lb boxes	14	@	—
Apricots, sun-dried, unbleached, common	11	@	—
" " " prime	12½	@	—
" " " choice	13½	@	—
" " bleached, prime	16	@	—
" " " choice	17	@	—
" " " fancy	18	@	—
" Evap. choice, in boxes	18	@	—1
" " fancy, "	19	@	—

Figs, sun-dried, black	2 @ 3
" " white	— @ —
" " " washed	— @ —
" " " fancy	8 @ 10
" " " pressed	5 @ 6
" " " unpressed	2 @ 3
" Smyrna boxes	12 @ 14
" do sacks	10 @ 12
Grapes, sun-dried, stemless	3½@ 4
" " unstemmed	2 @ 3
Nectarines, Red. sun-dried	10 @ 13
" evaporated, in boxes	13½@ 14½
" white, sun-dried	12 @ 15
" evaporated	16 @ 17½
Peaches, sun-dried, unpeeled, common, bleached	14 @ —
" " " prime, "	16 @ —
" " " choice, "	18 @ —
" " " fancy	20 @ —
" evaporated " choice	19 @ —
" " " fancy	21½@ —
" sun-dried, peeled, prime, bleached	20 @ —
" " " choice	23½@ —
" " " fancy	25 @ —
" evaporated, " in boxes, choice	25 @ —
" " " fancy	27½@ —
Pears, sun-dried, quarters	8½ @ 9½
" sliced	9½@ 10½
" evaporated, " in boxes	10½ @ 10¾
" " ring "	11 @ 11½
Plums, pitted, sun-dried	8½@ 10½
" " evap. in boxes, choice	10¾ @ 11½
" " " fancy	11½ @ 12½
" unpitted	5 @ 8
Prunes, Cal. French, ungraded sizes	8½@ 9½
" " graded 90 to 100	8 @ —
" " " " 80 to 90	9 @ —
" " " " 70 to 80	9½@ —
" " " " 60 to 70	10 @ —
" " " " 50 to 60	10½@ —
" " " " 40 to 50	11½@ —

Fancy sell for more money.

RAISINS.

Halves, quarters and eighths, 25, 50 and 75 cents higher respectively than whole box prices.

London Layers, choice ₩ bx	$1 80 @ 2 10
" fancy, "	2 25 @ 2 50
Layers, ₩ bx	1 50 @ 2 00
Loose Muscatels, common, ₩ bx	1 15 @ 1 35
" " choice, "	1 50 @ 1 75
" " fancy, "	1 80 @ 1 90
Unstemmed " in sacks, ₩ lb	4 @ 6
Stemmed " "	4 @ 7
Seedless " "	6 @ 7
" ₩ 20-lb bx	1 15 @ 1 25
" Sultanas, unbleached, in bxs	1 15 @ 1 25
" " bleached	1 25 @ 1 30

CALIFORNIA HONEY.

Comb, dark, 2-lb. frames, 60-lb. cases, ₩ lb	4 @ 5
" amber, " cs. new "	4½ @ 5½
" white "	9 @ 12
Extracted, dark, 5-gal. cans, 2 cans to case, ₩ lb.	4 @ 4½
" amber, " "	4½@ 5½
" white, " "	5½@ 6
Comb, 2-tins, 2 doz. to case, ₩ doz	— @ —
Extracted, "	— @ —
" 4-lb. tins, 1 doz. "	— @ —
Beeswax, per pound	21 @ 24

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations

WEDNESDAY, Oct. 8, 1890.

BEANS AND PEAS.	
Bayo, ctl	3 50 @ 4 00
Butter	2 00 @ 2 30
Pea	2 75 @ 3 25
Red	2 50 @ 2 75
Pink	2 10 @ 2 30
Large White	— @ —
Small White	2 75 @ 3 25
Lima	@ —
Fld Peas, blk eye	1 60 @ 1 75
do green	1 25 @ 2 00
do Nies	1 35 @ 1 55
Split	6 @ —
BROOM CORN.	
Choice to Extra	60 00 @ 75 00
Fair to Good	45 00 @ 55 00
Poor	40 00 @ —
CHICORY.	
California	6 @ 6½
German	6½@ 7
DAIRY PRODUCE, ETC.	
BUTTER.	
Cal. Poor to fair, lb	15 @ 22½
do good to choice	25 @ 32½
do Giltedged	35 @ —
do pickled	18 @ 21
do in kegs	17 @ 20
do Creamery in rolls	36 @ —
E stern do	25 @ 32½
do do, in tubs	20 @ 25
CHEESE.	
Cal choice mild	10 @ 11
do fair to good	7 @ 9
Young America	10 @ 11½
N. York Cream	9 @ 12
Western	8 @ 10
EGGS.	
Cal. ranch, doz	37½@ —
do do sel'cted	30 @ 35
do. store	40 @ —
Est'rn, cld st'rage	— @ —
do fresh	17½@ 27½
do selected	30 @ —
do to arrive	— @ —
FEED	
Bran, ton	16 50 @18 50
Feedmeal	28 00 @29 00
Gr'd Barley	30 00 @31 00
Middlings	22 00 @25 00
Oil Cake Meal	25 00 @27 00
Manhattan Food Per 100 lbs	7 50 @ —
HAY.	
Compressed	13 00 @17 00
Wheat, per ton	11 00 @16 00
do choice	17 00 @ —
Wheat and Oats	11 00 @15 50
Wild Oats	9 00 @12 50
Tame do	9 00 @12 50
Clover	8 00 @11 00
do ch'ce red top	— @ —
Barley	8 00 @12 00
Barley and Oats	8 00 @11 50
Alfalfa C'mpr'sd	— @ —
Straw bale	45 @ 55
FLOUR.	
Extra, City Mills	4 25 @ 4 50
do Co'try Mills	4 25 @ 4 50
Superfine	3 25 @ 4 00
GRAIN, ETC.	
Barley, feed, ctl	1 33½@ 1 37½
do Choice	1 40 @ —
do Brewing	1 40 @ —
do do Choice	1 45 @ 1 47½
do do giltedg'd	1 50 @ —
Chevalier once	1 50 @ 1 52½
do com to good	1 32½@ 1 45
Buckwheat	1 75 @ 2 00
Corn, White	1 20 @ 1 28½
Yellow, large	1 25 @ 1 30
do, small	1 25 @ 1 30
Oats, milling	1 62½@ 1 67½
Surprise	1 67½@ 1 72½
Choice feed	1 60 @ —
do good	1 55 @ —
do fair	1 52½@ —
do Gray	1 45 @ 1 55
do Black	1 65 @ 1 80
Rye	1 20 @ 1 30
Wheat, milling.	
Gilt edged	1 41½@ —
do Choice	1 39½@ —
do fair to good	1 36½@ —
Shipping, cho'ce	1 35 @ —
do good	1 32½@ —
do fair	1 28½@ —
Sonora	1 25 @ 1 30
HIDES.	
Dry light to h'vy	10 @ 11
Salted	5 @ 8½
HOPS.	
Oregon, 1890	32½@ 37½
Cal 1890 Choice	35 @ 37½
do Fair to G'd	32½@ —
ONIONS.	
Silver Skin	2 00 @ 2 40

Walnuts, Cal. lb	9 @ 10
do Ch'ce	11 @ 12
Almonds, hd shl.	5 @ 6½
Softshell	14 @ 15
Paper shell	16 @ 17½
Brazil	11 @ 12½
Pecans	9 @ 11
Peanuts	6½ @ 8
Filberts	11½@ 12½
Hickory	6 @ 8
Chestnuts	15 @ 20
Pine nuts	7 @ 8
POTATOES.	
Early Rose, sks.	60 @ 80
Chile	75 @ 1 00
Peerless	80 @ 90
River Reds	90 @ 1 00
Humboldt	— @ —
Petaluma	— @ —
Burbanks	60 @ 1 25
Sweet	75 @ 1 25
POULTRY AND GAME.	
Hens, doz	5 00 @ 7 00
Roosters, old	5 00 @ 6 00
do young	4 50 @ 6 50
Broilers, small	2 50 @ 3 50
do large	4 00 @ —
Fryers	4 50 @ —
Ducks, tame	4 00 @ 5 00
do large	5 50 @ 7 00
Geese, pair	1 25 @ 1 75
Turkeys, Gob'r	17 @ 20
Turkeys, Hens	16 @ 18
Pigeons	1 75 @ 2 50
Rabbits, doz	75 @ 1 25
Hare	1 00 @ 1 50
Venison	6 @ 8
Dove	50 @ 75
Quail	50 @ 1 00
Snipe, English	2 00 @ 3 00
do Jack	75 @ 1 00
Ducks, Mallard	3 00 @ —
do Sprigs	1 25 @ 1 75
do Teal	1 50 @ —
do Widgeon	1 25 @ —
do Small	75 @ 1 00
Geese, G ay	3 00 @ —
EGG FOOD.	
Manhattan, ₩ lb	12 @ —
PROVISIONS.	
Cal. Bacon.	
Heavy, lb	10½@ 11
Medium	12 @ —
Light	13 @ 13½
Extra Light	— @ —
Lard	9 @ 11
Cal. Sm'k'd Beef	11 @ 12
Hams, Cal	13 @ 14
do Eastern	14 @ 15
SEEDS.	
Alfalfa	8 @ 8½
Canary	3 @ 4
Clover, Red	1 ½ @ 11½
White	17½@ 20
Cotton	20 @ —
Flaxseed	2 @ 3
Hemp	4 @ 5
Italian Rye Grass	10 @ 11
Perennial	7 @ 9
Millet, German	5 @ 6½
do Common	5 @ 6
Mustard, yellow	1 90 @ 2 25
do Brown	2½ @ 3
Rape	1¾@ 2½
Ky. Blue Grass	14 @ 16
2d quality	13 @ 14
Sweet V. Grass	75 @ —
Orchard	12 @ 14
Hungarian	7½@ 8
Lawn	27½@ 40
Mesquit	6 @ 7
Timothy	6 @ 7
TALLOW.	
Crude, lb	3 @ 5
Refined	6 @
WOOL, ETC.	
SPRING—1890.	
Humboldt and Mendocino	19 @ 24
San'to valley	15 @ 22
Free Mountain	18 @ 24
S Joaquin valley	12½@ 17
do mountain	17 @ 22
Cala'v & F'th'll	15 @ 24
Oregon Eastern	13 @ 22
do valley	20 @ 25
So'n Coast, def	10 @ 14
So'n Coast, free	12½@ 19
FALL—1890.	
North'n, choice	15 @ 17
do defective	12 @ 14
Mountain Free	11½@ 14
San Jo quin defective	8 @ 11
Southern do	8 @ 11

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE. Oct. 1-7.	Olympia. Rain	Temp.	Wind.	Weather.	Portland. Rain	Temp.	Wind	Weather.	Eureka. Rain	Temp.	Wind	Weather.	Red Bluff. Rain	Temp.	Wind	Weather.	Sacramento. Rain	Temp.	Wind	Weather.	S. Francisco. Rain	Temp.	Wind	Weather.	Fresno. Rain	Temp.	Wind	Weather.	Keeler. Rain	Temp.	Wind	Weather.	Los Angeles. Rain	Temp.	Wind	Weather.	San Diego. Rain	Temp.	Wild	Weather
W.	.12	54	SW	Ry.	.36	54	SW	Cy.	.T	58	0	Ry.	.04	74	SE	Cl.	.00	70	S	Cl	00	60	W	Cl.	00	72	Nw	Cl	.00	72	0	Cl.	.00	68	W	Cl.	.00	68	SW	Cl
T.	.02	54	SW	Cl.	.09	54	N	Ry.	.00	54	N	Fr.	.00	68	Nw	Cl	.00	66	Nw	Cl.	.00	64	W	Cl.	00	72	Nw	Cl	.00	72	Nw	Cl	.00	66	S	Fr.	.00	66	S	Fr.
F.	.00	58	S	Fr.	.05	56	N	Fr.	.00	56	N	Cl.	.00	74	Nw	Cy.	.00	70	Nw	Cl.	00	62	W	Cl.	.00	70	Nw	Cl.	.00	70	Nw	Cl	00	66	W	Cy.	00	68	S	Cy.
S.	.18	54	SW	Cy.	.24	52	S E	Ry.	.00	46	Nw	Cy.	.00	82	Nw	Cl.	.00	76	Nw	Cl	00	62	W	Cl.	.00	72	Nw	Cl.	.00	68	N E	Cl	.00	70	N	Cl.	00	68	Nw	Cl.
S.	.00	58	SW	Cy.	.28	64	N	Cy.	00	56	N	Fy.	.00	84	N	Cl.	.00	74	E	Cl	.00	66	W	Cl.	.00	78	Nw	Cl.	.00	70	0	Cl.	.00	78	S	Cl.	.00	74	Nw	Cl.
M.	.12	54	SW	Ry.	.04	60	S	Fr.	.00	58	N	Cl.	.00	86	SW	Cl.	.00	82	S E	Cl.	.00	64	W	Cl.	.00	82	Nw	Cl	.00	76	[illegible]	Cl.	00	74	W	Cl.	00	72	W	Cl.
T.	.00	54	W	Cl.	.14	54	W	Fr.	.00	54	N	Fr.	.00	76	Nw	Fr.	.00	74	N	Fr.	.00	60	W	Cy	.00	80	Nw	Fr.	.00	74	[illegible]	Fr.	.00	72	Nw	Cl.	.00	68	SW	Cl
	.44				1.70				.T				.04				00				00				.00				.00				.00				.00			

EXPLANATION. Cl. for clear; Cy., cloudy; Fr., fair; Cm., calm; — indicates too small to measure. Temperature, wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Oct. 8, 1890.

Bananas, bunch	1 00 @ 3 00
Cranberries	10 00 @11 00
Limes, Mex	4 00 @ 5 50
Lemons, Cal., bx.	2 00 @ 4 00
do Sicily, bx	7 00 @ 8 50
do Malaga	7 00 @ 8 50
Pineapples, doz.	3 00 @ 5 00
Strawberries, chest	4 00 @10 00
Bl'kberries, do	4 00 @ 5 00
Huckleberries lb	9 @ 12
Figs, box, black	50 @ 75
do white	40 @ 60
do Smyrna	— @ —
Pears, bx	50 @ 90
Peaches box	50 @ 1 00
do choice	1 25 @ —
do canning, lb	4 @ 5
Apples com box	40 @ 60
do choice	90 @ 1 25
Grapes, box	10 @ 40
do Muscats	15 @ 50
do Rose of Peru	10 @ 35
do Tokay	25 @ 60
do Blk Hamb'rg	15 @ 45
do Isabella	40 @ 50
do Queen	75 @ 1 00
do Malvoise	10 @ 30
do Cornichon	50 @ 75
do wine Zinfandel	10 00 @15 00
do other wine	
black kinds	10 00 @14 00
Waterm'l'ns	100 5 00 @12 00
Cantaloupes crt	50 @ 1 00
Nutmeg melons	25 @ 50
Crabapples, box	75 @ 1 00
Quinces, box	50 @ 65

VEGETABLES.

Okra, dry, lb	6 @ 10
do green bx.	60 @ 75
Parsnips, ctl	1 25 @ —
Peppers, dry, lb	12 @ —
do green, bx	25 @ 40
do Bell	40 @ 60
Turnips, ctl	75 @ —
Beets, sk	— @ 1 00
Cabbage, 100 lbs	75 @ —
Carrots, sk	50 @ 65
Cucumbers box	20 @ 40
do for p'ckling	70 @ 1 00
Tomatoes, bx	20 @ 40
String Beans	2 @ 2½
Lima do	2 @ 3
Squash, summer, bx	25 @ 50
Marrow fat, ton	8 00 @10 00
Garlic, lb	8 @ 10
Green corn ch'ce	20 @ —
do do com sk	60 @ 90
Egg Plant, bx	35 @ 50
Cauliflower doz	40 @ 60

California Fruits East.

CHICAGO, Oct. 2.—The Earl Fruit Company sold California fruit at auction to-day as follows. Strawberry peaches, $1.45@1.50; hf boxes, 75c; Salway, $1.35@1.45; Muscat grapes, hf crates, $1.80; full crates, $3.50@3.55; Tokays, hf crates, $1.55@1.80; full crates, $3.10@3.30; Japan prunes, $2.50.

Porter Bros. Co. sold to-day seven cars of California fruit. Peaches, $1.15@1.50; full crates Muscat grapes, $3 65; hf crates Muscat grapes, $1.60@1.75; hf crates Tokay grapes, $1.55@1.65; full crates Tokay grapes. $3.50@3.70; hf crates Cornichon grapes, $3.25; Ickwith plums, $2; hf crates Cornichon grapes, $2.

CHICAGO, Oct. 3.—The Earl Fruit Co. sold California fruit to-day at the following prices: Grapes, Cornichon, $3.30; hf crates, $1.70; Tokay, full crates, $3.05@3.25; hf crates, $1.50@1.60; Emperor, hf crates, $1.85; White Malaga, $1.70; hf crates, $1.25; Muscat, full crates, $2.80@3.25; hf crates, $1.50@1.60; White Hollis, $2.35; Beurre Clairgeau, $3.55; Salway peaches, $1.30@1.45; Henrietta Cling, $1.50; Rose Cling, $1.40.

CHICAGO, Oct. 3.—Porter Bros. sold five cars of California fruit to-day at the following prices: Peaches, $1.20@1.50; grapes, hf crates, Muscat, $1.65@1.70; Tokay, $1.35@1.75; pomegranates, $1.10@1.65; Bartlett pears, $3.40@4.20; Beurre Clairgeau, $3.35; Howell, $3.35; quinces, $1.70@1.80.

NEW YORK, Oct. 3.—Sgobel & Day report the market strong on Tokay and Muscat grapes from California. The first cargo of Almeria grapes was sold here to-day. It amounted to 9000 barrels, and was sold at $3.50@6.50, all in good order. These barrels hold between 25 and 50 lbs., and the grapes are packed in cork dust.

NEW YORK, Oct. 4.—A fruit auctioneer says: "In about a week we shall have little, if any, fruit from California, because of rains there. The largest quantity of peaches that ever arrived in New York from California has been sold during the past 10 days, fully 50,000 boxes. Sales on Monday, Tuesday and Wednesday this week amounted to about 15,000 boxes."

CHICAGO, Oct. 4.—The Earl Fruit Co. sold to-day Seckel pears at $5; Winter Nelis, $2.30; hf boxes, $1.10; Vicar, $2.20; Tokay grapes, full crates, $3.05; hf crates, $1.55. Weather cloudy and rainy.

Porter Bros. Co. sold four cars of California fruit at auction to-day, as follows: Emperor grapes, full crates, $3@3.10; hf crates, $1.25@1 60; Cornichons, full crates, $3; hf crates, $1.40@1.60; Tokays, hf crates, $1.55; quinces, $1.75; Cling peaches, $1.40; Ickwith plums. $2.10@2.15; Muscat grapes, full crates, $2.75@3.20; Black Ferrara grapes, full crates, $2.50@2.70; Beurre Clairgeau pears, $3.05.

NEW YORK, Oct. 6.—Raisins are not plenty, and are steady. Loose Muscatels ranged $2.05@2.25, spot. Evaporated, unpeeled peaches are weaker in absence of the demand. There is a fancy trade, in a small way, paying 33½c for peeled. Apricots are firm and quiet. Dealers are for the time supplied. Prunes are weaker, perhaps one-half cent, under the late prices to sell. Good French are now 10@10½c.

CHICAGO, Oct. 6.—The Montgomery Auction Co. sold to-day five cars of California fruit at the following prices: Grapes, full crates, Tokay, $3 10@3.35; Muscat, $2.80@3.15; hf crates, Tokay, $1.60; Muscat, $1.60@1.65; Salway peaches, $1.35@1.50; Strawberry, $1.40@1.50; Beurre Bosc pears, $4; Vicar, $2.35; Winter Nelis, $2 25; Easter Beurre $2 20.

CHICAGO, Oct. 6.—Porter Bros. sold three cars of California fruit to-day at the following prices: Full crates Tokay grapes, $3.65@3.80; Muscat, $3.70; quinces, $1.80@1.85; White Doyenne pears, $3.15; Coe's late red plums, $1.85@1.90; Ickwith plums, $1.95.

NEW YORK, Oct. 6.—California prunes are quoted at 12½c ₩ lb.; walnuts, 7¾c; dried peaches, peeled, 33c; unpeeled, 22c; apricots, 20c; raisins, 2-crown, $1.80 ₩ box; 3-crown, $2.20; London Layers, $2.50. In hops there is little doing; Pacific Coast, 1889 crop, 25@32c ₩ lb.; 1890 crop, 40c. Selected California hides, 23@25 lbs., 12½@13¾c ₩ lb. California Spring wool is in fair demand at 18@21c. Several sales were reported during the week. Fall wool ranges from 16 to 18c.

California raisins are coming to hand, and, according to the *Commercial Bulletin*, are selling at full but unchanged prices.

PHILADELPHIA, Oct. 6.—The price of California grapes has advanced 50c ₩ crate here during the past few days. Tokays and Muscats are selling at $5 ₩ crate.

CHICAGO, Oct. 7.—The Montgomery Auction Co. sold to-day for account of the Earl Fruit Co. and others five cars of California fruits. Winter Nelis pears, $2.25@2.15; Beurre Clairgeau, $3.25; Vicar, $2.20@2; Easter Beurre, $2.30@2.25; White Doyenne, $2.75; Glout Morceau, $3.10; quinces, $1.75; Strawberry peaches, $1.30; Salway, $1.30; Muscat grapes, hf crates, $1.70@1.45; full crates, $2.80@2.75; Tokay grapes, hf crates, $1.65@1.30; full crates, $3@2.40.

Porter Bros. Co. sold to-day six carloads of California fruit. Tokay grapes, full crates, $2.60@3.50; hf crates, $1.25@1.80; Black Morocco, hf crates, $1.85@2.05; Muscats, full crates, $3@3.05; Muscats, hf crates, $1.20@1.60; Blue Malvoise, hf crates, $1.35; George's late peaches, $1@1.40; Duchess pears, $2.75; d'Alencon pears, $2.50.

NEW YORK, Oct. 7.—Five thousand one hundred boxes of raisins arrived to-day and must pay new duties. A market pointer to-day is in a cablegram from Bordeaux, saying that French prunes are still higher and are held firmly there at 43 francs for four sizes.

NEW YORK, Oct. 7.—The *Commercial Bulletin* reports a great demand for California apricots and says that they will be sold up earlier this season than usual.

CHICAGO, Oct. 8.—The Montgomery Auction Co. auctioned two cars of California fruit to-day for account of the Earl Fruit Co. and the W. R. Strong Co., at the following prices: Strawberry peaches, $1.30@1.35; grapes, Tokay, full crates, $3.15; Cornichons, $1.35; Black Morocco, hf crates, $1.70; Muscats, full crates, $2.65@2.75.

CHICAGO, Oct. 8.—Porter Bros. sold seven cars of California fruit to-day at the following prices: Tokay grapes. full crates, $2.75@3.50; hf crates, $1.35@1.55; Emperor, $2.50; Muscat, $1.15@1.40; full crates, $2.30@2.85; French prunes, $2.20.

NEW YORK, Oct. 8.—The situation in California raisins here is a little irregular. The goods coming in on contract seem to be taken without ceremony. The prices on future shipments are practically unchanged from the earlier quotations. California prunes are also irregular. The market is rather weak. Really choice are no cheaper.

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" Manilla, lb	14
Twine, for hops, balls, tarred, lb, Manilla	16
" " grape vine, balls, lb "	16½
" " " coils, lb "	16½
" spring, lb "	18
" binder (650 ft. to lb), lb	15½

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MR. H. E. AMOORE (of the Japanese Tree Co., 120 Sutter street, San Francisco) wishes his friends to know that he is likely to remain in Japan till December. His P. O. address is Yokohama.

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Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

APPARATUS FOR MAKING EXTRACTS.—George S. Andres, S F. No. 436,623. Dated Sept. 16, 1890. This is an apparatus for extracting from animal and vegetable fibers the fatty acids, oils and other soluble matter which may be contained in said fiber, all of which constituents are soluble in water or more volatile solvents, such as some of the hydrocarbons, bisulphide of carbon, alcohol, ether, etc. The object of this invention is to provide an apparatus of simple construction by means of which extracts may be obtained from animal or vegetable fiber, either in a continuous or intermittent manner, and which may be also employed for more perfectly removing dirt and other soluble matter from the fiber.

APPARATUS FOR MAKING EXTRACTS.—George S. Andres, S. F. No. 436,624. Dated Sept. 16, 1890. The object of this invention is to provide an apparatus of simple construction, by means of which extracts may be obtained either in a continuous or intermittent manner and which may also be employed for more perfectly removing the solvent from the extract either with or without pressure.

ANIMAL TRAP.—Frank White and Frank J. Murphy, Pomona, assignor of two-thirds to said White and one-third to said Murphy. No. 436,643. Dated Sept. 16, 1890. This is one of that class of animal traps designed for catching moles, gophers, etc., and in which opposing spring-controlled jaws are held separated by a suitable trigger which, upon being tripped, allows the jaws to close. The object of this invention is to provide a simple and effective trap of this class having jaws at both ends by which it is adapted to catch the animal coming from either direction.

FRUIT-PITTING MACHINE.—James T. Ish, S. F. No. 436,629. Dated Sept. 16, 1890. The fruit is placed in suitable cups, and as each cup of the series moves forward, the holders are opened and projected toward it, passing on each side. Then they come together on the front and carry it backwardly into position between knives which at this time have separated. Then the knives come together so that their cutting edges divide the fruit, while the points engage the pit of the fruit. When the knives have closed down on the fruit and cut its flesh from the pit, they then separate laterally, so that the points give the pit a kind of twist, while the knives themselves separate the flesh from the pit, and as the knives open again and the holders separate, the fruit is released and falls into a suitable receptacle below.

LAWN-SPRINKLER.—Thomas Scheen, St. Helena, Cal. No. 436,942. Dated Sept. 23, 1890. This sprinkler consists of a cylindrical head adapted to be fitted to the nozzle. The head has a central opening and a closed outer end. A slit is made with outwardly diverging walls from the central opening to the periphery of the head, and a socket is made in the opposite side of the head to receive a supporting pin. The location and shape of the exit slit provides for the proper area to be covered by the sprinkler and produces a fine, delicate spray like rain under light pressure and a mist under heavy pressure.

TRACTION ENGINES.—Daniel Best, San Leandro, Cal. No. 436,931. Dated Sept. 23, 1890. In this machine are a number of improved features. The general frame includes an angle-iron or bracketed frame with lugs, between which pass the side-bars of the main frame, and said angle-iron frame also supports the boiler. The location of the crank-axle and springs is a distinct improvement, and in connection with these and supporting brackets certain adjusting and brace-rods are used. The intermediate draft connections and the power-transmitting mechanisms are also features of novelty in the device, all the improvements in which are designed to better its working and increase its durability.

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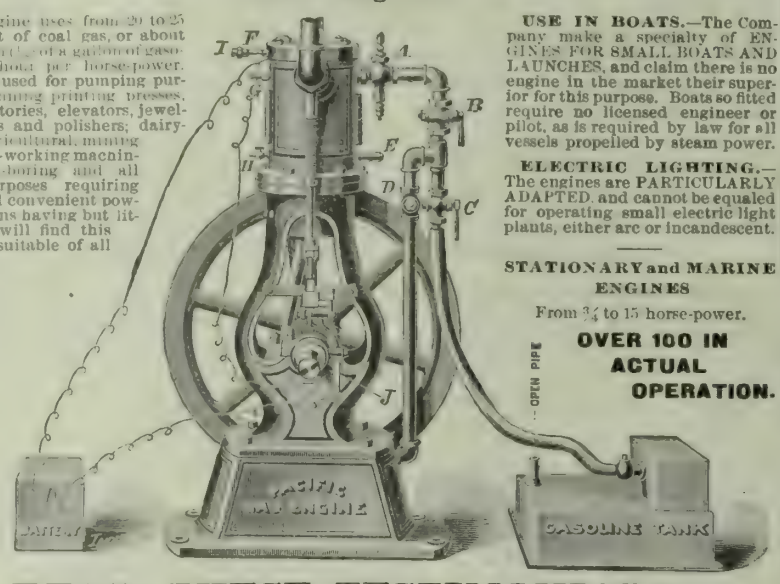
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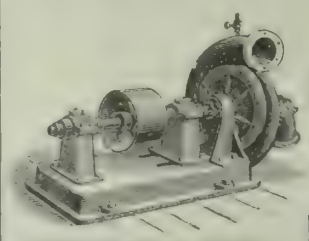
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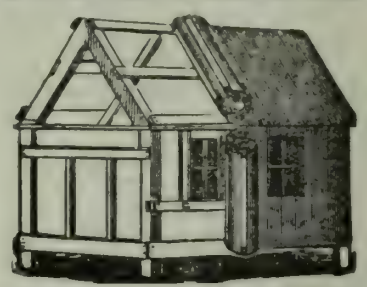
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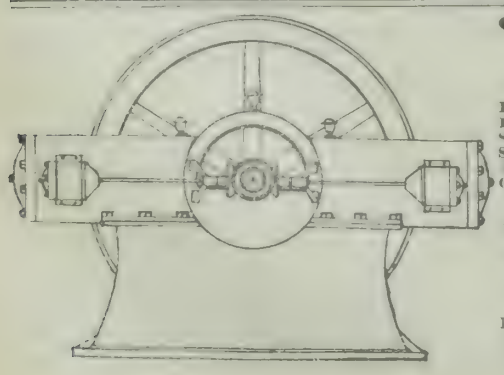


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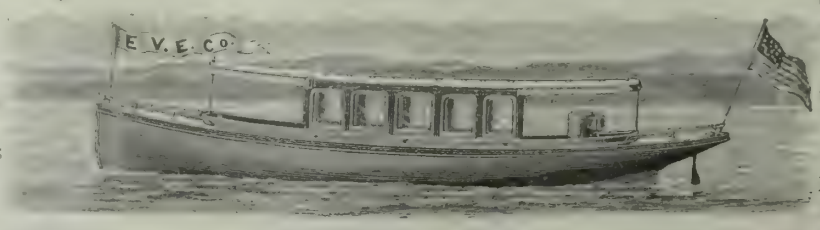
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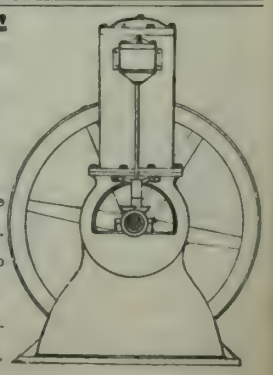
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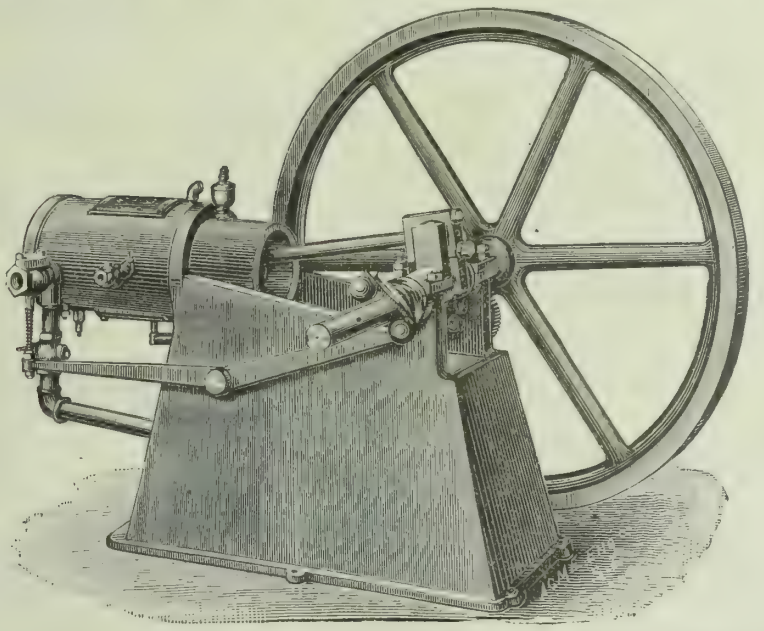
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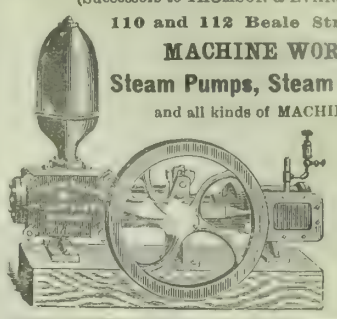
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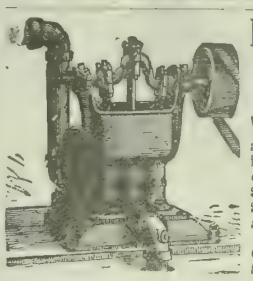
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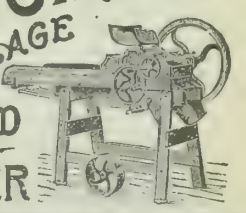
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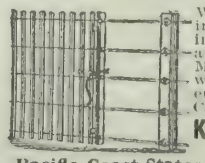
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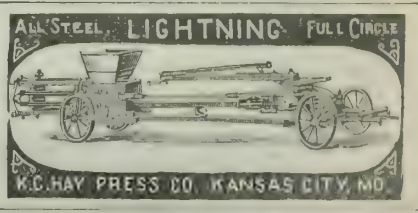
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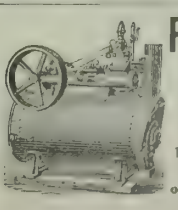
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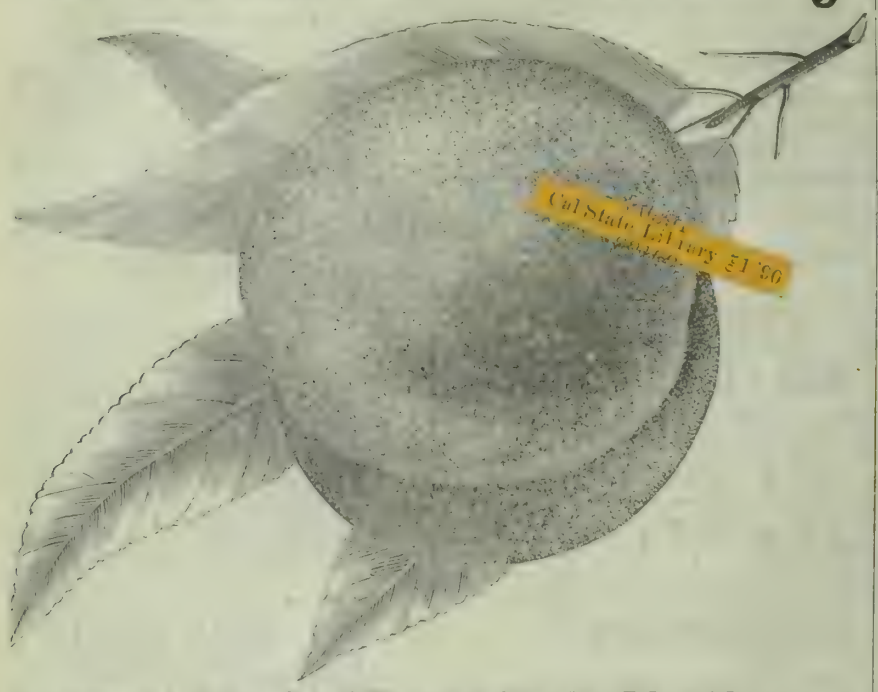




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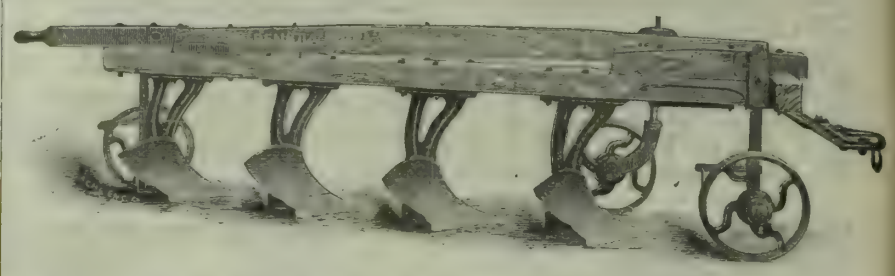
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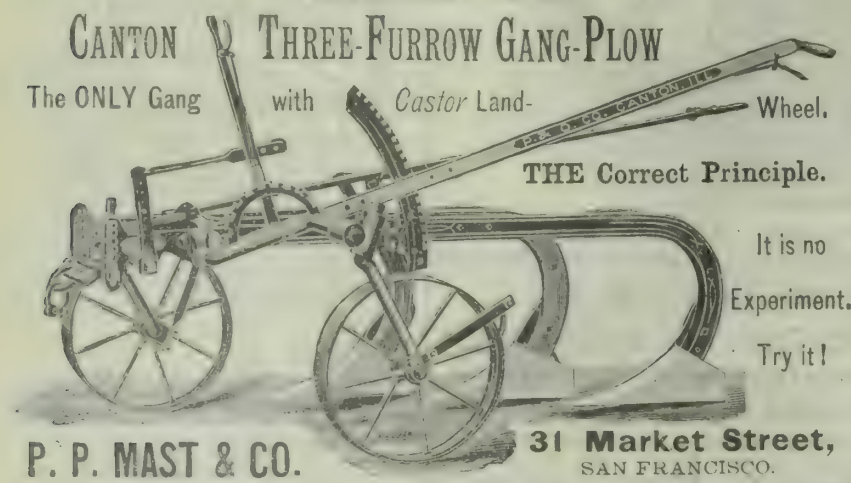
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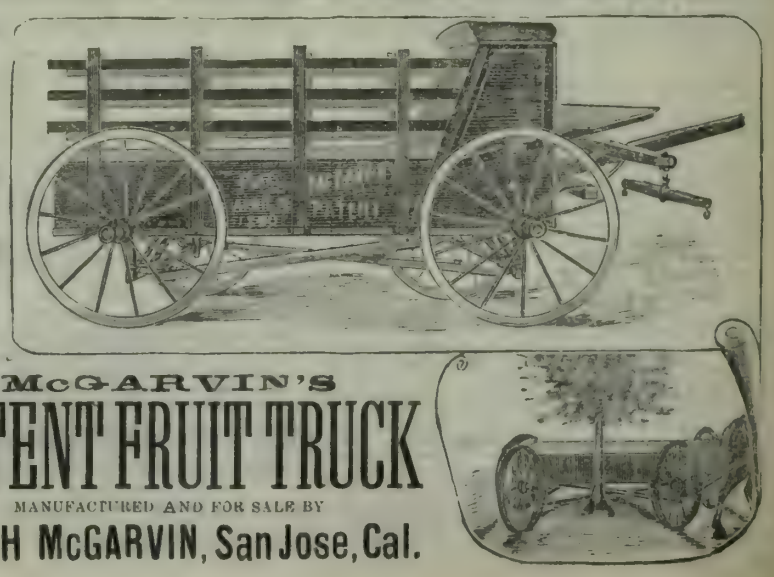
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PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XL.—No. 16. SAN FRANCISCO, SATURDAY, OCTOBER 18, 1890. DEWEY & CO., Publishers, Office, 220 Market St.

The Early and the Latter Rains.

The rain, which commenced on the 28th ult., was general throughout California, having been confined to that and the following day in some sections of the State, while in others it held on raining more or less for four or five days. While the precipitation in a few localities amounted to as much as 2½ inches, it did not generally exceed half an inch, being even less than that in most places. As a rule, this, like all premature and unseasonable rains in California, did more harm than good. It injured the grapes still on the vines, the unpicked hops and berries, and the raisins in process of curing some harm being also done to the dry grass and the sacked grain left uncovered or but partially protected. The only good that resulted from this rain was the laying of the dust, thereby rendering everything more cleanly, and travel more comfortable. But despite such small benefits nowhere did this rain meet with hearty welcome.

While some affect to see in these early rains the indices of an early or a late, a wet or a dry winter, as the case may be, they really seem to have no significance one way or the other. They have preceded some of our wettest just as they have preceded some of our driest winters.

Ever since our people came to occupy California we have been trying to obtain some clue by which to predict the character of our winters. We have consulted the Indian and studied the habits of the provident chipmunk and the sagacious woodpecker, but as yet to little purpose. During all these years we have been seeking a sign, but no sign has been given us save the sign of the prophet Jonah, and that has proved of hardly more use than the signal service, which presumes only to prognosticate the weather from day to day. We have need of something more far-seeing than this—something that will denote, if not the date of its advent at least in a general way the more notable meteorological features of the coming winter. When will arise the sage who will be able to supply this desideratum? What a boon would it be to the race.

Black Hamburg Grapes.

Our engraving shows the Black Hamburg, a popular table grape grown largely for local marketing in California. The variety is a very old one and has long been considered the first of the black grapes for winery culture. Downing says it very rarely perfects its fruit out of doors, but of course California does not come under that ruling and the variety grows most luxuriantly and produces the most perfect fruit. The engraving shows a section of a Black Hamburg vine as growing on one of the Haggin & Carr ranches in Kern county.

The Black Hamburg is popular here both for arbor and trellis culture, as well as for common short-pruned vineyard. We have in this State some magnificent single vines growing over trees and buildings, and, if we remember correctly, some of them surpass the dimensions of the famous Hampton Court vine, which is of the same variety. As grown in California, the Black Hamburg is a very showy grape, its cluster large and its berries large also, and though hidden by a dense bloom, which gives the fruit the whitish appearance shown in the engraving, the skin is a jetty black, with a high luster when fully ripe. The picture is, of course, much below natural size, for the clusters often attain a length of ten inches and the berries are proportionally large. The flavor of the Black Hamburg, though characteristic, is acceptable to most people, and it is counted as one of our most delicious table grapes.



BLACK HAMBURG GRAPES AS GROWN IN KERN COUNTY.

THE LATEST THING IN "PALACES" is the Interstate Hay Palace, opened at Momence, Ill., Oct. 1st. The building is 206 feet in length and 186 feet wide in the center. The main hall is a circle 103 feet in diameter, with wings on the four sides. The walls are built entirely of baled hay, with just enough baled straw to make a pleasing contrast in shading and color. The structure is to house exhibits of the varied products of Eastern Illinois and Western Indiana, of the farms, factories, forests, mines, quarries, and of the arts, domestic skill, etc., of the people of the district.

POULTRY YARD.

Care and Diseases of Poultry.

EDITORS PRESS:—What a time we have been through with poultry and eggs! The gathering at San Francisco of the Native Sons of the Golden West and their friends and of all those who assembled to witness the "doings," tasked, no doubt, the "entertaining" ability of the Queen City severely. What lots of fowls and eggs they consumed, so that in spite of their bringing with them, as one might say, so many carloads of Eastern poultry, our own had a chance to go off at very fair prices. This does not often happen now, as if one thinks the opportunity favorable for a good price and sends down a lot, expecting to sandwich them in between two lots of Eastern, he is sure to find that the day his got in market there arrived from one to a half-dozen carloads overland, and he is forced to put up consequently with a price which does not give him any satisfaction whatever. In view of such things, one is tempted to think that there is nothing in raising fowls for market, but the fact that they do raise them in the Territories or Western States and continue to put them in our markets at the price they bring would seem to prove conclusively that they either are satisfied with very moderate profits or that they raise them so economically that the profit seems to them sufficiently good. No doubt where corn is so cheap as to warrant them in using it as fuel, fowls can be fed very economically, particularly where one has his own land on which to raise his feed, and I think one having his own land in California can raise his feed as cheaply as he can East. Not in corn, perhaps, which does not produce well in all places, but in wheat, barley, rye and Egyptian corn, as well as vegetables, we can, I think, raise feed at as little cost as they can if once we get in the way of trying it earnestly.

Green Stuff for Fowls.

As I have before said, our young growing fowls can be fed almost entirely on green stuff of various kinds chopped and perhaps mixed with a sprinkling of bran or middlings, and even laying fowls can be fed largely in the same manner. I have corn of the large yellow variety as high as ten feet, with of course quite a thick, hard stalk, which I chop for them and mix with their mush in equal quantities, and they eat it all readily, eating first the pieces of stalk which, although somewhat pithy, are still juicy. Afterward they eat the leaf, but eat all, and having a supply of chopped corn, carrot tops or cabbage to work on through the day, it keeps them bright and fresh-looking and in good condition. For this purpose sunflower seed fed to them occasionally is good also, but like corn (or even more so) it is very fattening and should not be generously fed, as a fat fowl is comparatively a poor layer, especially where yarded and deprived of the exercise it would have on a free range.

I am inclined to think that when fowls are yarded, particularly in somewhat small yards, the tendency is to overfeed, which I consider another argument in favor of feeding green stuff plentifully, as even when quite fleshy, if fed in this way, it does not seem to lessen the number of eggs as it would do if fattened on corn or wheat.

On two acres of land, well watered, enough green stuff can be raised to feed 2000 hens and to spare, and at trifling cost, and 20 acres in grain, which in these days of combined harvesters need not cost one (outside his own labor) more than $2 or at the outside $3 per acre in sacks, on his own land, would furnish the necessary grain. One man's labor is sufficient (except the harvesting) for all this and the necessary care of the fowls, particularly if he has a family inclined to be helpful in the care of the chicks. Therefore it seems to me that we really could prepare ourselves to meet successfully competition prices if we gave ourselves determinedly to the effort. We need very little, really, that we cannot raise ourselves, such as gravel, shells, charcoal and some lime. These things, if we except the shells, are of trifling cost and fill a very small place in the expense list.

Labor-Saving Arrangements.

I read not long since a description of the manner in which the fowls on a large poultry farm were kept and fed. Being kept in yards, the yards and houses were arranged so as to leave lanes so that each yard could be reached readily by a cart containing the feed, drawn by a horse with a driver who gave out the feed to each yard without the necessity of getting down from the cart. He afterward followed with the water in the same way. I suppose this could be done, but I have learned to believe it needful to clean their feed and water vessels each day, particularly the water pans, which collect a green, poisonous slime if not washed each day with a cloth thoroughly. The eggs were collected, I believe, much in the same way by having the nest-boxes arranged along the side of the house or yard at such a hight that the driver could reach them from the cart. The writer dilated on the amount of time and labor saved, needing only one man, a cart and a horse.

I don't know but that method might be successful for a time, but I do not think that they could continue it long without introducing disease and vermin among their fowls. I have raised poultry as a business for many years, and have never failed to find that neglect or a slighting, wholesale way of keeping fowls in quantity means loss, and to be successful as a poultry-raiser one cannot afford to neglect or omit any detail, however small or unimportant it may seem in the proper care of fowls. This is why, as a general thing, women are more successful than men in raising chicks. Things, which to a man who has not learned to the contrary, seem trifling and fussy, have their due importance and are not omitted, and the result is paying returns.

Fowls are small animals (perhaps I should say birds) and small things affect them for good or ill. A hen, if a good laying strain properly kept, will pay easily enough a dollar a year profit, while the same hen, neglected, might be considered a very poor layer and altogether unprofitable. This happens so many times, I have no doubt it is owing altogether to the kind of care and not so much to the kind of fowl which one pronounces a good or poor layer; and this brings to mind the practice of a neighbor, a brother poultry man of several years' experience, who, during the time of low prices in eggs, does not care to have his fowls lay and feeds them accordingly, so that during the high prices, his hens being fresh, he feeds them up and starts them to laying. Although I have never tried that, I have no doubt that there may be something in it. Fowls may be stinted in food until they haven't the heart to try to lay and are satisfied to merely try to live, but I should be afraid that it would do them a permanent injury and that they might after awhile refuse to lay under any circumstances. But in poultry-raising, as in many other pursuits, there is always something to learn, and among the things not yet learned is

How to Determine

A hen's age, or rather how to know when a hen is an old hen by any marks, signs or appearances it may carry. A hardening or stiffening of the whole bony structure, a thickening of the legs and an increase of scaliness, and perhaps a thickening and overhanging or protruding of the skin over and around the eyes are the only signs known to me by which an old fowl may be known unless it is excessively old. It seems to me that a good practice by which to indicate a fowl's age would be to cut a slit in the comb, much as one earmarks an animal, for instance, marking always at one certain time in the year. One slit in such a manner as to cause a portion of the comb to lop would indicate a year old and two slits a two-year-old, etc., and such marks can be easily seen when desired. Marking with a shoe-punch between the toes would make it necessary to catch the fowl to examine it, while the comb-mark, if properly made, could be seen without this necessity.

Where fouls are yarded, one can keep run of their ages without necessity of marking in any way, as, for instance, supposing it desirable to sell the three-year-old fowls, they would be found in yard No. 3, and when removed from the yard the fowls from No. 2 should be moved into the vacant No. 3 and those of No. 1 moved into No. 2, and that year's hatch into No. 1, and so on. In this way a tolerable certainty could be arrived at; there would be an occasional "fly-over," but not enough to affect the general result materially, and this method I think would be open to less objections than would any other that I have known of. Where fowls were not yarded, the combs might be marked in the way indicated above, and if any poultry-man has knowledge of a better method, will he, for the good of the fraternity and for the benefit of would-be poultry raisers in general, please communicate it? As a general proposition, there is comparatively little profit in keeping an old fowl, or a fowl that is three years old. Some breeds hold out longer than others and occasionally fowls of the same breed will continue to lay long after the balance have ceased to be profitable as layers, but a safe method is to sell everything at three years old and fill their places with younger ones.

Feeding for Eggs.

There is a great deal in feeding fowls in such manner as to make them good layers, and while I do not advocate the forcing or stimulating of fowls to make them lay, I do believe in getting and keeping them in the best possible condition by careful and regular feeding of good and nourishing food in proper quantity—sufficient but not too much, as overfed fowls become dumpy and refuse to lay. By condition I do not mean fat or flesh, but a bright, fresh, healthy appearance, indicating that the fowl is in its best state for the doing of its full duty as an egg-producer, and with the fowl in this condition, not only are the eggs produced more in number, but they are larger and finer and contain more nutriment, are richer in flavor and in every way than an egg laid by a poorer or an overfed fowl, and for this reason eggs from properly kept poultry farms, and known as "selected ranch eggs," are always in demand at higher prices than are eggs from poultry allowed to forage for their own food and getting little care. Such eggs come into market through the stores and are known as "store eggs," which eggs, by the bye, are not always quite up to the mark in goodness, as witness the experience of a friend of mine not long since (during the hot months), who, on buying a dozen eggs at the store and finding only three of the dozen good, begged the grocer to give him three more eggs that he might stand a chance of getting a half-dozen at least out of the dozen. I am willing to admit, however, that this was perhaps an extreme case, and that store eggs are not always quite so bad as were these.

Where one desires to feed egg food he will find the following receipt, I think, as good as any and as little hurtful, in fact they are all things constantly needed by fowls to keep them in proper laying condition: 10 lbs. best ground beef scrap, 5 lbs. fine ground bone, 2 lbs. granulated or powdered charcoal, 1 lb. sulphur, 2 oz. cayenne pepper, 4 oz. salt.

One quart of this mixture to every hundred fowls say twice a week will be found helpful, and is to be given in soft food.

In this connection I would say also that fowls should be fed morning and noon a mush of middlings (unless very rich, when bran should be mixed with it) mixed with scalding water or milk, and milk is much the best, as stiff as can be made. At night a feed of grain, principally wheat, but barley, rye, buckwheat, or an occasional feed of corn, may be used also, and for the mush a mixture of ground rye, barley and oats, with an equal bulk of bran, may be used in the place of the middlings. I have been for some time past substituting fine-cut green stuff for half the middlings or ground grain mixture of the mush, and find it excellent.

I know of no other one thing so good as a plentiful supply of green stuff to keep fowls bright and fresh-looking, and consequently healthy. With regard to the

Diseases of Fowls,

Very little is really known, and as in the human family, prevention is better than cure, and to this end unfailing care in supplying the necessary amount of healthful food and fresh, pure water, clean, well-ventilated quarters free from vermin, is essentially needful. Whitewash does no harm, and among my hen-houses I have one, and only one, whitewashed, but all are free from vermin of any kind. Neither have I found it requisite to use carbolic acid or coal oil, or coal tar, or any of the numerous insecticides or disinfectants, but I clean thoroughly and regularly my houses and yards at least once per week and see that my fowls have dust-baths.

Sitting hens and little chicks require generally some treatment to keep them clean and free from lice. Persian insect powder or carbolic powder and sulphur carefully used on the head of each chick is amply sufficient for this purpose.

With regard to Dr. Gally's fowls and their death from some disease, no one, I think, can tell with any certainty what the disease was, but I should say from what he says of the manner of their death that it was chicken cholera, and for this there are many "infallible remedies," but I regret to say that they don't always cure. Of course, nothing can now cure Dr. Gally's, but if he has any more attacked in this way he had better yard them and give them water with a teaspoonful of liquid carbolic acid to each quart of water, and not allow them any other, and keep everything about them clean and dry, and constantly disinfected, for which purpose lime or wood ashes is probably as good as anything. Phenyle is also good and inexpensive. I have seen also a plentiful use of strong alum water highly recommended, as mixing their food with it twice a day for two or three days, afterward once a week, or you may put in the feed for one dozen fowls a tablespoonful each of red pepper, gunpowder and turpentine, thoroughly mixed in, and give them this every other day for a week or so. Then there are methods of treating each fowl separately, which would not pay except in the case of a valuable fowl; as I have before said, prevention is always best, for doctoring is generally uncertain.

Lodi. T B GEFFROY.

THE IRRIGATOR.

The Wright Law.

We received the following from an old and valued friend, Alfred Cridge, of the S. F. *Weekly Star:*

SAN FRANCISCO, Sept. 24, 1890.

Mr. J. W. Mackie—SIR: (1) Have you formed any opinion on the Wright Irrigation law? (2) Does it, or not, give undue advantage to holders of large areas of unimproved land for speculation as against holders of small, well-improved farms, vineyards, etc.? (3) Does it, or not, tend to clean out farmers with small means by compelling them to pay a high price as a tax on construction before they are in a position to utilize the water, thus, in a measure, forced prematurely upon them? (4) Would it not be more in the interest of the small farmer if the tax was levied mainly upon owners of large areas of unimproved land, no improvements taxed, etc., and no bonds at all?—ALFRED CRIDGE.

1. Yes, a very favorable opinion.

2. It does not, and offer as evidence the very decided opposition of owners of large areas of land to the formation of irrigation districts. One irrigation district is rendered inoperative by the manipulations of the owners of large tracts of land. The holders of small, well-improved farms, vineyards, etc., are the most benefited by the irrigation-district system, which eventually must compel the breaking up of large farms, for the unimproved farm has to pay as much per acre to the tax-collector as the owner of a ten-acre vineyard.

3. We admit the hardship of paying up before the realization of benefits. Farmers are used to that; they have to do it every year. Seed-time comes before harvest and sometimes there is no harvest, especially here when there is no water. Water we must have, and but for the Wright Irrigation law it would be impossible for us to get any, as the owners of large areas of land, by appropriations of water gained by their ability to maintain lawsuits and other ways better known to them, so manage it that small farmers are left high and dry. The Wright Irrigation law gives the poor, small land-owner a greater power than he ever possessed before

4. Why, yes! If the owners of large areas of land, whether improved or unimproved, paid all the taxes and the cost of construction, it would most decidedly be for the benefit of the small farmer, and if our friend Cridge will only so arrange it the small farmer will be exceedingly glad. But the small farmer is willing to pay his just proportion of expense. No bonds at all! How otherwise is the money to be raised? For it does require money to build reservoirs, excavate canals, and all the appurtenances necessary to an irrigation system.

With friend Cridge, we believe that it would be better to not tax improvements on lands for any purpose. The man who improves land should receive a gratuity instead of being fined for conferring a benefit on the public. The taxation of lands only is an excellent idea, whether the single-tax idea be good or not. The National and State Government might have other sources of revenue and should. But it is not yet A. D. 2000.

The law regulating assessments is: Section 17. Said bonds and the interest thereon shall be paid by revenue derived from an annual assessment upon the real property of the district, and all the real property in the district shall be and remain liable to be assessed for such payments as hereinafter provided.—*J. W. Mackie in Tulare Register*

HORTICULTURE.

Fig-Growing.

At the last meeting of the State Horticultural Society there was a long discussion on fig-growing. The following outline was prepared by Charles S. Aiken, a member of the society, for the *Evening Bulletin:*

An interesting address on the Smyrna fig was given by Dr. Gustav Eisen. He related that in the fig plantation at James Shinn's at Niles, among the trees grown from *Bulletin* cuttings he had found three of the five known varieties of choicest Smyrna figs, and he had found also growing with these trees a number of Capri figs, the wild fig of Greece and Asia Minor. There was very little fruit to examine, but the leaves and habit of growth denoted the characteristics of each variety. Some leaves were full lobed, some three; some were sharply serrated, others smooth-edged. There were distinct features enough to show beyond all question the presence of three varieties, highly prized abroad for their large and delicate fruit.

"These varieties," Dr. Eisen said in response to a question, "are without doubt the true Smyrna, and as such they are destined to be of great value to the State. I am thoroughly satisfied that they are a very distinct type from the White Adriatic fig, grown here, and far superior."

Very unexpectedly, following these remarks and subsequent discussion, E. W. Maslin of Placer, who has made a special study of figs, corroborated Dr. Eisen's views as to the identity of the *Bulletin* fig. A leaf shown by Dr. Eisen taken from one of the Niles trees, is precisely the same in shape and structure as those on Mr. Maslin's trees, which he raised from seed taken from a box of the best imported Smyrna figs that he could get in the New York market.

The value and use of the Capri fig, found with the Smyrna importations, were explained by Dr. Eisen in detail. It is the fig that is relied upon in districts of the Old World for caprification purposes, for the little insect, *blastophaga*, breeds only in these wild figs. Some fruit taken from the Niles Capri figs were examined and found to contain, differing from other figs, traces of both male and female blossoms. The precise difference in formation between the Capri and other figs was explained by blackboard illustration. The value of caprification was explained in great detail. In summary, Dr. Eisen's views were that caprification is necessary for the Smyrna fig, in order to produce paying crops of fruit. It will set its fruit without caprification, for some figs matured this year at Niles, but, in his judgment, the trees will not bear in abundance without caprification. This matter of caprification is easily managed. Since the trees are here, the insect which makes its home in them may easily be obtained by importation, and with them perfect fruit and more of it on Smyrna trees may be assured. An obstacle similar to this was met by West India planters some years ago when they started to raise vanilla beans. The bearer would not mature until they brought from South America a pollen-carrying moth which made fruitful the otherwise barren blossoms. In figs of this type, it is claimed by Dr. Eisen, caprification will increase size and yield, will prevent possible scurfing, and will make the figs drop in every instance when ready for gathering. The White

Adriatic sets fruit without caprification, but its fruit is not perfect. Its seeds will not reproduce. There is a wild fig similar to the Capri in Lower California, but the fruit of the Capri is about 50 times larger than this native fig. Any failure of the wild fig crop in the Smyrna districts is regarded by the natives as a great calamity because then all the fruit, from the effect of non-caprification, has to be cut from the trees instead of picked from the ground where it falls. There has lately been much complaint around Fresno of White Adriatic figs souring; caprification would likely prevent this trouble. Apparently figs sour more in hot interior districts than where fogs prevail. In order to produce botanicaliy perfect fruit, caprification will be found necessary, anu the speaker expressed confidence that in the future the practice will be thought all-important in fig-growing.

A member suggested that some of the finest fruit is really imperfect. The cultivated banana produces no seed, neither does the Washington Navel orange, nor the Sultana or Thompson grape.

Secretary Lelong of the State Board of Horticulture took issue with Dr. Eisen as to the need of caprification for successful fig-culture. Recent European correspondence has given results of tests made in the Grecian archipelago. There trees have been entirely inclosed in tents and kept from the pollen-carrying insect, and yet those have borne and ripened figs as well as trees freely exposed. In some places it has been found that the fruit simply ripened earlier with insects than without. The French Minister of Agriculture has lately recommended the entire abandonment of the practice of caprification.

Dr. Eisen, replying to Lelong, said that, so far as the best authorities state, there are now no true Smyrna figs, similar to these *Bulletin* figs, in either Italy or France. So, if the Minister of Agriculture of France discourages caprification, he is considering a matter which he likely knows nothing about.

Regarding treating figs, Secretary Lelong favored sulphuring by careful fuming, claiming that the process was necessary to kill all fungus. He showed some of the Delemater figs from Placer sulphured in this way last year, and defied any one to detect the traces of sulphur.

Mr. Maslin expressed the belief that sulphuric fumes gained entrance to the fig, generating gas that would spoil the finest fruit.

Mr. Maslin said he had not yet made up his mind as to the value of caprification here. His fig-growing experience dated from 1885, when he bought a box of the largest Smyrna figs he could get in the San Francisco market and planted the seeds. Last year some of the trees from these seeds bore. The leaves varied in form, and the fruit of these reputed white Smyrna, some of it, at least, was blue as any ever seen and nearly circular in shape. In 1886 he obtained from New York another box of Smyrna figs, the largest he ever saw. The following year he set out seven acres of young trees from these seeds. Last year they had sent up shoots nine and ten feet high, and four trees bore about two dozen figs. They were yellow-skinned, with amber meat and very sweet. He decided he wanted stocky trees, so he cut the long shoots back. The result was disastrous, for some branches died, some trees died, and none bore any fruit this year. From this experience, he has decided to never again prune a fig tree. Fully five per cent of the trees in his seven acres planted hexagonally, 25 feet apart, have died, but the rest are doing well, and choice fruit is looked for next year. The leaves of trees from his New York seeds are similar as above noted to some of those found by Dr. Eisen on the *Bulletin* Smyrna trees at Niles. From his observation of figs about the State he is satisfied that the foothills are best adapted to fig culture, producing the thinnest skinned and by far the sweetest fruit.

Emory Smith referred to sulphuring figs, condemning the indiscriminate practice. He told lately of testing some figs in the local market which came from Fresno. They had bee sulphured so much that they were as tasteless as so much cotton.

[This discussion was followed by one on orchard cultivation, of which we will give an outline next week.—EDS. PRESS]

Prunus Simoni—Olives.

EDITORS PRESS:—In the report of proceedings at the August meeting of the State Horticultural Society, the *Prunus Simoni* is recommended as a profitable fruit. Surely the Winters shipper who got $2 45 for 17 fruits could not have had the genuine *Prunus Simoni*, which is a worse fraud than even the Kieffer pear. The fruit has a fine aroma, which was probably the attraction with the buyer, who, now that he has tasted them, would probably not give $2.45 a ton for them. The fruit resembles in shape and color a medium-sized red tomato, is firm-fleshed, and would therefore stand a long journey, but it is uneatable until dead ripe, and even then is both sour and bitter. Mr. Barbank, my predecessor, being charmed with the description of the fruit by Prof. Budd, and wishing to be up with the times, secured buds to bud some orchard trees, and also propagated some nursery trees which were among the stock purchased from him two years ago. When the orchard trees bore we watched the fruit with interest, but it was found to be utterly worthless, and I had the budded branches cut off. In my first catalogue I described it as a "large, showy, red, Chinese plum—very sour till ripe, peculiar flavor." Of course, such faint praise failed to sell the nursery trees, which, however, did not trouble me, as I wish no "cuss words" connected with my name by disappointed customers. If we wish to ship plums to Europe, why not plant the Kelsey or the Satsuma, which will ship equally well, and have a much better flavor than the *Prunus Simoni?* The Burbank excels all three in flavor, and, though not so good a shipper as the abovementioned, it will stand a much longer journey than any of the American varieties.

Olives.

As the time has come for buying trees, some of your readers might wish to know how olives do in wet ground. Most people suppose that, as they do well among rocks and on hillsides, they will not stand much moisture. Our experience last winter proves that they will stand much more moisture than peaches, for we had peaches and prunes on peach roots killed on both sides of a row of olives four feet distant (and on same level) which survived the winter without apparent injury. True, we had some olives killed in low places where there was a hardpan beneath, preventing drainage, and the ground was quite soft for two months. Some rows of olives, which were too small to sell, stood under an inch or more of water during every heavy shower, and yet they came out all right and are now alive.

I may add, in this connection, that the improved varieties stood the frost and excessive moisture as well as the Redding Picholine. The Manzanillo, for instance, will withstand even more frost than the Redding, while the True Picholine Columella and Manzanillo are all more vigorous growers than the Redding Picholine.

R. W. BELL.

Santa Rosa, Cal.

[These notes are interesting. There must certainly be confusion about this *Prunus Simoni*. We have seen specimens grown by I. A. Thomas of Visalia, which we did not consider so objectionable in flavor—in fact we liked them well for so early a variety. We notice, also, that there is much difference of opinion at the East about Prunus Simoni. What do other growers think of it?—EDS. PRESS]

Arsenical Sprays on Peach Trees.

Prof. Bailey of the Cornell University Station has been experimenting in spraying peaches this year, and in a bulletin just issued announces the following summary of his results:

1. Peach trees are very susceptible to injury from arsenical sprays.
2. London purple is much more harmful to peach trees than Paris green, and it should never be used upon them in any manner.
3. Injury is more liable to occur upon full-grown foliage and hardened shoots than upon young foliage and soft shoots.
4. The immunity of the young growth is due to its waxy covering.
5. Injury late in the season is more apparent than early in the season, because of the cessation of growth.
6. Injury from the use of London purple may be permanent and irreparable.
7. The length of time which the poison has been mixed appears to exercise no influence.
8. London purple contains much soluble arsenic (in our samples nearly 40 per cent), and this arsenic is the cause of injury to peach foliage.
9. A coarse spray appears to be more injurious than a fine one.
10. A rain following the application does not appear to augment the injury, and it was shown that the arsenic passes at once into solution without the aid of rain.
11. Meteorological conditions do not appear to influence results.
12. Spraying the peach with water on a bright and hot day does not scorch the foliage.
13. Paris green, in a fine spray, at the rate of one pound to 300 gallons of water, did not injure the trees. Probably one pound to 350 gallons is always safe.

FRUIT PRESERVATION.

Sulphuring Fruit Not a Mistake.

EDITORS PRESS:—I submit the following propositions:

First—Sulphured fruit dried on wood on wooden trays contains no sulphuric or sulphurous acid, provided the fruit is thoroughly dried.

Second—If it does, those acids taken in small doses are not poisonous, but beneficial to the human family.

Now I will leave the first proposition to any fair-minded chemist in the State to decide. Sulphur when burned in air is oxidized to two degrees, or is a binoxide. To oxidize it higher, it must come in contact with nascent oxygen and must be confined. This is done in a leaden chamber by chemists in the presence of fuming nitric acid, the leaden chamber having on its upper surface a large *bell glass* for the operator to see through so that he can tell when the reaction is going on, or if in presence of a metal oxide, this dioxide of sulphur will form a sulphite, which, when exposed to the atmosphere, will slowly change to a sulphate or higher salt. So we see here where our chemists have been getting their sulphuric acid from—their *evaporated* and not from their *bleached* fruits.

Now I took some bleached fruit not long since, and placed my "Qualitative Chemical Analysis," by Fusenius, before me so I should not make any mistake. The fruit had stood over night in distilled water. I used barium chloride and pure hydrogen chloride. I proceeded to make an analysis of my bleached peaches, and the result was what I expected—I got no *precipitate;* therefore, no sulphurous or sulphuric acid. Had they been evaporated, I should have gotten sulphate of barium showing the presence of sulphuric acid.

Now when we bleach fruit it contains large quantities of water. This water absorbs the sulphur dioxide in large quantities, and as the water is given off in the air the sulphur dioxide is liberated and leaves the fruit, hence the necessity of drying thoroughly in open air.

Now about the flavor. This is generally destroyed by stacking the fruit in large piles, as it is taken in before cutting and is sometimes entirely lost in this manner. If the essential oils have been broken up from the tissues of the fruit by standing and heating before being cut, then the heat of the bleaching process will complete the work and the fruit will come out tasteless.

Fruit containing sulphuric acid in small quantities is not poisonous, but in a malarial country is beneficial to the persons eating it, so say John Scudder, Dunglinson and many more medical men, since the sulphuric acid is an anti-zymotic; but this would cause less "calls" for a physician. Let us be sure that we are right as drying-men and go ahead. Let us have ripe, fresh fruit, placing it on wooden trays, bleaching thoroughly and drying in the same manner. People want such fruit and will have it. It looks nice, and for the sick person this is a great consideration when he has no appetite. Growers, if you want to sell your fruit, follow the hints given by that able article published in the PRESS in June, I believe, from a friend in San Bernardino. All the points for drying were given there in a nut-shell, and one that any person could crack.

Los Gatos. J. J. SHANER.

[The article on fruit-drying to which Dr. Shaner refers approvingly was published in our issue of Oct. 4th —EDS. PRESS]

THE FIELD.

Rice-Growing Suggested.

Horace D. Dunn of this city writes to the *Bulletin* suggesting the trial of rice-growing in this State and giving the following information:

Soil and Location—The soil should be of a mucky or swampy nature, so situated as to permit drainage and of being supplied with water by gravitation or machinery when required. The place for an experimental trial should be located the farthest up stream where overflow can be most readily controlled. I suggest location in Colusa, Butte or Sutter counties, so as to reduce the expense of levees, and obtaining water as low as possible.

Time and Method of Planting—Rice can be planted as soon as danger from late frosts is past, say from the 10th to the 20th of April. The land should be prepared as for wheat, and if the rice is sown in drills, as is the case in the Atlantic States, it should be flowed afterward with, say an inch of water, increasing the same as the plant grows. Until the plants grow so as to shade the ground between the drills, twitch grass and weeds will have to be removed by using long, light rakes. In Japan and Hawaii a seed-bed is used and the plants transplanted, thus saving considerable time and labor. One acre in rice sown broadcast furnishes plants for ten acres transplanting. Transplanting is done when the plants are about a foot high. The plants are made into small bunches, a number of which a man carries in his apron, which, being tied at the waist, makes a sack open at both ends, between waist and neck. Taking a bunch of plants in his hand, the man walks backward between the levees, at every step planting from three to five plants together in the mud—which is half a leg deep—until the other levee is reached. Then facing around and stepping a pace sideways, he goes backward, planting as before. This operation is repeated until the field is planted. By this plan the rice gets such a start that very little weeding is done. The water is increased in depth as the plants grow, care being taken not to cover the joint where the leaves separate, except temporarily, so as to prevent thrashing the blossoms, or grain, when heavy winds blow. A constant small flow of water can be repeatedly used in several fields below, through a system of water gates cheaply and simply made. When the rice is in a doughy state the water should be drawn off, enough moisture remaining in the soil to perfect the grain, the sod becoming firm enough to harvest upon. Harvesting is done by the sickle, or cradle, the grain being left in sheaves to harden until thrashing is done. The stubble forms a thick sod which, in Japan, is cut into brick shapes and turned over by the use of a heavy hoe. If the land is only used for annual crop of rice, this sod is left to the disintegrating powers of wind and rain until just before planting, when a flow of water returns it to its original condition of mud.

Enemies of the Rice Plant—These are weeds, water-rats and birds. By transplanting, weeds give little trouble; water-rats, when numerous, are killed by dogs, and birds driven away by scarecrows or occasional shooting.

Seeds—There are a large number of varieties of rice grown in tropical and sub-tropical countries. Those which have the highest value among the rice-consuming population of this State are as follows: The true No. 1 rice from China, "damio" rice from Japan, long-grain pearly rice from Batavia, Dutch East Indies; the largest long-grain rice from South Carolina, some of which, prior to the Civil War, was had ⅜-inch long and pearly in color. Many years ago similar rice was imported from San Salvador, Central America, and Peru, and probably can now be obtained from those places. It would require probably fifty pounds of seed to plant one acre.

Labor—One of the fallacies about growing rice is that the labor is both degrading in character and not suitable for white persons. The facts, so far as Hawaii and Japan are concerned, are that the labor of preparing and planting the rice-fields is not more severe than our duck-hunters and net-fishermen experience, and does not extend over a period of more than four or six weeks.

Yield and Price—The taro-fields of Hawaii, when first planted, returned crops of 6000 pounds of rough rice per acre, and bore two or three crops per year. This system soon exhausted the land, so that both the yield and quality were greatly lessened, and the practice was modified somewhat, but the quality and size of grain is now much inferior to the best Carolina rice. I believe that annual crops of rice on California tule lands will for many years average 6000 pounds per acre, worth, in an uncleaned state, from 2½ to three cents per pound. If large grain, this would return about 4000 pounds cleaned, at a cost of not over 75 cents per 100 pounds ready for consumption. The expense of planting and harvesting would not be much greater than that of wheat, while the net results would be more than double. An expense of a few hundred dollars would test the adaptability of our tule lands for rice-growing, and be an object-lesson that would return a thousand-fold in case of success for further cultivation in this State.

Early Sown Grain Does Best.

The Colfax, Wash., *Gazette* publishes the following statement by R. C. McCroskey of Garfield in response to inquiries.

The ground was plowed during the fall of 1889, to a depth of 6 inches.

The variety of wheat sown was Red Chaff.

The amount of seed sown per acre was 1¼ bushels.

It was sown during the early part of April, as soon as dry enough, with a toothed seeder.

It was harrowed twice with a drag harrow and clod mashed.

The average per acre was 46 bushels for 22 acres, and 40 bushels for 20 acres. The latter was sown later and on land broken in the spring—the two causes, as I apprehend, of the decrease in average. This was all the grain that I, individually, had ready when header and thresher were here, but from what I observe on my own and my tenants' crops, the grain will invariably diminish in quantity of yield in proportion to the lateness of sowing. Eighteen years experience in California and two years here have proven early sown grain the best without an exception, other things being equal.

ALFALFA AND IRRIGATION.—John Hutchins of Lodi gives the *Sentinel* the following statement of cost and profit of growing alfalfa hay with irrigation: It costs me in cash, besides my time and labor, about 75 cents per acre per wetting, and as I flood the land 3 times for four crops, it would make the water cost me $2.25 per acre for the season. The mowing can be done for $2 and the raking and stacking for $2 per acre for the four cuttings. That would make a total expense of $6.25 per acre. Some of my land produced 2½ tons per cutting, but from some of it I cut but a ton or a ton and a half, owing to circumstances, which by experience gained in the past, I can control, and bring the average production up to 2 tons per cutting or 8 tons per acre for the season. I sold last year's crop for $8 per ton on the ground, which gives a gross income of $64 per acre. Take from this the expense, $6 25, and there remains the snug little sum of $57.75 per acre which belongs to me, John Hutchins. People may say I am an enthusiast on irrigation. Well, if they do, they are right; I am. And why shouldn't I be? I can make more money off one acre of irrigated alfalfa than off of five acres of grain land."

FOREST FIRES in the Black Hills (Dakota) this season are reported to have proved the most destructive in the history of the region, and though now under control they will not be extinguished until the rain comes. In timber 60 square miles have been burned over, mostly brush and dead trees. It is impossible yet to estimate the losses in timber and to ranches.

QUICK STEAMING.—The Pacific Mail steamship Newport ran from Colon to New York in 6 days, 11 hours and 55 minutes, reaching the latter port Oct. 1st—the fastest time on that route yet recorded.

Patrons of Husbandry.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

State Grange in Brief.

We have only time this week to give a few words about the recent meeting and shall not attempt any connected report. Our Grange Edition will contain, from week to week, a more connected report of the most interesting portion of the proceedings. [The Executive Committee have kept us busy thus far this week.]

The session was opened promptly by Worthy Master Davis in Masonic Hall, Watsonville, Tuesday morning, Oct. 7th, and proved one of the largest, most harmonious and generally satisfactory held for many years.

The Master's desk, Ceres, Pomona and Flora's stations and the Secretary's desk were all very tastefully and beautifully decorated with flowers, fruits and cereals. The hall was a very spacious one and most richly frescoed; upon each of its four sides were highly artistic and attractive views. In addition to these expensive adornments of the hall, over $2000 was spent by the Free Masons in carpeting and furnishing the hall and ante-rooms. All in all, the hall and its adornments we believe superior to those of any hall on this coast outside of the metropolis of San Francisco.

Over 200 Patrons were counted as being present at the first morning session. This is a larger number than at any session within the past ten years. Although there was no general election of officers, or any one particular thing to call out large numbers, the session was the best attended for many years. Besides this, nearly all came to stay to the end, and the Love Feast on Saturday evening had about twice the usual number present. The fact that Watsonville Grange numbered so many good and true Patrons (192) added much to the life and enjoyment of the meeting. Every want of their guests seemed to be anticipated.

The Citizens' Reception, Tuesday evening, was an immense affair and greatly enjoyed by both Patrons and citizens. It reminded us of the brilliant entertainments given by our citizens to the National Grange throughout its session and excursions last year. The program of the Citizens' Reception was excellent throughout.

The offerings of the Literary Committee from time to time during the session contained no dross, to the credit of Chairman Roache, Bro. Fay Raymond and other assistants.

We never saw a more hearty interest taken in any spontaneous Grange affair than that led by Worthy Ceres in making Bro. and Sister Roache the present of $100 as a dowry for "baby" Roache—whose name is Granger and his god-father the State Grange. His dowry has been increased to $105 and placed in the Grangers' Bank as a special 20-year deposit, to draw six per cent interest, compounding quarterly. We have never seen Past Master I. C. Steele more happy and satisfied than when informing us of having finished his present task in connection with this generous compliment by securing so favorable a deposit for the benefit of the little "Major."

No Patron present will ever forget the scene when Brother Cressey carried this "child of the Grange" to the altar and presented in fitting words the dowry and the few heartfelt words which the father and mother were able to express in gratitude for the unexpected honor.

Worthy Master Davis presided with ability far beyond his physical strength and received the highest praise for clear and prompt decisions and rapid dispatch of business.

All the Past Masters present were called to the chair temporarily during the session by the W. M., giving all the old members a reminder of the creditable manner in which they formerly handled the gavel.

Brother Cressey was presented a magnificent floral harp, with appropriate sentiments, by a very handsome young sister on behalf of the Matrons of the Grange.

For the first time, all resident Past Masters were required to take seats in front between the Master's and Secretary's desks, a very appropriate requisition. They all through the sessions took an active and helpful interest. The following were present: Bros. Steele, Webster, Flint, Coulter, Johnston and Overhiser. All their better-halves were also present excepting Sister Webster.

The reports of the General Deputies and District Deputies showed that a larger number of visitations had been made on the part of the State Officers and Deputies, to Subordinate Grange and District meetings, than heretofore. Bro. B. F. Frisbie probably made the largest number of visitations, rounding out with Brothers Flint and Steele, and others, an extraordinary year of good service.

Every one of the list of thirteen leading officers was present at the first roll-call; with the exception of the two first days on the part of Brother Webster, the Executive Committee were present during the entire session.

We were pleased to note that some of the younger members of the Grange took more than ordinary interest in the work, and all did well their part.

The preparation and recommendation of important bills for presentation at the next Legislature by the Legislative Committee, if well followed up, must give valuable fruitage from the work of the session. The resolution passed in favor of legislative reform should be effective of much good. Action in favor of business co-operation was favored and we trust is hopeful of excellent returns for the Good of the Order.

The reception of Past Master Hale of the State Grange of Connecticut was a hearty one. His speeches for the Good of the Order were interesting and well listened to.

Further information will be had of the proceedings on this page and others in our Grange Edition. We hope the brothers and sisters present will help us out with our report in noting things that we may overlook. Other mention of the session will be made hereafter.

The pamphlet of the Annual Proceedings will be issued and distributed to each subordinate Grange as soon as practicable.

The Executive Committee Report was unanimously adopted, completely exonerating Dewey & Co. from the scandalous insinuations made by a few members of Eden Grange last November. The charges were emphatically denied by us at the time.

Let us all work with a will for a still larger and better session at Haywards next October. Shall we not have a hundred Granges, good and strong in our next roll-call?

Feast of Flora and Pomona.

At Watsonville, after the sixth degree had been conferred on a class of "ninety and nine" that now lie safely in the shelter of the Grange fold, fair Pomona, with beautiful ritualistic language, invited all to the feast already spread at the Opera-house.

We had had a feast for the mind, and here came a feast for the eye and a feast for the palate.

There were tables reaching the whole length of the hall beautifully and tastefully spread. On the white cloth were strewn pepper leaves to make, as it were, the groundwork of the bouquet. Then there were plates and baskets of all sorts of fruits you could name or imagine, with luscious strawberries and great juicy apples in the lead.

Tableau.

Ceres, Flora and Pomona, with their lovely attendants all appropriately bedecked and posed, were shown upon the stage under the glare of a red stage-light. It was a spectacle to be remembered for a lifetime.

At the close of the tableau, Worthy Pomona sang in a clear voice of exquisite sweetness and rare expression a song of welcome and of joy.

To bring us back to earth again, let us look from the lofty impressions conveyed by the grand and solemn ritual, the imposing ceremony, the triumphs of taste and art shown in hall, songs and sights to the level of the man who says: "I rather guess I can make about as much money outside the Grange as in it."

Brother Roache promises to send a list of all who contributed fruits and flowers. F. S. C.

Uncertainties of the Telephone.—Just before our Grange edition went to press last week, the Secretary telephoned from State Grange: "G. P. Loucks re-elected on Executive Committee." In passing the word from Watsonville to San Francisco, via Santa Cruz, "Loucks" was transformed into "Locke"—in whom the editor thought he recognized our old friend D. M. Locke of Santa Cruz, the husband of the lamented "Mary Mountain"—and that is the way Bro. G. P. Loucks of Contra Costa came to "suffer a sea change into something rich," but by no means "strange."

The Scarcity of local Grange news in this number will be accounted for by the fact that many of our correspondents have contributed to the enjoyment of the recent session of the State Grange.

Free Jute.

The McKinley bill abolishes the duty on raw jute, while it increases the tax on bags and other manufactures of that fiber.

The ship Glenalvon, from Calcutta, brought the first cargo of foreign products which arrived in the port of San Francisco after the new tariff took effect, consisting of 500 bales of raw jute, billed for the State prison, at San Quentin. On this cargo the State will save about $1000 in the way of duties.

At the meeting of State prison directors, last Saturday, Warden McComb reported as follows:

The contract price of the 2000 bales raw jute now in bonded warehouse at San Francisco is 3 75 cents; the duty amounts to $3652, but under the decision of the Revenue Department the invoice will now come in duty free. The charges against this jute since it was placed in bond up to Nov. 23, the expiration of the present storage month, are: Storage, five months, at $200 per month, $1000; drayage from ship to warehouse, $200; insurance, $390; drayage when taken from warehouse to steamer, $200; total, $1790. The State will thus save $1862, and the cost of the jute at San Francisco will be 3 53 cents per pound, as against 3.75 cents, the contract price.

To save insurance the jute now in warehouse in this city will be removed as soon as possible.

A customs' decision is reported via Norfolk, Va., that jute butts imported later than Oct. 6th are free of duty, and that no drawback can be allowed on bagging exported after that date and claimed afterward to have been manufactured from jute butts imported under the old tariff, unless the claim is fully supported by proofs of importation.

Amendment to S. G. Constitution.

The following amendment to the Constitution of the State Grange of California was adopted:

That Sec. 1 of Art. XII of the Constitution of the State Grange of California be amended so as to read as follows: Section 1.—Any member in good standing, clear on the books of the Grange, shall be entitled to a demit on personal or written application in open Grange.

Patrons holding demits may be admitted thereon into the Grange in whose jurisdiction they reside, on application, accompanied by an admission fee of 50 cents, by a majority vote of the Grange; but the application must be referred to a committee and be reported on at a subsequent meeting before the ballot can be taken.

That Sec. 3 of Art. XII be abolished.

Alliance Stockyards.—It is announced that the Farmers' Alliance of the southwest is about to establish independent stockyards at Kansas City. The Alliances in Texas, Nebraska and Iowa are back of the scheme. Fifty acres of land adjoining the present stockyards is the site of the new yard. By maintaining their own yards the farmers believe they can save much money in marketing cattle, doing away with commission men and a great part of other expenses.

Address of Welcome.

[Delivered by Mrs. E. Z. Roache, W. M. of Watsonville Grange, to the State Grange.]

Away back in the misty shadows of antiquity, close by the verge of earth's morning, born to eternal existence and rocked in the cradle of Nature, primeval man took his place amid the teeming activities of animal life, his flickering lamp of reason burning so dimly that it seemed to threaten extinguishment at any moment, leaving him to be governed by his animal instincts alone. By virtue of climatic conditions and geographical conformations, men were naturally different. Yet, gregariousness being an instinct, they congregated into tribes or clans. Impelled by the combative instinct and for lack of better employment, these bootless savages often *met* to fight, yet only with the weapons Nature had bestowed, hence without great loss of life.

Passing over a dismal period of ages from which *time*, that friend of truth, had evolved a semblance of civilization and humanity, we note other hostile *meetings* of Israelites and Philistines, of Mamelukes and Macedonians, of Finn and Pict. Still, bridging another chasm of time, we arrive at the terrible period known as the *Dark Ages*, when selfishness and brutality ran riot and vied with each other in ruin and wrong, then the crusades of Christians against Infidels, presumably for a principle but in fact for rapine and plunder. So on down the lagging centuries to that *meeting* where, for the first time, a true principle was involved and vindicated by our Revolutionary parents whose patriotic actions sounded the knell of human slavery and kindled the fires of eternal freedom and progression, which were only temporarily checked by that other unfortunate *meeting* which arrayed brother against brother, father against son and filled our land with sorrow and death as the cost of sustaining that emblem of peace and purity—our starry flag.

To-day we have a *meeting* to nurture and guard principles as sacred as those over which innumerable wars have been fought. But how different the meeting; neither the battle cries of gathering hosts, neither bows, spears nor cannons are anywhere visible. There appears upon the scene, for the first time, the natural mediator between the man animal and the man human—woman. Here at this meeting reason is the guide, love the control, honesty the purpose, and virtue, happiness and enlightenment the reward.

To me, brothers and sisters, has been accorded the high honor and loving duty of extending our Grange welcome to this grand body—the aggregated intelligence and perfection of all those millions of years since the march of time began. What can I say to these noble sons, these splendid daughters, representatives of an industry founded by the great creative power of first causes, who have left their vine-covered cottages on the hillside, their flower-bedecked cabins on the mountains, their beauty-encircled mansions in the valleys, their to each, be it ever so grand or humble, dearest spot on earth—home, sweet home; where silver-haired parents guard and guide these sanctuaries of the soul and where those peerless nymphs of all natures glory—darling little ones—eagerly and longingly await your return.

To you, brothers and sisters, from north, south, east and west, who come to our little valley by the sea, to unite with us in legislating for that which will benefit humanity, for that which will beautify our homes, purify the morals and exalt the lives of all to efforts of self-perfection, how can we convey to you our appreciation of your coming? In no other way than to offer you our *all*. To none less are you entitled. To the sincere love of unselfish hearts, to the lingering clasp of willing hands, to the light of kindly intentions beaming from our faces and to our best efforts for your comfort and happiness. To our valley, our town, our homes, our farms and our orchards, do we most cordially welcome you, with a welcome as pure as the objects of our noble Order, as simple as undying truth, and as lasting as eternal right. Yet, I would remind you that your stay among us is not to be all pleasure or play. A gigantic work is to be performed. Our members are comparatively weak, our enemies, ignorance, selfishness, dishonesty and intemperance, well-drilled and strong. We meet in the cause of law, order and good government, to assist in eradicating that idea, remote and present, which considers brute force the panacea for many supposed and some real ills. To establish improved educational facilities in our schools, colleges and mechanical institutions, with the view that a practical education may be received by the youth of our land, fitting them to enter into the business relations of the age and earn an honest living. To condemning the present cramming and artificial system which obliterates most of the natural powers of the mind while deteriorating or ruining the physical system. To discountenance the excessive training of the intellect alone, to the exclusion of the morals, resulting, as it does, in giving us a vast army of intellectual sharpers and thieves, on whom, spending great sums to educate, still greater sums are required to sustain in prisons, reformatories and penitentiaries. To assist in reforming our politics—county, State and national—that just laws be enacted and executed in directions which monopolistic capital has long considered its special territory. To see to it that the tiller of the soil be accorded an equal share, at least, of that which his labor has produced, with him who has done nothing, who is a non-producer (without it be of evils) who sits comfortably in his railroad office and dictates whether the farmer shall starve or prosper, or in his counting-house, buys and sells millions of dollars worth of imaginary farm products, and is a stumbling block to agricultural progression and hence an enemy to mankind. These, Patrons, and others of as vital importance, are the questions on which we are to legislate, which stand defiantly before us, which we must meet face to face and either vanquish or be *ourselves* destroyed.

Let each one, then, do the best of his or her ability, and on the honor of a Patron, labor for the best interests of all, that we may abide in unity, peace and harmony, a shining example to the world; and may the fruition of our united efforts be the elevation of manhood and womanhood to the highest attainment of human perfection, until which the mission of the Grange will not be fulfilled.

Again, brothers and sisters, welcome, welcome, welcome. Oh, thrice welcome! Read it in our faces, hear it in our voices, feel it in our hands, breathe it in the air, let it permeate your being.

Trusting that your stay here will be both pleasant and profitable, and that your labors may be blessed with a liberal harvest, and when you have heard the last grand song, the last fervent farewell, and safely wended your way to your several homes, and the waning echoes on the wings of time shall add its enchantment to the past, may the shining stream of memory, on its gliding boat of fancy, turn your thoughts to *this meeting*, and may you be able to truthfully say: "It was one of the pleasantest of your lives."

Oh, toilers with Nature, who kneel at our shrine
Of justice and virtue with thoughts all divine,
To labor for country, for home and for right,
On souls bowed with darkness to let in the light;
And when through the cycling centuries fly
Beyond the beyond- to the by and the by—
If true to your vows here, of friendship and love,
A *welcome* you'll gain from the great Grange above.

E. Z. Roache,
Oct. 7, 1890. Master of Watsonville Grange.

County Exhibits at State Fair.

Humboldt County.

For the fourth time Humboldt comes 400 miles by sea and land to make a display of her resources. These exhibits have always been under the care of Chauncey Langdon. This year she does better than ever with her wonderful products of forest, field and dairy, and is quite unique in her showing of the hunter's and trapper's craft, prepared by the late Seth Kinman, the noted mountaineer. There are a stuffed grizzly, a chair made from deer's horns and grizzly's hide, as a Presidential seat for James G. Blaine, and a large array of Indian curios and tools and treasures of the chase.

Humboldt enjoys almost a monopoly of redwood, and seeks the lead in potatoes, apples, cheese and butter.

ROHNERVILLE EXHIBITS.—Chauncey Langdon shows potatoes in quantity and variety, a fine output of onions, parsnips, beets, carrots, sugar peas, white beans, salsify and grasses, 36 varieties of fruit in glass and 36 glasses jelly; Horace Drake—oats and nectarines; Mrs. Mary E. Carr—oats; Al Leach—wheat; Mrs. W. H. Bryan—jar cherries; Mrs. W. H. Dunnigan—cherries and crabapples; Alex. Mason—soapstone; G. F. Stewart—blackberries, clover and samples nursery stock, showing remarkable growth; Mrs. Mary Martin—crabapples and case-knife beans; A. P. Compton—Early May peaches; John Miller, five sacks grass seed.

GRIZZLY BLUFF.—C. H. Southmayd shows four varieties apples; Mack Madsen—apples; J. Dinsmore—five kinds apples and barley; A. J. Bakes—potatoes; —— McMahill—potatoes and apples; J. Davenport--beets, potatoes, carrots and apples; B. L. Wait—apples, plums, prunes, onions and peas.

EEL RIVER ISLAND.—Smith Tulmore shows corn 15 feet high; G. G. Dudley—four varieties apples; F. Lonquist, six do.

CAMP GRANT.—Amos Hansell & Sons—30 varieties apples, and display of pears, peaches, peppers, walnuts, prunes, dried raspberries and canned fruit; A. Cusa—sack corn and box tomatoes; J. Newman—apples and pears.

HYDESVILLE.—Geo. Gray—rye; F. A. Hansen—finished burl tablet, very fine grain and polish.

ALTON.—M. P. Hanson—peas; Frank Oliver—oats and barley.

BLUE LAKE.—K. Geer—oak tanbark, moldings, pickets and burl redwood, case glass, package canes.

FERNDALE.—M. B. Alfred—salmon berries, red and yellow; Vedder Cheese Factory—display of new and old cheese.

LARIBEE CREEK.—John Smith—apples, pears and peaches.

SALT RIVER.—Conrad Whitman—peaches, beets, carrots and cucumbers; Mrs. Etter—flowers and buckwheat.

EEL RIVER.—G. M. Howard--five varieties apples; John Robinson, apples, pears, peaches.

PRICE CREEK.—John Miller—five sacks grass seed.

FIELD'S LANDING.—Miss C. S. Kendall—hand knit work, very fine, and the flora of Humboldt county in water-colors.

PEPPERWOOD.—H. D. Darnell—three varieties apples and one of pears.

GRAVELLY POINT—Geo. Smith—grasses and clover; —— Montgomery—rye; —— Reynolds—stave-bolt; Humboldt Creamery—butter.

Yolo County.

The tasteful arrangement and large variety of products reflected great credit upon the people of this county, and particularly upon W. M. Lee, the exhibitor, since they had not decided to make a display until shortly before the opening of the fair. If Yolo does take but a short time for it, she "gets there just the same," as the following list of articles and exhibitors will show:

Snowflake wheat, pecans, dried fruit—Barney Parish; Egyptian corn—J. L. Pace, Blacks; grapes—A. J. Thomas and D. J. Hershey; dried figs—W. C. Cole, Esparto; chestnuts, persimmons, dried fruits, etc.—Nick Cadanassee, Capay; grapes and canned goods—Clarence Scott; dried apricots—Sam Nutting; prunes—Jacob Henry and J. C. Winter, Brooks; grapes and artichokes—G. W. Dameron and J. W. Gillam, Madison; dried peaches, nectarines, etc.—J. B. Griffin, Winters; English walnuts, grown on black walnut stock—F. E. Russell, Davisville. (Nuts were fine in quality, and the success of this experiment teaches a valuable lesson in horticulture.) Grapes, almonds, prunes—from Davisville—shown by E. H. Larue, E. Anderson and P. Treat; extra fine almonds, Wm. Bray, Woodland; fine variety of prunes—L. G. Rhodes; canned goods, wheat, etc.—Geo. A. Pierce; vegetables from Clarksburg—H. S. Conner and Dan Webber; Muscatel grapes—Rev. Mr. Belt, Woodland; apples—Mrs. W. N. Lee; cucumbers—Geo. Wiseman; flour—Sam Mering, Yolo; grape brandy and syrup—Mr. Snavely, Woodland; cheese—Calvin Perkins; hops—D. O. Entrican; canned fruits—Mrs. Entrican and W. T. King; broomcorn—W. H. McMullen; melons—Barney Copps; honey—C. H. Gluvz; vegetables—Fred Martinelli & Co.; fine Russian oats—L. N. Scott, Yolo; tobacco—S. Richardson.

HORSES.—Tom Ryder (2:20½), the Alexander Button and Black Ralph pacer, owned by R. H. Newton; Belle Batton, owned by Geo. W. Woodward; Albert and Vidette, owned by Tom Snider; Clay Duke, two standard trotters and three roadsters, owned by J. W. Martin; Creole and Bompter, shown by Tom Snider.

CATTLE.—P. S. Chiles of Davisville showed a fine herd of Shorthorns, most of them to be sold at sale of P. C. S. H. Breeders' Association. Of Galloways there was a large herd, representing 50 or more very fine specimens of the breed, but we have forgotten the owner's name and cannot find his advertisement anywhere. Perhaps he has none to sell.

The sheaves of wheat, the almonds, the grapes and the dried white Smyrna figs were especially attractive. F. S. C.

Mutual Endowment Humbugs.

An *Alta* reporter who called on Labor Commissioner Tobin, one day last week, got a very decided expression as to the degree of credence due the Legion of the West, Endowment Associates, Royal Argosy, Guarantee Endowment, Beacon Light, Order of the Golden Shore, and other "benefit" concerns worked on the same principle.

"They are all gross frauds," said Commissioner Tobin, "and only serve to give the heads of them a fat living for nothing. The annual report of the Legion of the West has not yet been published, but when it is it will reveal little or nothing of the manner in which the money paid into the 'General Expense Fund' has been used. The Pacific Endowment League I consider the worst of all these societies. None of them can last for any length of time. The principle on which they are based is unsound. You pay $100 to get $500. Most of the members of these societies are women. They are naturally sanguine and easily fall into the trap. They pay up their assessments, often at great sacrifice to themselves and families, only to find at last that there is no money to pay them their coupons when they fall due. The organizers of these affairs are careful to give a heavy inducement to members to get others to join. A premium varying from $1 to $3 is paid for every member gained, and thus each member becomes a canvasser and lures dozens besides himself into the fraud. Of course, there is a social feature to these societies, which is a further inducement for the young of both sexes to belong. Then politicians, lawyers and others whose living depends on a large acquaintance, join in great numbers. These, of course, enjoy a benefit in the increase of their patronage. It is the poor fools who stint themselves to pay their assessments that have to suffer."

There is no law to prevent the existence of these societies in this State. They do not come under the head of insurance companies, and are not subject to the investigation of the Insurance Commissioner, Sec. 451 of the Civil Code taking them quite out of his supervision.

Eighteenth District Fair.

At the 18th District Fair, opened at Independence, 23d ult., the *Independent* notes in every department of exhibits decided improvement over former years. The grain, roots and vegetables gave ample proof of the fertility of the soil. J. V. Skinner made a display especially worthy of notice, as being the first crop raised on land irrigated by the Stevens ditch. Corn ripened in 90 days from planting; potatoes, tomatoes, pumpkins, squash and other products of great excellence. E. Robinson, John Baxter, John Kispert, A. N. Bell, C. A. Walter, S. A. Densmore and others showed such fruit as is making Owens valley famous. The apples, pears, peaches, quinces and prunes were all beautiful. Mr. Kispert is admitted to excel in grapes.

The apiarian display of W. Muth Rasmussen included combs in all stages of progress, from the foundation to the finished pound sections, ready for market, bee-keeper's tools and implements of all kinds; also a fruit-drying tray, the invention of the exhibitor, that protects the fruit from insects and is much easier to handle than any other tray in use.

Miss Rachel Bell had a beautiful display of live flowers.

Alex. Clark showed corn with eight ears on a stock, one of the ears measuring two feet four inches in length, grown on grass land, without irrigation.

A. N. Bell had fine walnuts, English and native; also flour of his own manufacture.

E. Robinson showed the best sweet potatoes even seen there.

C. A. Walter had a fine exhibit of home-made hams and bacon.

From the quarry of the Inyo Marble Co., Mr. Staudinger set up a display of fancy marbles, worked into various forms of beauty.

W. L. Hunter had a large and choice collection of the mineral products of Inyo, including gold, silver, lead, bismuth, antimony and other ores, and J. S. Gilman made a fine display of silver ores of the county.

THE SANGER *Herald*, which got burned out a few weeks ago, has reappeared in its usual form, looking none the worse for the hot spell experienced, and is vigorously urging its townsfolk to provide suitable and sufficient means for guarding their property against fire.

IN honor of the memory of Father Mathew, the apostle of temperance, 50,000 persons marched through the streets of Dublin, Oct. 13th. The Lord Mayor, members of the corporation and various trade and temperance societies were in the procession.

ACCORDING to the astronomers, winter has set in early on the planet Mars. They reported a snowstorm there week before last.

Daily City Papers and Market Reports.

EDITORS PRESS:—Many farmers in California take a daily San Francisco newspaper, particularly when they reside near enough to a postoffice to get the paper on time. I have been buying the *Examiner* daily—part of the time from news-dealers—for many years, and as most farmers or producers from "the earth earthy" do, I have instantly referred to the column of market reports; and on last Sunday I bought also the S. F. Sunday *Call*. Being somewhat in the potato line of culture this season, I was willing, if not anxious, to know the price of good "spuds." On turning to the *Examiner*, I found good "Peerless" quoted at 50 to 80 cents per 100 pounds; then turning to the *Call*, I found the quotations of price for the same potato to be 75 cents to $1 per 100 pounds.

Now it is very important for producers of "farming truck" to know which of these two daily papers was correct and beneficial to "old hayseed," because the odds between 50 cents and 75 cents or between 80 cents and $1 on the cental, if lost through printed misinformation, is, upon large potato crop, a fearful discount upon the eminently pious industry of "old hayseed." It is a fearful sin to deceive "old hayseed," as any brilliant daily newspaper pencil-pusher can find out by referring to (to him) a very rare and ancient volume of sacred writing wherein is related the story of the wicked children who were devoured and obliterated to this day for trying to poke irreverent fun at the alkali flat on top of "old hayseed's" head when he was going uphill. And as, with the average agriculturist, it is usually "uphill," we would—at least I would—like to have the RURAL try to tell us which paper, on Sunday last—the *Examiner* or the *Call*—quoted the market correctly from a producing point of view.

Of course we of the hayseed household are aware that a ready writer and rigid ratiocinator, whom our small earnings have probably helped to graduate from some high school or university, can throw off into our wrinkled and toil-worn hands any amount of sophistry and back numbers of statements to show how difficult it is to get market reports daily exactly correct. That is not what we need, and certainly not what we want. What we do need is to know which paper was correct in last Sunday's issue—the *Call* or *Examiner*. Can the RURAL do anything to ease our woe? J. W. GALLY.

Pajaro Valley, Oct. 13.

[The *Morning Call* was right in placing the value of Peerless potatoes at the higher figure. The potato market has been advancing steadily in view of shipments, etc., and Peerless are quotable to-day (Oct. 15) at $1.10 per ctl. The advance shown by the *Call's* quotations was foreshadowed by the RURAL'S report which was prepared on the Wednesday previous.—EDS. PRESS.]

Water Works and Gin-Mills.

EDITORS PRESS:—The Bear Valley and Alessandro Development Co. have a large force of men at work on the ditch on this side of the hill to deliver water on their lands now being sold. Parties are working on both ends of the tunnel through the hills. They have made a good wagon-road over the hills to connect Redlands and their property. They are having 700 acres plowed, to be set out to trees this winter. Their surveyors are busy running lines and platting the land ready for distribution, which takes place on the 15th inst. They have sold over 7000 acres now, mostly in small tracts. This will work a great change in our country. When the poor grain-fields are converted into vineyards and orange groves, the people will begin to prosper.

I have just returned from a trip to Los Angeles by team and was surprised to see the amount of land along the foothills from Whittier to the Santa Ana canyon lying idle, except where it is used for sheep pasture, awaiting the application of water to convert it into beautiful homes; and I was equally surprised on the other road to see the number of saloons there are where the country is settled. The question comes up in one's mind: Do all the country people patronize them that they can afford to run so many? Can farmers, who work so hard for their money, afford to support saloons? If all the farmers in the country would decide to let the saloons alone and give the money thus saved to their wives, there would be fewer saloons and more happy homes.

L. S LYMAN

Alessandro, San Bernardino Co., Oct. 6.

GEN. W. W. BELKNAP was found dead in a room adjoining his office, in Washington, the morning of the 13th. An autopsy showed that the immediate cause of death was inflammation of the inner lining of the heart. Gen. Belknap was Secretary of War during President Grant's first term. He was 61 years old.

THE deciduous fruit shipments over Southern Pacific lines for the season up to October 7th amounted to 2450 cars. Estimating 20 tons to a car, this would make in round figures 49,000 tons, or about 100,000,000 pounds of fruit.

THE Starr-King Monument Committee has the $11,000 necessary for the monument, but $3000 is required for a suitable pedestal.

THE APIARY.

Handling Bees.

EDITORS PRESS:—In all your operations in the apiary, work with the bees carefully, and do not leave any honey scattered about on the hive covers, or on the ground. If honey is not coming in rapidly, you may start some to robbing by this carelessness.

Be very careful in handling frames and hive covers, and always strive to kill as few bees as possible, as smashing bees rouses their ire, and in time an apiary will become almost unmanageable.

In apiaries where bees have become wild from mismanagement and careless handling, a careful man will in a week's time tone them down so that he can handle them without a veil, and with very little smoke; whereas, before it required a good veil and clouds of smoke, to say nothing at all of the small army of bees that followed you around.

Of course, I do not mean to state that a good apiarist can handle bees without a veil at all times and on all occasions, because he cannot.

There are times just after a honey flow when bees do not have much to do, or when there is not much for them to work on, that it is dangerous to open a colony without a veil and plenty of smoke.

An experienced apiarist can generally tell by opening a hive or two whether it will be safe to work with bees at such a time.

Just after a rainstorm is a bad time to handle bees, as they are all at home and naturally not having anything to do, they are mean-tempered and sullen.

When there is plenty of honey coming in, a person with a little experience in bee culture can handle bees without a veil and with very little smoke.

When you go to manipulate or work with a colony of bees, first blow a puff of smoke in at the entrance and then gently pry off the top, after which blow a puff or two of smoke on the frames, and if they are the average bee, you are ready to remove the frames.

Occasionally, when working in the apiary, you will come across certain colonies that are naturally vindictive; it is best to remove the queen as soon as possible and insert another in her place, as it is time and money both saved to you.

Italian and Carniolan bees are the easiest to handle on all occasions. Hybrids are the hardest bee to handle, but strange to state, two-thirds of the bees in California are hybrids.

In Southern California where there are so many bees kept, there is not much show for a progressive apiarist to keep his bees pure. Most of the ranchers keep a few colonies and they do not care what kind of bees they are as long as they gather honey, and, of course, our progressive apiarist raising queens from choice stock does not stand much chance of having his queens purely mated.

I used to carry on quite an extensive correspondence with a Monterey county apiarist, who, for several seasons, managed a large apiary of 300 or 400 colonies. He had tried all kinds of bees and had had a great deal of experience, and had finally arrived at the conclusion that the black bee for his location was a pretty good bee after all, as they were easy to handle and gathered almost as much honey as the Italians. The black bees in the southern counties hold their own to a great extent against the moth, while in the foothills of the northern counties it is nip and tuck between them. The reason I believe is that in the southern counties there is a longer honey season, and consequently the bees breed up and keep in heavier colonies; while in the northern foothill counties it is the reverse; for about two months in the summer they have comparatively nothing to work on. In the higher altitudes of the Sierras, that is, from an elevation of 4000 feet and upward, black bees are rarely if ever troubled by moths, as they have an abundance of pasture to work on during the dry seasons.

In my own experience with black bees, I find that they do pretty well at these higher elevations, but the Italian and Carniolan do considerably better; in fact, enough more so to warrant me in keeping those races entirely. I was never troubled much with cross bees. I used to have an apiary of 20 colonies not over 30 feet from the house, and we rarely got stung when passing them. Bees soon get accustomed to persons, anyway, when placed near a house.

If when working in the apiary a bee or two seems determined to sting, it is a good idea to kill them. A small paddle made from a piece of shake or shingle answers the purpose well. If you do not kill them every time you come in the apiary they will attack you, and I generally carry a paddle with me to kill all these scolders. A good smoker is indispensable when working with bees. For fuel I use rotten oak wood with a few drops of coal oil poured on it; after once started it will last for hours. Never give your bees too much smoke; a puff or two at the entrance and one at the top is all that is required in most cases. Some bee-keepers, though, smoke the bees from the time they commence until they finish—a foolish and unnecessary way of doing.

Grizzly Flats, Cal. S. L. WATKINS.



Uncaught.

O Poesy, thou fair elusive spirit, still lingering
Deep in the woodland shade,
Or by the lonely shore thy lute-strings fingering,
Shy as a rustic maid.

I've caught the shimmer of thy garments trailing
Far up the mountain side,
Or seen thy fairy boat adown the river sailing,
Or drifting with the tide.

But when I sought acquaintance, doubting, fearing
To find thee less than kind,
Thou hast a naughty trick of disappearing,
And leaving naught behind

But poor dead butterflies bereft of grace or glory,
Or floating down of brier,
Foam-flecked water, idle song or story,
That's lost its heart of fire.

Sweet, gentle Melody, thy fair, calm mother,
Will lead me far apart
From noisy haunts of men, and all the pother,
Out near to Nature's heart.

I know thy sister Music, and Rhyme, thy daughter,
Comes often to my dwelling,
With some bright story that her mother taught her,
Spoiled in the telling.

Thy straight-laced brother, Prose, and grim Aunt Reason,
Oft come and sit with me,
And chide thy wayward freaks and call it treason
And impropriety.

Thou art a spirit, fleeing onward ever,
Luring from strife and pelf,
Still upward to the hights of best endeavor,
But all uncaught thyself.

—*D. M. Riley, in Transcript Monthly.*

Helps to High Living.

Sun.—Prescribe to yourself an ideal, and then act up to it.

Mon.—Better die than live ill.

Tues.—Be self-denying but do not boast of it.

Wed.—What ought not to be done, do not even think of doing.

Thurs.—Ruin and recovery are both from within.

Fri.—No one is a slave whose will is free.

Sat.—Keep a watch upon yourself as your own most dangerous enemy. —*Epicletus.*

Cooks in the Future.

[Written for the RURAL PRESS by MARGARET P. HARVEY.]

Is it possible, nowadays, to take up a paper or magazine without finding in it something like the following?

Girls should be taught to cook. Upon a thorough knowledge of cookery depends the happiness of the home, etc.

What does it all mean? Is there any real necessity for so many exhortations in this line? In other words, are the girls of to-day less proficient in cookery than their mothers were?

I, for one, believe that the girls of to-day, generally speaking, are *not* proficient cooks, and I unhesitatingly add, rightly so. There is too much expected of the girls of to-day, already, without saddling upon them the burdens which their mothers were not able to bear. Women were intended to be something else besides cooks.

Those exhortations in the "domestic economy" style tell far more than their authors thought or intended. They tell that the girls of this age are not taking kindly to cookery, but they also tell that the writers of such es says are unable to discern in this fact true signs of progress. By preaching cookery to a generation which is rapidly growing beyond it, they are unconsciously trying to turn back the wheels of time.

Of course I understand that we are in a transition age. I know that we cannot all at once reach the period in which cooking will be done out of the house by professionals, just as weaving and dyeing are to-day. We scarcely stop to think that our grandmothers spun and colored their own yarn. How many of us know that "wife" originally meant *a weaver*, and "spinster," or maiden, *a spinner?* But we have mothers and daughters who never spun or wove; in another century there will be just as many mothers and daughters who never cooked.

Do I believe in cooking-schools, lectures on household chemistry, etc.? Not altogether. Perhaps I might if I did not honestly think that we are hearing too much about them. But like other crazes, such subjects will have their day and run out; and when they have run out we shall find that we have advanced without knowing it; we have risen a little higher in a certain line than we probably should had the craze not carried us upward. We laughed at the esthetic craze a few years ago, but now, as one of its results, we are able to see that there is elegance in simplicity and beauty in a straight line.

I grant you that a great deal of the happiness of a home depends upon a well-ordered table and all the rest of it. But the average writer on domestic economy stops a little too short. He—it is often a man—loses sight of the fact that home-making is higher than mere housekeeping; that food is but a means to an end; that housekeepers can be hired, but true wives, mothers, counselors and friends, never. If a cook is all-sufficient for him, why wouldn't he marry Bridget or Dinah?

Do you not see what I am driving at? It is simply this: The person who is arguing so forcibly in favor of girls learning to cook is really upholding the servility of women. He is actually resenting the idea that in these days women are learning better.

Yes, my dear, I was once romantic enough to agree with Lady Mary Wortley Montague when she said that preparing a dinner for her husband was not menial employment—"it is providing refreshment for him whom I love." But the question has occurred to me, Would he have done as much for *her?* Would he not have thought it unmanly?

In simple justice, then, let us have perfect reciprocity before we begin to talk of what is or is not manly or unmanly, menial or dignified—that is, if we can.

For my own part, even in the present imperfect state of society, I think it is *unwomanly* for women to do cooking, washing, or any other kind of heavy housework. A woman's true mission is intellectual and spiritual. Besides which, men have already invaded woman's traditional "sphere." Men, whether French or African, make better cooks than women; and men—American as well as Chinese—are performing the greater part of our laundry-work all over the United States. Now when women are even partly emancipated from the cruelty of old custom, why seek to reverse the present verdict of centuries?

I know all you can say about "emergencies," "reduced circumstances," "difficulties with servants," etc. Well, all this might happen to a man as readily as to a woman. Why should not *he* be prepared with a knowledge of cookery against the evil day? If you will say that *boys* ought to be taught "domestic science," I will agree that girls ought. Boys have quite as much time to learn as have girls, for girls go to school quite as long and earn their own living just as soon; or if they don't earn their living, they can afford to hire their cookery done for them; and boys have quite as much probable need for the accomplishment as have girls.

If boys and girls both learned cookery, as a sort of laying-up for a rainy day, it would be all right; for then the idea of the servility of women would be taken away. Henry Ward Beecher early argued in favor of this, and carried out his belief in his own practice.

Straws show which way the wind blows, and magazine articles and stories indicate what people are thinking about. A short time ago I read an open letter from a woman who said that she was teaching her little daughter to be useful. The little daughter was five years old. The mother stated, with pride, that this little daughter could sew on buttons for her brother, "a year and a half older." Now I should have liked to box that mother's ears. She was already instilling into the minds of those two innocent little ones the pernicious doctrine of the servility of woman. If that brother was a year and a half older than his sister, he was big enough to sew on his own buttons, and, if need be, his sister's too.

With real pleasure I turned to a story which I believed would prove a wholesome antidote. It did. The story was about an old auntie who came to her nephew's house to do what she could in a sick mother's place. There were in the house two boys and two girls. The aunt resolved to take them all in hand and teach them "household science." The whole four entered into the plan as though it were great fun, and the wise aunt made it fun by offering prizes for the best cake and biscuits. When the mother recovered, she found her young savages transformed into the most efficient aids. Now something like this, in the present era, is something like what ought to be.

Do you mean to tell me that those boys would never need the knowledge as the girls would? What if the boys went "camping out," as thousands do, to say nothing of the possibility of their being wrecked on desert islands, as hundreds have been? and what if the girls never married or never went to housekeeping, as, in these days, must be taken into consideration in the case of every girl? The boys may have needed the knowledge more than the girls.

The long and the short of it is, the idea of every girl's being tied to the cook-stove is simply an old superstition which is dying hard. If it wasn't, we shouldn't hear half so much about it. Do you remember how Mary Somerville tells us that her friends would scarcely believe in her right to be an astronomer until she had proved to them that she could make good jelly? That was only another way of saying that the world expected a woman to pay a penalty for being a woman; to escape serfdom, she must purchase freedom with some sort of a ransom. Now is it not high time that we had advanced far beyond this? You would be a little ashamed to say, in so many words, that men were intended to rise because women were made to wait on them. Then why act out such a belief?

But as a matter of fact, it is generally in the lower grades of society where persons insist so strenuously on the idea that men must be waited on by women. Not always, but usually. If ever you see a man sitting at a table while his wife stands by the stove and turns cakes for him, you may safely draw your own conclusions as to the inferior social position of the parties. A *gentleman*, even in reduced circumstances, would stand by the stove, too, until there were cakes enough for both, and then they would sit at the table together. I saw a gifted editor and an influential minister, in places a thousand miles apart, do the very same thing, showing that the instincts of true gentlemen are the same everywhere; and it is usually a gentleman, by birth, education and means, who takes pride in his accomplishments as a cook. He does not think it unmanly in him to cook, though he probably would think it unwomanly in his wife, if he could imagine himself allowing her to do such a thing.

Did you ever hear of famous club suppers, cooked by the members themselves? These members are generally men of wealth and standing.

There is in Philadelphia a noted organization known as the "State in Schuylkill." It has existed ever since Washington was President. It is an aristocratic club, membership in which is strictly hereditary. The club owns a tract of land on the Schuylkill river—a tract which some say was granted by the First Congress, and it is as much a territory, separate from the State of Pennsylvania, as the District of Columbia is from Maryland. On this "State in Schuylkill" is an antique mansion-house, in which the club meets once a year for its annual banquet. Guests are rarely invited. It is said that a feature of this banquet is that the members of the club put on white caps and aprons, and cook the entire repast themselves. The club owns some recipes, handed down from father to son, which the outside world has never been able to get hold of. Now you see that in the most aristocratic city in the Union, aristocratic descent may confer upon a gentleman—what? Why, the privilege of cooking! A common man would probably think himself degraded.

In short, I believe that cooking is a suitable employment for men, but not for women. Men are better cooks than women—they know more about it, and are, as we say, better "diners." The time is rapidly coming when men will do all our cooking. In the meantime, if girls want to cook, let them do it as amateurs, just as some already dabble in painting and photography; but understand, womanly character does not depend upon cookery, nor does the sanctity of the home, nor love, friendship nor hospitality, any more than they do on coal-stoves or gas ones. Keep things in their right places, or, if you choose, separate the permanent from the temporary and the eternal from the temporal.

Moving a Lame Horse.

A big bay horse, one of the car horses on the Montgomery-street road, lamed his ankle on the cobbles yesterday, and the police compelled the driver to take the injured animal out of harness.

An attempt was made to lead the lame horse to the railway company's stables, but he was too badly hurt. The unfortunate beast stood in the street for some time. Then the horse ambulance of the Society for the Prevention of Cruelty to Animals was sent for, and a crowd gathered around to watch the operation and assist.

It was pretty evident that none of the crowd had seen injured animals removed before. Almost before the wagon had stopped the movable platform was run off by the volunteers. One little fat man with a red face assumed command of the volunteers.

"Lift her clear!" he shouted. "Shift to the right. Here, take this rope. Draw that taut there. Whatcher doin'?"

In about two minutes 20 men were standing around the ambulance, all holding ropes or straining at the platform and awaiting further orders.

The orders came.

Secretary Hunter of the society alighted.

"Put back that platform," he said quietly.

"You—I—that is—"

"Put it back."

Back went the platform into the wagon, the volunteers working sullenly enough.

"Drop those ropes."

The twenty let go of the ropes, but looked savage.

Then Mr. Hunter simply took hold of the horse's halter, led him up into the low ambulance, the driver deftly put a sling under him to prevent the animal from falling, and then drove off.

That was all.—*S. F. Examiner.*

KNOWLEDGE OF ANCIENT ROME.—The *English News* states that the commission in charge of the improvement of the City of Rome has unearthed great quantities of lead water-pipe, each plainly stamped with the name of the owner of the house, the year of the plumbing, the name of the consuls for that year, and that of the reigning emperor. In opening the 82 miles of new streets in that city, material has been found sufficient to add to our present knowledge a thousand details concerning the baths, heating flues, water pipes and house sewer pipes, the organization of the police and fire brigades, etc.

THE LONDON POOR are justly indignant because the wholesale fish-dealers of that city frequently destroy hundreds of tons of fresh fish in order to keep the prices up.

Joaquin Miller at Home.

[Written for the RURAL PRESS by VIOLET M. BROWN.]

Seeing Joaquin Miller's article in this month's *Harper's* reminded me of an interesting visit I paid, in company with my mother and a friend, to him this summer at his home on "The Heights," a few miles back of Oakland, walking out from the terminus of the Fruitvale cars for that purpose.

After a tramp of several miles through some of the most beautiful scenery California can boast of, we came in sight of the place. Our hearts began to fail as we thought of meeting the "Poet of the Sierras," whom we had been led to think was a tall, robust, austere, overpowering individual who would look upon our visit as an intrusion. However, plucking up courage, we ventured to enter the gate, expecting every moment to be pounced upon by the wolf Mr. Miller is said to keep.

Crossing a bridge which spans a small ravine, we found ourselves standing before a one-story building of the gothic style of architecture. To the right was a cottage, and farther up the hill another, which we concluded must be the domicile of his mother.

A young Spanish woman came to meet us with a pleasant smile, causing our spirits to go up a degree. She announced our arrival to Mrs. Miller, who came out and greeted us with much cordiality. She is all that a genius' wife should be—small with a beautifully molded form, demi-blonde in complexion and dressed in a navy-blue suit, which was very becoming.

She invited us into the poet's sanctum sanctorum, where we saw reflected the genius and character of the occupant in every article of furniture. On the floor was a large rug composed of six otter-skins. The bed was covered with the woolly horse-hide, so famous.

The sun was shining brightly through the stained-glass window-panes, falling on an antique oak table where an open copy of "Looking Backward" lay. Freshly written manuscript lay on another table, showing that our poet has not given up literary work, as has been reported. Over this second table hung a huge sombrero of Panama straw. The walls were covered with photographs and views of all portions of the globe. While we were taking in these details the great Joaquin himself entered.

We were agreeably disappointed in finding him a whole-souled, genial, hospitable gentleman who made us feel perfectly at home. His personal appearance is indeed striking—about five feet ten, or more, slightly built, dressed in a gray summer suit, with his immense yellow mustache curled so that the ends almost reached the brim of a black sombrero, which, when removed, showed a massive brow.

After a hearty welcome he sat down beside me and looked inquiringly at my pencil and note-book. I told him I was only taking a few points for a local paper. This did not offend him, as I had half expected, but instead he kindly offered to lend me all the assistance in his power. Conducting us through his unique house, he took us into what we supposed was his winter quarters, for a stove was in the center of the floor. However, there was no need of a fire on that July day, for the sun was beating down, making the air very oppressive.

Mr. Miller went outside and turned on a contrivance he had constructed for the purpose of throwing a stream of water on the building, very effectually cooling the atmosphere inside, giving the same effect as though a heavy shower had suddenly come up. We could hear the patter of the drops on the roof and see the water dripping from the eaves on the windows.

While speaking on the subject of nationalism, he picked up a copy of the New York *Independent* and read us an original poem entitled "Nationalist." On our friend expressing the wish for a copy, he courteously handed her the one he had read, telling her to keep it.

On the walls of this room were clippings, invitations, autographic letters from famous men, pictures and many beautiful sentiments in the poet's own writing on the woodwork.

I regret that I did not make a copy of these, but our reception was so different from what I had expected that I almost lost my wits and thus failed to secure much information which I am sure Mr. Miller would have readily given me. However, I recollect one which impressed me very much as our host read it to me, "God forgives all sin but that of willful ignorance." He left us to return in a few moments with a pitcher of claret and water, followed by his daughter Juanita, who is a sweet little lass of about ten years, the image of her father. He seems to idolize her, for he called her his "little princess," his "duchess," and many other nice names.

I asked about the wolf. He laughed and said it was true in a certain sense, for, as he did not keep fowls, he would not allow any one to kill a wild animal on the place, and the canyon contained many wolves, which he fed daily.

In answer to my inquiry, he pointed to his scarred face and asked if a man with such scars was likely to fear common wild wolves. While standing at the door I expressed my admiration for the view, which is indeed grand.

"That's the way!" he exclaimed; "every one comes up here professing their desire to see

me and then turn their backs on me and begin talking about the view!"

I earnestly protested that our sole desire had been to meet him and had only been prevented from coming sooner by the fear that he would think it impertinence. After that he became, if possible, more cordial, even going so far as to present me with a copy of the New York *Independent* containing his Fourth of July article, with the leaf turned down so I could find it easily, and then to crown it all he wrote on the margin "With love to you and yours. Joaquin Miller, The Heights, Oakland, Cal., '90."

I must confess to a great deal of celebrity worship in my composition, for when I got home I dotted the lead-pencil lines with ink so as to preserve it for many years.

He has mounds of rocks all over the place which resemble castle turrets, and from nearly all of them a flag was flying at half-mast out of respect to Fremont's memory, whose death Mr. Miller seemed to feel very deeply.

When leaving, he told us he was a Nationalist—a working one, though—and in proof thereof he exhibited his hands with great welts on them from using the shovel, apparently.

My mother asked him why he left Washington City.

"Because I was bothered to death with Congressmen and Presidents," he answered. He gave us a cordial invitation to repeat our visit, which we intend doing when the opportunity offers.

We returned to Oakland feeling well paid for our tramp.

Oakland, Cal.

Chaff.

BILLY: So you have returned from your bridal tour. What did you see on the trip that pleased you most? John: My wife.—*Siftings*

"YES, we two boys were thrown together a good deal when we went to school in the country." "In the same class, eh?" "No; we rode the same mule."—*Detroit Free Press.*

"THIS bell," said a well-meaning sexton when showing the belfry of an interesting village church to a party of visitors, "is only rung in case of a visit from the Lord Bishop of the diocese, a fire, a flood or any other such calamities."—*Figaro.*

BACON: Have you seen young Brummel in his new tennis suit? He looks like thunder. Egbert: As loud as that?—*Yonkers Statesman.*

A LITTLE BOY, called to testify in court, was asked if he understood what an oath meant, and said he did. He was then asked if he knew where little boys went who told wrong stories, and he said he did not. After a few moments' reflection the court remarked: "Well, I don't know as I do, either; you may be sworn."

JO HOWARD says that "all the tall women at the seaside have short husbands." Naturally. And the longer the tall women tarry at the seaside, the "shorter" their husbands get.—*Norristown Herald.*

To the uninitiated it is hard to understand how a game of whist can be honest and still be won by a trick.—*Binghamton Republican.*

IT is an odd man who does not enjoy getting even.—*Terre Haute Express.*

FRENCH EDITOR: Did you make a minute of yesterday's duel? Assistant: No, Monsieur; it was impossible. French editor: Why? Assistant: Because it had only two seconds.—*Light.*

"WHAT a horrible punishment!" exclaimed Cumso, as he laid down the newspaper. "What is it, love?" asked his wife. "An American gentleman in St. Petersburg has made a Russian eat his words."—*Atlanta Constitution.*

THE difference between a starving man and a glutton is that one longs to eat and the other eats too long.—*Binghamton Leader.*

"MR. HOPPER, I find my last lot of sugar full of flies." "Well, madam, at this time of the year, you know, we—" "That doesn't account for it, Mr. Hopper. These are sand flies."—*New York Sun.*

AMERICAN MILLIONAIRE (in Paris, proudly): My daughter is being waited upon by a duke. Old Traveler: Well, dukes make excellent waiters. There are several of them in our restaurant, too.—*Good News.*

THERE are two reasons why some people don't mind their own business. One is that they haven't any mind, the other that they haven't any business.—*Harvard Lampoon.*

"WHY do they publish so many dialect stories in the magazines?" "Because it saves the proof-reader the trouble of correcting the spelling."—*Puck.*

THE man that can't sing and won't sing deserves the sincere thanks of a musical community.—*Somerville Journal.*

WILDFLOWER (timidly): I hope you will excuse my behavior of last evening, Miss Jones, but I was so full of—of— Miss Jones (frigidly): I have not the slightest curiosity to know what you were full of, Mr. Wildflower. Mr. Wildflower: But you misunderstand me. It was not alcohol I was full of, but spirits. Miss Jones (contemptuously): Spirits! pooh! another name for the same thing, sir.—*Harper's Weekly.*

SOUND WAVES.—It is estimated, from a careful microscopic examination of the impressions which the little word "hello" makes on a phonographic cylinder, that it produces not less than 16,000 indentations.

YOUNG FOLKS' COLUMN.

An Evening's Amusement.

[Written for the RURAL PRESS by MAUDE S. PEASLEE.]

The education of children cannot be left entirely to the school-room; it must be in the home that the strongest impressions are made. One of the greatest aids to a healthful, profitable childhood and youth is an attractive home. The sweet and beneficial influences of home cannot be gained unless under such surroundings.

Time is never lost, then, in making the home circle cheerful and bright. Children accustomed to such enjoyment have no temptation to seek pleasures without the charmed circle. Their young friends visit them occasionally; they return the courtesy, but they realize joyfully that there is really after all "no place like home."

Sometimes the old well-known pleasures and games grow tiresome and a new divertisement is desirable. One thing that the children with whom I spent my early girlhood never grew weary of was a kaleidoscope made of the polished top of a piano.

They were happy children and had many things to make home pleasant, from their simple games of authors, old maid and checkers to an occasional candy frolic or evening of tableaux.

The kaleidoscope, however, was an especial treat, and half-past nine found them all too reluctant to go to bed. Any kind of piano can be used, square or upright, or even an organ, if highly polished, provided the top can be made to fold back twice. Then the edge of the lid must be supported by books or anything that will hold it in the position or shape of a triangle. This forms an immense (in the case of a grand piano) optical instrument, making a long kaleidoscope.

A lighted lamp must now be placed on a stand at one end. By its side, just out of view, stands the "operator," whose duty it is to twirl and twist about any bright article you may wish to see reflected in the polished surface of the kaleidoscope.

The spectators stand at the opposite end and the beautiful and symmetrical forms are a constant source of delight and ejaculation.

Ribbons and bright-colored flowers may be twisted and twirled together till the glowing mass of beautiful forms becomes quite dazzling.

As it is next to impossible to produce the same figure or form twice exactly the same, it is hard to tire the spectators, and easy to forget the operator's tired arms. Unfortunately only one or two heads can be comfortably accommodated at the same time, and occasionally will be heard the cry, "Let me see now," and a good natured tussle will ensue to secure the coveted place.

An amusing variation is to require the spectators to guess what the operator is exhibiting. If ever so familiar, they often almost lose identity in this position.

This would prove a most acceptable addition to the amusements provided for an evening party where it is often difficult to keep a roomful of half-bashful children happily at ease.

Some little care must be used to get the lamp in just the right focus, and it can only be done by trial. Have it perfectly adjusted before the performance begins, so that all may go smoothly, and in that way the wonder will seem increased.

To Young Girls.

[Written for the RURAL PRESS by THEIR FRIEND.]

Young girls, be reserved!

In these few lines I do not intend to give you "the same old lecture," but only a little reminder of what so many girls forget or probably others never know. That reserve which is the star of woman's life cannot be impressed too early on a girl's mind. By being reserved I do not wish to imply that one must be a mere "figure" in company, neither "over-nice"—simply reserved. We see every day schoolgirls hardly in their teens walking the streets with boys, giggling and talking in a very unlady-like manner, and they are even seen out riding with the boys unaccompanied by mother or chaperon at that early age. They say "Oh, there's no harm in that," and "I'm not the only one," etc. There may be no immediate harm in riding with one's friends, but it does not "look right." There is no harm in trimming a plush dress with velvet, still you will allow that the effect produced is not a pleasing one—not "good taste," so to speak.

A young girl who has, by her actions, once allowed people to call her a "giddy" or "wild girl," can seldom regain perfect dignity. She may grow up to be the "glass of fashion" and reigning belle, but there will always be a gossip-loving somebody who knew her when she was young, and "she was such a giddy-headed thing." A boy may be a "little terror," the worry of mother and sister. He will grow up to be a business and probably a "society" man," and all that will be said of him is that he was very wild when a boy, "but then all boys are."

Another thing over which young girls do not scruple is receiving the attentions of promiscuous acquaintances and even their gifts. We sometimes wonder how a girl whose parents are in straitened circumstances can afford to give her so much jewelry and "knick-knacks." My lady will admit it, and indeed in some cases she will boast, that "This pin is from Johnny," "Harry gave me this ring" and "Bertie had that bangle made for me." Do you know that a man who respects a girl (unless he is very ignorant) will never offer her any gifts of value? Flowers, the latest waltz, or even bon-bons, I admit, may be presented and accepted without compromise or suspicion to that effect.

How many of our girls keep company with this and that young man, receive their attentions, escort to the theater and other amusements, and when if "Cupid" has aimed without thought of consequences, the supposed favorite speaks to her of matrimony, she is "thoroughly shocked" and "never dreamed of such a thing;" "how foolish he is!" Yes, how very foolish he is to waste his time and affections on so heartless an object. I know personally a woman who when a girl kept company with a man whom she "liked" because he was "good company," and an over-indulgent mother supplied him with a great deal of pocket-money, which he applied for her every wish, making her the envy of less beautiful girls. If she did not openly encourage his affections which were becoming more ardent as their meetings grew more frequent, at any rate she gave him no reason to think that he was an intruder. In the meantime when every one expected their engagement, she met a young Italian whose romantic eyes took her fancy and soon became engaged to him. She did not announce her betrothal to any one and even her former lover was not informed of it, although she accepted his escort as before. At length he proposed to her, firmly believing that his love was reciprocated. Then she was obliged to admit that she was already affianced. This was a terrible blow to him. He left that evening, never to see her again. She married the Italian. At first, any young girl who would have seen the loving couple together would have thought that all such things as "reserve" were useless. She seemed to enjoy all that her heart could desire, a loving husband, wealth, social honors; all this was simply the sweet coating of the bitter pill she was about to swallow. She soon found that her husband was a drinking man. It was the novelty of a pretty face that had kept him sober, but now he became the same degraded being as of old. Loss of wealth through games and drink followed, and the usual consequence, loss of social position. A young family was growing up around her in poverty. Her romantic husband became a demon, and she and her little ones were left to the charitable public. When relating this to me (I hired her to do my housecleaning every week), she would say, "O my God! no one knows the misery I endure, but alas! it serves me right; when I close my eyes to sleep I see the pitiful look of Ernest when I told him I was betrothed to another; that look has haunted me through life."

What became of her jilted lover? He died the death of an inebriate after two short years of awful dissipation, which soon caused his mother to follow him in sorrow to the grave. So, dear girls, you see the consequences of encouraging false hopes. Girls, *try* and be "reserved!"

San Jose.

GOOD HEALTH

PREVENTIVE MEDICINE.—It is to be feared that the time is far off when mankind will be wise enough to pay their money for being *kept* in health. The following remarks by Dr. W. W. Johnson, in the *Medical Advance*, are to the point: "We doctors get the most praise when we make the biggest fools of ourselves. When we prescribe accurately and a disease is cured in its incipient stages, nothing is thought of it. It is passed over as of no great importance, and the chances are that the patient is deemed foolish for calling a physician to such a simple case. But if the prescription be a poor one, as many of them are, and the disease takes its natural course, assuming from day to day its progressive and various symptoms, how changed then the conditions! Nurses and attendants move with bated breath, the friends hang on the words and even the looks of the physician. At last the disease having run its course, nature winning solely through a strong vitality, the patient is pronounced convalescent. Then sound the praises of the doctor. What a mighty man he is! Before his august presence grim Death slinks away and yields up another victim to his mighty power. Herald his fame abroad, that suffering thousands may avail themselves of his sapient skill. Does the doctor know he didn't cure the patient? Yea, verily, let us hope he does. Does he tell the friends of it and bid them hold their peace? Oh no, he's no fool, though sometimes foolish.

DEADLY CATERPILLARS.—The Philadelphia *Press* gives an account of a man, 32 years of age, who recently died of blood poison caused by the bite of a common green caterpillar. He was bitten upon the neck as he lay on the grass. The same paper tells of a young lady, 21 years of age, living in Philadelphia, who was at the time in a dangerous condition from the bite of a green caterpillar, which she received while sitting under a grapevine. Severe illness, and even death, is sometimes caused from the bite of a fly. In all such cases, death, or severe illness, is caused by blood poison superinduced by the bite; and it is supposed that insects, usually harmless, whose bites are thus dangerous, have recently come from feasting upon some decayed and poisonous meat or other substance whence the poison virus is taken.

THE USE OF VINEGAR.—Far too much vinegar, says a good medical authority, is used to be compatible with good health. The general belief is that it is a wholesome and necessary adjunct to our diet; but really it might be almost entirely dispensed with except for pickling purposes. If used, it should be used sparingly. A slice of lemon is far preferable as a substitute, and limes may be used if convenient. If vinegar must be used, that made from wine is much more wholesome than that made from cider. In this connection the following upon the effects of acids and alkalies on the stomach from *Good Health* may be read with profit: An eminent Polish physician, Jaworski, has been experimenting to determine the effects of acids and alkalies upon the stomach. He finds that acids precipitate mucus, cause bile to flow into the stomach, increase the amount of pepsin in the gastric juice, but not its acidity, diminish the flow of gastric juice, and in excess, produce disturbances of digestion. Alkalies, on the other hand, dissolve mucus and decompose pepsin. These facts explain the evil results arising from a continued use of vinegar, baking powder, saleratus, soda and similar substances commonly used in cookery.

BLOOD TRANSFUSION.—The operation of the direct transfusion of blood, says the New York *Sun*, is becoming quite common in the great hospitals of that city. It is performed as often as once a month, but not always, however, with success. Of late a similar operation—injecting an artificial fibrinated fluid into the veins of collapsed patients—has become still more common. Remarkably successful results have many times been obtained.

A REMEDY FOR CHOLERA, it is claimed, has been discovered by a Frenchman from Cette. People either attacked by or in fear of the disease must sit for some hours in a garment soaked in paraffine, which irritates the skin, producing a healthy reaction, and kills the cholera microbe. Very doubtful.

DOMESTIC ECONOMY

SPONGE CAKE FOR TWO.—Beat the whites of four eggs to a stiff froth, add one teacupful of sugar, then the yolks; lastly, one teacupful of flour. To be perfect, this cake must always be put together in the order given in the recipe.

CHOCOLATE CAKE.—Two eggs, one cup of sugar, one-third cup of butter, one-half cup of chocolate, one teaspoonful of vanilla, one tablespoonful of milk, 1½ cups of flour, one teaspoonful of cream of tartar, one-half teaspoonful of soda.

JOHNNY CAKE.—Nine tablespoonfuls of molasses or soft sugar, two cups of buttermilk, one teaspoonful of soda, and one-half teaspoonful of salt, and cornmeal enough to make it so it will run out of the spoon; but not too thin, and not thick enough to drop from the spoon.

SLICED GRAPES.—Ten pounds of grapes, eight pounds of sugar, four tablespoonfuls of cloves, four tablespoonfuls of cinnamon, one quart of vinegar. Boil slowly until the fruit is tender. Remove from the fire and rub through a colander; put in tumblers and cover closely. Cherries, gooseberries and currants are nice spiced; the two last need not be strained.

TUMBLER CAKE.—Three tumblers of sugar, one tumbler of water; beat these to a froth with the hand, then add one tumbler of sweet milk and five tumblers of flour, two teaspoonfuls of cream tartar, one teaspoonful of soda sifted with flour, then four beaten eggs and flavor to taste, last of all a tumbler of citron cut fine or chopped.

APPLE PRESERVES.—Peel, core, and if the apples are large, halve them; if not, preserve whole. Add to one pound of fruit a pound of sugar, then place the fruit in a vessel; cover with just enough water to make sufficient syrup. Let it remain all night, then put on to boil; when nearly done, take out the fruit and sun while syrup boils. Return to kettle and cook until done. Flavor with extract of lemon. If boiled too fast the fruit will drop to pieces.

AN OLD-FASHIONED NUT CAKE.—Two cups of sugar, stirred to a cream with three-quarters of a cup of butter, a cup of rich milk, a teaspoon of soda, four eggs, four scant cups of flour and a teaspoon of cream of tartar. A cup of hickory nuts chopped very fine, is stirred through the cake just before it is put in the oven. It should be baked in large brick-shaped loaves, iced with a thick icing, through which half a cup of hickory nuts have been stirred.

SPANISH CREAM.—One quart of milk, one cup of sugar, one package of gelatine, half a teaspoonful of salt, one teaspoonful of vanilla, yolks of four eggs. Soak the gelatine ten minutes in half a cup of cold water. Boil the milk and add the gelatine and other ingredients. At the last, stir in the yolks, which must be beaten to a cream, and pour into molds to harden. Use the whites for cakes or meringues. They are sometimes beaten stiff and stirred in at the last; but the cream is better when made with only the yolks.

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SAN FRANCISCO:

Saturday, October 18, 1890.

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[NEW THIS ISSUE.]

Harrows—H. C. Shaw Plow Works, Stockton.
Wearing Apparel, Etc.—Hale Bros. & Co., Sacramento.
Wine and Cider Press—F. W. Krogh & Co.
Harrow and Seeder—P. P. Mast & Co.
Guns, Fishing Tackle, Etc —C. D. Ladd.
Wire Fence—Bird-Turnbull Mfg. Co., Chicago.
Pianos—A. L. Bancroft & Co.
Pianos—Matthias Gray Co.
Orchard Land—S. J. Stabler.
Sheep Wanted—A. Watson.
Fruit Trees—Pike Co. Nurseries, Louisiana, Mo.
Sawing Machine—Folding Sawing Machine Co., Chicago.
Ladies' Guide—A. B. Stockham & Co., Chicago.
Poultry—W. C. Damon, Napa.
Roofing Paper—Pacific Roll Paper Company.
Roofing Paper—Dimmick & Low.

See Advertising Columns.

The Week.

We have frequently alluded to the great demand for staple vegetables for Eastern shipment. This movement is already beginning to influence local prices, and the question may be whether the great hungry East will leave enough garden sass in this State to supply our own people until other crops can be gathered. On page 340 of this issue is a paragraph from a Pomona exchange showing how active the shipping demand is likely to be. It looks now as though the advice frequently given in these columns, that those who have land *in safe localities* for early planting of potatoes, etc., should get in as large areas as possible, for fine prices are likely to rule for early products.

The recent law reserving over seven townships for the National Sequoia Park will add interest to the valuable essay, accompanied by a map, on the Sequoia forests of the Sierra Nevada, which we print upon another page. It is a grand thing that these monarchs are to be saved to receive the homage of coming generations.

Special Weather Reports.

For the last ten years the work of the local branch of the U. S. Signal Service has been growing more and more valuable to our agricultural producers. The disposition of the several officers who have had charge of the work during that time has been uniformly in the line of rendering their observations and deductions therefrom of greater practical value to our people. Special bulletins conspicuously placed have conveyed to the public much timely and important information, and have saved a vast amount of loss from unseasonable or unusually severe weather. Special reports to meet the needs of special classes of producers have also been transmitted by wire. The present officer in charge in this city, Lieut. Finley, has succeeded in making arrangements which will bring the service still more directly at the command of our farmers, and these arrangements he describes in the following circular:

Signal Office,
Office of Officer in Charge,
Rooms 327–328 Phelan Building,
San Francisco, Cal., Oct. 8, 1890.

This communication is to inform you that arrangements are being made at this office to facilitate the distribution of daily weather forecasts and rain warnings by employing the long-distance telephone service of this city. The Pacific Bell Telephone Company of this city has very kindly placed at the disposal of this office the proper instrument and connections whereby direct communication can be had with the signal office from all towns in the State having long-distance telephone service from San Francisco. It is desired that these facts be made known to the public so that they can avail themselves of quick communication with this office in case of storms or when it is desired to obtain any other meteorological information. It is the earnest desire of this office to place all information which reaches it in the hands of the public, where it will do the most good at the earliest practical moment and in the most convenient manner. It is expected that the service above referred to will not begin later than October 15th, and perhaps by the 12th inst. Any inquiries or suggestions will be cheerfully received and considered from those who may desire further information regarding this scheme. Jno. P. Finley,
Second Lieutenant Signal Corps, in charge.

It would be very easy for neighborhoods of producers to arrange for the reception of such information as they are likely most to need at their nearest telephone station, and to have the announcements taken from ranch to ranch by a boy on horseback, so that every individual may be warned of danger or advised of probable safety in spite of threatening local manifestations. We trust that producers generally will consider the matter and avail themselves so far as possible of Lieut. Finley's timely offer.

Inspector of Experiment Stations.

The many friends of W. G. Klee will regret to learn that ill health has compelled him to resign his position as Inspector of the University Agricultural Experiment Stations. He is seriously ill, and the hardships of the travel which is necessary to supervise the progress of these widely separated institutions would endanger his recovery. For this reason Mr. Klee lays down his work with deep regret, and will pursue a quieter course which will enable him to regain strength.

The Board of Regents of the University, at a meeting on Tuesday of this week, approved the recommendation of Prof. Hilgard that Mr. C. H. Shinn be selected to fill the unexpired term of Mr. Klee. Mr. Shinn needs no introduction to our readers. He has for years been recognized as well informed upon California's agricultural practice and resources and an able expounder of them. He appears to be well fitted to assist Prof. Hilgard in the conduct of the outlying stations and in making their work significant and valuable. We expect that Mr. Shinn's work in this field will be energetic and effective, and therefore add our commendation of his appointment.

The Finest Broadcloth.—It may not be generally known that the finest piece of broadcloth which ever left a loom was manufactured at the Vassalboro woolen-mills of Maine. It was first exhibited at the World's Fair in London, in 1851. It was exhibited at the Centennial in 1876, and was pronounced by the judges in that line of goods as unsurpassed by anything of the kind there on exhibition. There is no public recognition of any other manufacture of broadcloth superior either in texture or finish. It stands to-day unequaled by any goods of its kind on record. This fact is well established, and should be more widely known as evidence that nothing is impossible in American hands which can be accomplished anywhere else. The only reason why these superior goods are not made on a commercial scale is because the high price of labor here forbids it. In this connection we may also state a fact well known on this coast, but not so well known elsewhere, that the finest woolen blankets ever produced in the world were made at the old, but now defunct, Mission woolen-mills, in this city. Those blankets were exhibited at several European expositions, at our own Centennial, and at various exhibitions in this city, and never met an equal in either texture or finish. There is nothing in the world's general produce in the way of skill which Americans cannot attain if they are only properly paid for it.

Sunshine for Consumption.

Plenty of air and sunshine, light out-door work, or horseback riding, etc., constitute an old prescription for consumption and possibly the best one which can be given. It is a fact of constant observation in California, that almost in every neighborhood people are now living, working and enjoying themselves, who came here from other climates with fractional lungs, and threatened with early dissolution. It has been generally supposed that California air and sunshine induced a toning up and strengthening of the system which enabled it to arrest the course of the disease and perhaps to repair its injuries. This hypothesis is so reasonable and seems to be approved by such wide experience that it will probably do to cling to, but it is of interest to note that Koch, the great German student of the minute vegetable organism which is supposed to be the cause of tubercular consumption, has announced that the splendid effect of sunlight on this organism is to destroy its virulence, suspend its activity, and finally render it inert. It follows from this that consumptives cannot do better than live in the open air and the sun, and that the more they are exposed to the solar rays, the greater their chance of escape. Hence a climate that permits open-air life every day is the one for consumptives. There are also some remedies that check the progress of the bacillus, but researches on these are not yet complete.

Possibly even this does not mean that the sunlight exerts a direct effect upon the organism (*bacillus tuberculosis*), but that it saves the patient by rendering his blood or tissues unwholesome for its growth, and then it suffers and finally becomes inert. It does not matter particularly, either, although it would be satisfactory to the waiting consumptive to know that the sunshine which is burning his back is directly killing the organism which menaces his life as well as giving him new vitality for regaining health and strength. In any case, it is in the sunshine and air that lies the patient's hope of recovery, and nowhere can he find such remedial agents as in the drier, warmer portions of California, shunning fogs and malaria and selecting those regions which are well known as especially favorable to the cure of pulmonary disorders.

Wheat as Ballast.—Many of our grain-growing readers who watch the course of prices in the different centers have no doubt noticed the disparity between prices on the Atlantic and Pacific Coasts during the last few weeks, and that the difference in favor of the Atlantic wheat-sellers was more than the usual equivalent of their greater proximity to the English markets. The fact is that freights from New York to Liverpool have been quoted "nominal," which really means that wheat has been carried eastward across the Atlantic as steamer ballast. There has been an unparalleled movement of passengers and merchandise westward—the latter because of the eagerness to get in goods before the new tariff law went into effect. This heavy movement one way has made it impossible to secure return cargoes, and in haste to return, wheat has been taken as ballast. This condition, though temporary, has caused the disproportionate advance in Eastern wheat prices to which we have alluded.

Justice Samuel F. Miller of the U. S. Supreme Court was stricken with paralysis Oct. 10th, and died last Monday night at Washington, aged 74 years.

The World's Fair.

The World's Fair Commission has solved the question of classification, and therefore given the coming exhibition definite form. The main classes or departments agreed upon are as follows:

A, agriculture, farm machinery and appliances, forestry and forest products; B, viticulture, horticulture and floriculture; C, live-stock, domestic and wild animals; D, fish, fisheries and fish products and apparatus for fishing; E, mines, mining and metallurgy; F, machinery; G, transportation and intercommunication; H, electricity and electrical appliances (electrical exhibits will also be found in other departments of the exposition); I, manufactures; K, fine arts, pictorial, plastic and decorative; L, music, education, literature, engineering, public works, sociology; M, the progress of human labor and invention.

The creation of a separate department for horticulture, viticulture and floriculture is credited to the efforts of the California commissioner, Mr. De Young, and it is believed that this will give our State a much better opportunity to display its excellence in this line as well as afford the horticulturists of other States the same opportunity. As the general scheme has been adopted, the general manager and secretary selected and the architects at work, it may be regarded as settled that the opportunity will be provided, and it will be in order for the States to provide their displays. We presume this will be taken up in California as soon as the excitement of election dies away.

The Coming Orange Crop.—Judging by the S. P. Co.'s returns from agents concerning the orange crop, it is estimated that 3750 carloads will leave the State where last year the total shipment was 2600 cars. The largest consignments will be made as follows: Macpherson, Riverside, Castle Blanca and Alisto 1800 cars, San Gabriel and Alhambra 500 cars, Azusa and Glendura 130 cars, Pomona 148 cars, Redlands 120 cars, Tustin 143 cars, Highland 50 cars, San Diego 27 cars, Santa Ana 36 cars, Pasadena and Lemoore 49 cars, Orange 50 cars, Ontario 34 cars, Colton 14 cars, Los Angeles 316 cars, Downey 107 cars, Anaheim 90 cars and Decarte 112 cars.

High Treason and Hog Meat!—A threatened rupture of the friendly relations that have so long existed between the United States and Germany has just been averted. The Yankee youngster who was heard to say, "I sneeze at the Emperor," has been tried and acquitted of the charge of high treason; that both countries breathe easier it were needless to say. The exclusion of our hog meat from the Kaiser's realm remains, however, a matter of irritation between the two peoples. Since now we admit the Kaiser's anarchists and even his saur kraut duty free, why cannot he reciprocate and admit in like manner *die fleisch auf unser schwein.*

Horticulture in the Census.—As our readers have already been informed, Mr. J. H. Hale of Connecticut is now in this State in discharge of his duties as special agent of the eleventh census for the investigation of the nurseries, seed farms, truck farms, florists' establishments and the production of semi-tropic fruits and nuts of the United States. Mr. Hale expects to stay on the coast about two months, and no doubt will form the acquaintance of many of our readers, to all of whom we commend him and his valuable efforts, and bespeak interest and assistance from all producers.

For Less than Nothing.—A Los Gatos fruit-grower dispatched 31 boxes of large egg plums to a San Francisco commission-house, the latter paying the freight bill. A few days later came the fruit-dealer's statement that the plums were sold for 20 cents a box, and requesting the shipper to remit $4.20 to cover his loss. The orchardist thought the entire loss of his plums sufficient, refused to remit and changed his city agent.

Peanuts.—Peanuts may be thought by some to be a small crop, or item, among American farm products, but they were included among the inquiries in the Division of Agriculture of the Census, and the returns in acres and values will be surprising. That "there's millions in it" is shown by the fact that the city of Norfolk, Va., alone handled over $1,000,000 worth of peanuts last year.

The Sequoia Forests of the Sierra Nevada—Their Location and Area.

[A paper read by FRANK J. WALKER at the California Academy of Sciences, Sept. 1, 1890.]

In the Standard Guide-Book to the Pacific Coast, of a late issue, we read this statement: "There are nine groves of big trees in California;" and in the descriptive sketch following this remarkable statement, we find three of the nine groves mentioned as lying south of King's river, vaguely described as: The King's River grove, the grove in the basin of North Tule, and the grove in the basin of South Tule. There are in the localities named, as containing three, no less than seven distinct groves and forests of big trees, while in the enumeration given there is no mention whatever by the author of the several groves and forests of Middle Tule, Kern or Kaweah rivers, nor of the most southern grove, on Deer creek; in short, the omissions comprise some 20 distinct Sequoia groves and forests, aggregating an area of at least 25,000 acres. Few, indeed, of the inhabitants of Tulare county, where most of the forests are found, have any conception of the wide extent of their Sequoia possessions; probably not one person in 500 knows of the existence even of big trees on the Kern-river slope, and many would dispute the fact—a fact I have never seen referred to in print—and yet there are no less than 2000 acres in that region, and some of it the most dense forest growth of *Sequoia gigantea* known to man. And so with other groves; many of them are to the general public practically unknown and unexplored.

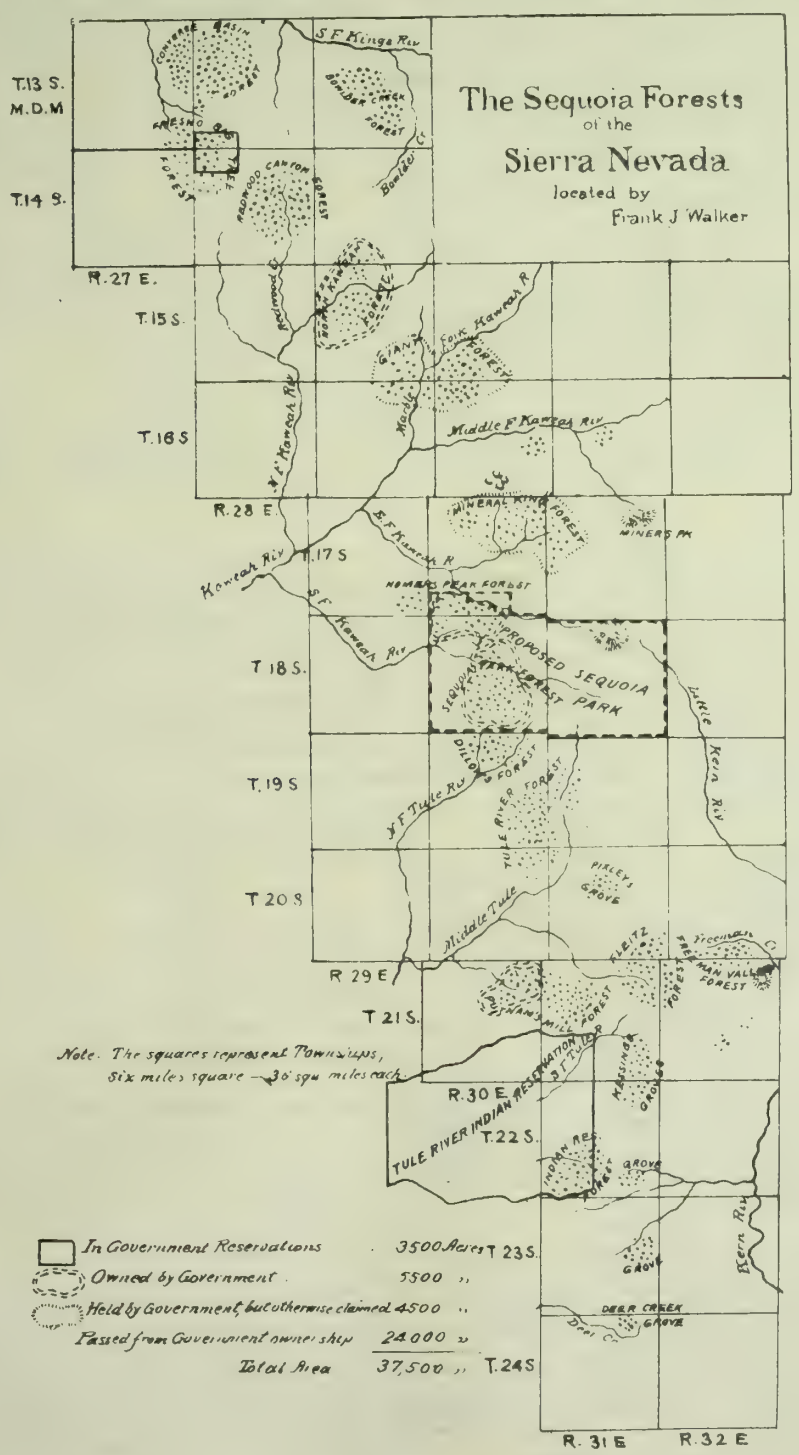
The accompanying map is the first ever published with an approximate showing of the area, location or existence even of what is by far the larger part of our Sequoia possessions.

With reference to this map, it is my purpose in this paper to briefly mention what may be termed the forests of Sequoia, and the neighboring groves; and in making the distinction between forests and groves, it will be necessary to draw a somewhat arbitrary line; and for this purpose we will classify as forests all areas of 1000 acres or upward, and all below that as groves. According to this distinction, we can safely assume that all forests of *Sequoia gigantea* are to be found to the south of King's river, and nearly all of them in Tulare county; and with mere mention of the better known northern groves—the Calaveras, South Park, Tuolumne, Merced, Mariposa, Fresno and Washington—we will, therefore, confine our sketch to a description of this region only.

The first, going southward, and probably the largest compact body of all, is located on the south slope of the South Fork of King's river, in Fresno county. It is designated on your map as Converse Basin Forest. Its location may be given more exactly as in the northeastern portion of Township 13 South, Range 27 East, and the northwestern part of Township 13 South, Range 28 East, M. D. M., the larger part being in the latter township. [Please bear in mind that all townships and ranges hereafter given are south and east of Mount Diablo Meridian.] The area of this tract is about 5000 acres. These figures can at best be but an approximation. For most part, the Sequoia country is so broken, and the variation of density of growth so great, and the limits so vaguely defined, that an exact estimation is almost impossible; besides, it is likely to be misleading from the fact that it represents in some instances what might be called a heavy continuous growth, while in others it is more or less broken and scattering. In nearly all cases there is found mixed with the Sequoia a plentiful growth of other timber, principally yellow and sugar pine (*Pinus ponderosa* and *Pinus Lambertiana*), with a sprinkling here and there of fir, cedar and other growths. However, I have aimed everywhere to keep my estimates of areas well within bounds. This first forest, together with the one next in order, are owned by one of the leading lumber firms of California, and, next Wednesday, they celebrate at Sanger the completion of their 40-mile lumber flume, connecting their capacious mills in the mountains with the railroad on the plains. They propose to clean up everything as they go along, stripping the land bare and moving their mills and extending their flume from point to point as the timber supply becomes exhausted. It will probably take years for them to reach the Boulder Creek forest, in Township 13, Range 29, so named from the affluent of King's river, on whose slopes it is found. The area of this forest and neighboring groves cannot be less than 1500 acres, probably more. These two already mentioned lie altogether on the waters of King's river, in Fresno county, but the forest next to the south, the Fresno Big Tree forest, is on the divide between the waters of King's and Kaweah rivers, partly in Fresno and partly in Tulare counties. It lies in the contiguous corners of the four Townships 13 and 14, Ranges 27 and 28. Its original area cannot be computed at less than 2000 or 3000 acres, but so much of it has been stripped of its timber that its limits are hard to determine. Here have been the principal milling operations in Sequoia for the past 20 years. Four sections of it, containing what is known as the "Fresno Big Trees," have already been reserved by the United States Government, it being the only reservation ever made in these southern forests for the purpose of saving the Sequoia. This is the reservation recently confirmed by the Hon. Secretary of the Interior, and containing the famous big tree known as "General Grant," said to be 40 feet in diameter.

Passing on to the west side of Township 14, Range 28, we find along Redwood creek a forest of some 3000 acres. This most magnificent growth has also passed from the possession of the Government to private ownership. Farther south, we next come to a forest on the North Fork of the Kaweah river in the northwest portion of 15–29, and extending northward across the line into 14–29. There are here upward of 1500 acres of Big Tree forest still owned by the Government. The whole township is timbered and well worth preserving, aside from the Sequoia.

A few miles southward brings us to the Sequoia tract, known as the Giant forest, located in the contiguous corners of Townships 15 and 16, Ranges 29 and 30, where there is found an area of some 2300 acres of Sequoia. This, although still in the hands of the Government, is claimed by individual locators, by reason of their locations having been made in good faith and filed previous to the withdrawal from entry of these townships, as explained hereafter. It is generally thought that they will substantiate their claims and acquire the land, and public sentiment seems to favor it. Passing to the Middle Fork of Kaweah river, we find several groves, some of which are still in the hands of the Government, but there exists on this branch no Sequoia tract that could properly be called a forest.



Southward, on the East Fork of the Kaweah river, we come to what is designated as the Mineral King forest, from a mining district of that name, comprising, with the detached groves, some 3000 acres; the main body is in Township 17, Range 30, the township whose recent restoration to entry gave rise to the movement culminating in what is known as the Vandever Sequoia Park bill, lately passed in the lower house of Congress. In December, 1885, Commissioner Sparks of the General Land Office withdrew from entry 18 certain townships, of which this was one. The reason for this suspension was the alleged fraudulent character of the surveys. We need not consider the condition of these surveys, but from the character of the country it would seem that the sub division lines of Township 17, Range 30, could be more readily run with a ruling pen than with chain and transit, and at that time the compensation for either system of survey was supposed to be the same. But one thing is certain, on many of the Government plats you will search in vain for any trace of Sequoia growth, even where the alleged lines run through sections now known to be heavily timbered with the mountain redwood. It is to this fact largely, no doubt, that the very existence of certain Sequoia forests has so long remained unknown to the public.

The fact that several of the suspended townships contained big trees had nothing whatever to do, so far as we know, with influencing the act of the Commissioner. But Commissioner Sparks "builded better than he knew," and the ultimate outcome of his order of withdrawal has been to preserve, in the Government's undisputed possession, several forests of these big trees that would otherwise have gone the way of all the rest—into the hands of speculators and lumbermen. Thus the matter remained in *statu quo* till the opening of the present year, the friends of Sequoia preservation resting easy in the fancied security of their position, inasmuch as the Department had expressly declared its policy not to restore to entry these lands in advance of an official examination. At the opening of the present year, parties interested in acquiring timber, by some means, secured the release of the suspension of Township 17, Range 30. It was restored to entry on May 23d, and in less than six weeks the entire Mineral King forest was filed on by timber-land claimants, and the tract effectually cleaned up. While thus the greed for big-tree timber was developing, the supply was growing short and the attention of timber prospectors was turned to other forests; and it was found that in the township to the south, Township 18, Range 30, there was a forest practically unexplored that offered the best field for their next work. The same measures that had proved so successful in opening up Township 17, Range 30, were forthwith set to work to secure this more valuable prize. At this juncture a few citizens of Tulare county took steps to thwart the attempted spoliation of the Sequoia forests. As the forest in Township 18, Range 30, was the one the timber men most wanted, the inference was reasonable that it was the best of all for the Government to keep. I need not detail the ways and means adopted, but the ultimate outcome of the opposition has been the Vandever bill, embracing in its proposed reservation two townships and four sections to be set apart as a National Sequoia Park. This reservation includes the forest marked on your map as the Sequoia Park forest, and also the larger part of the Homer Peak forest, somewhere from 3000 to 5000 acres. South of these, following the Sequoia belt, in Township 19, Range 30, we come to the Dillon Mill forest, of over 1000 acres, with but little remaining to the Government, and from which thousands of Sequoia fence posts are being hauled this season. And still farther southward, partly in the southeast corner of the same township and extending into the corners of three other townships, is the Tule River forest. Much "cutting and slashing" for a period of years, of which Prof. Eisen told you at a late meeting, has here been going on, and during this time different mills have been drawing their supply of mountain redwood from this forest, and still by far the larger part remains. Here exists a noted center of Sequoia growth known as the "McFadyen 80" (acres), estimated by lumbermen to have on it timber sufficient for 8,000,000 feet of lumber. Only one mill is running this season. This, with the Pixley grove, we will estimate at 3500 acres. About six miles directly south is the Putnam Mill forest, in Townships 20 and 21, Range 31, containing some 4000 acres. A portion of this, that in Township 20, Range 31, is still owned by the Government and is a very beautiful forest of over 1000 acres. In the northeast of this same Township 21, Range 31, and extending into the adjoining townships, is found the Fleitz forest, owned by a Michigan syndicate, while in the southeast portion of the same township, and extending into Township 22, Range 31, are groves owned by the syndicate known as the "Kessing," the several tracts comprising an area of some 4000 acres. Here again, in the southwest of Township 22, Range 31, the Government possesses a forest of somewhat uncertain value and extent, known as the Indian Reservation forest, and estimated at 1500 acres. It is not generally known that there exists any Sequoia on the Kern river slope, but there are on that side at least 1500 or 2000 acres in groves scattered along the slope from Freeman's valley southward for some 15 miles. Only one of these tracts could be classed as a forest—that of Freeman's valley. Here is a tract of about 1000 acres, a limited portion of which is probably the heaviest growth of *Sequoia gigantea* in the world. Unfortunately this also has passed into the hands of lumbermen. One grove more remains to be mentioned, not because of its intrinsic merit, but because of its location, it being, so far as known, the southernmost limit of Sequoia. It is that on Deer creek, indicated on older maps as "Mammoth Grove." It contains less than 150 Sequoias, scattered over an area of perhaps 300 acres.

This completes the list. The Sequoia forests proper therefore extend over a belt of country beginning at Converse basin on the north and ending with the Indian Reservation forest, 60 miles to the south. The groves and forests together in this region are upward of 20 in number, with an average distance between them of perhaps three or four miles.

Within this scope of country, a moderate estimate of the Sequoia area would be, according to the foregoing figures and including a few unnamed groves, 37,500 acres, divided between the several river systems as follows:

King's river	7,500
Kaweah river	14,000
Tule river	14,000
Kern river	1,700
Deer creek	300
Total acres	37,500

It has been sufficiently shown that there are in the State several forests and groves of big trees still belonging to the Government, aside from those embraced in the Vandever bill. To insure the safety of these, and to put them beyond the designs of timber-men, and above all, to protect them from devastating forest fires, it is exceedingly desirable that they be reserved and placed under expert supervision. We need no reminder that the greed of timber and cattle men will soon work havoc with what remains, unless something be done to stay the devastation; and if we would save a portion we must begin at once.

Concerning the utility of the region embraced in these limits as the best natural reservoir for the storage of waters needed for irrigation, we need not dwell. But for a moment let me touch on the suitability of the country for a park because of its charming natural attractions. You need hardly be reminded of this. The heart of the Sierra culminating in Mount Whitney affords grand scenery of peculiar charm and great variety. Here are three Yosemites rivaling their noted prototype in many features, with a little world of wonders clustering around the headwaters of Kern, Kaweah and King's rivers. We will simply mention the Grand Canyon of the Kern, where for twenty miles the mad waters of the river are walled in with the continuous battlements of the California Alps, crowned with nameless and unnumbered domes and towers. Then, only a few miles across the divide, extends the canyon of King's river with its wealth of impressive scenery; and some eight miles farther to the north lies the Valley of Tehipitee—the gem of the Sierra—with its wondrous dome of rock ris-

ing in rounded majesty some 6000 feet from the level of the river-cleft meadow at its feet. Yet a view of the most impressive and characteristic scenery of the region is to be earned by scaling one of the lofty peaks of the Kaweah Range. At least a hundred peaks here rise to altitudes exceeding 10,000 feet. One never can forget the impression, who has once looked out over the California Alps from the pinnacle of Miner's Peak. As I once before said, in describing this scene: "Here amid the companionship of peaks one beholds with speechless wonder the spectacle beyond. No satisfactory view of the Whitney Range can be found from the San Joaquin plains. The intervening Kaweah Range veils the view of the higher peaks beyond. But here, standing on the crest of the Kaweah Sierra, one looks across the Grand Canyon of the Kern, and the encircling wilderness of crags and peaks is beyond the power of pen to describe. Mounts Monache, Whitney, Williamson, Tyndall, Kaweah and a hundred nameless peaks—the crown of our country—have pierced the mantle of green that clothes the canyons below and are piled into the very sky, jagged and bald, and bleak and hoary—a wilderness of eternal desolation."—*Zoe for September.*

AGRICULTURAL NOTES.

CALIFORNIA.

Colusa.

SALE OF MUTTON SHEEP.—Orland *News*, Oct. 11: A. W. Riley of Santa Rosa was in town this week. He purchased 6000 ewes of Hon. John Boggs, and Miller & Lux bought the remainder of the band, some 10,000.

Contra Costa.

LEVEE BUILDING.—Antioch *Ledger*, Oct. 11: Messrs. T. C. Walker, B. F. Porter, J. O B. Wyatt and Wm. Forman have entered into an agreement to build a levee that will be of great importance to their lands. This levee will reclaim about 2000 acres of land that is now subject to overflow. It will extend along the bank of the San Joaquin river from the mouth of Dutch slough to the Giovanetti place, and will fill in a gap that former land-owners would not build. A good and substantial levee already faces the land belonging to Porter, Wyatt and Walker, and in order to complete the gap, Mr. Porter bought the land belonging to Truman and Stanchfield. It is the back water from this gap which has covered the overflow this year. We also understand that Mr. Porter has bargained for or purchased Mr. Walker's large tract of land. This is an important enterprise.

Inyo.

THE NEW CANAL.—*Independent*, Oct. 10: It looks now as if the big canal would certainly be built. Mr. Brooks is in the field with a corps of assistants making a working survey. Mr. C. A. Swan has nearly completed a portable kitchen for the surveyors. It is built upon wheels and is filled with all necessary cooking apparatus. The canal will be one of the greatest works of the kind in the State. From the point where it leaves the river to where the water can be turned loose to find its own way to Salt Wells Valley, the distance is over 60 miles. The water would there flow freely into the valley, a distance of about 30 miles. Tens of thousands of acres of land will be fertilized.

Los Angeles.

PLANT CABBAGES AND POTATOES.—Pomona *Progress*: We have a letter from John D. Cheney of Denver, who says that every pound of potatoes, cabbages, parsnips and such vegetables that can be grown in Southern California this season will be gladly bought by commission merchants not only in Denver but in Cheyenne, Minneapolis and Chicago. Mr. Cheney says he will be in Southern California next January and will himself buy, at the best market prices, 40 carloads of cabbages and potatoes if he can get them. He says that he also knows of several commission men in the East who have their eyes turned toward this part of California for their supplies of potatoes, cabbages, etc., for the winter season, and will buy many carloads if possible. Mr. Cheney says that the supply of potatoes in the East, especially in Colorado, Kansas, Minnesota and Wisconsin, has never been so small for this season of the year. The Canada and New England potato crops are about as near failures as possible. The rains caused a general rotting of the vegetable in the ground.

A VALUABLE RANCH.—The Santa Ana *Blade*, in speaking of a ranch in that vicinity owned by Sanford Johnson of Los Angeles, says: The largest of Mr. Johnson's ranches lies five miles due west of Santa Ana, on First street. It contains 352 acres of land, most of which is utilized in raising hay and corn. Concerning this piece of property Mr. Johnson said: "This ranch yields me an income of $10,000 a year above all expenses, and I hire all my work done. I have 120 acres in alfalfa, and get five crops a year from it. I have 1500 tons of hay in sheds upon the ranch now, a portion of which is last year's crop. At the present price, this would bring me $15,000, but I am going to hold it awhile longer, as I am of the opinion that good hay will bring $15 a ton by January next. Then I have 150 acres in corn that will run from 50 to 100 bushels to the acre, and that is no small item."

Mariposa.

LARGE BAND OF GOATS.—Mariposa *Gazette*, Oct. 11: A band of several thousand goats belonging to C. W. M'Master passed through town Thursday. They were nearly all Angoras, and presented a very handsome appearance, being fat and clean looking.

Mendocino.

HOPS.—Ukiah *Dispatch and Democrat* Oct. 11: We understand that nearly 1000 bales of hops will be shipped direct to New York from this county. The Bartlett Bros. this week shipped their entire hop crop (399 bales) to Horst Bros., New York City. They expect to realize 35 cents per pound net.

Monterey.

THE APPLE PROBLEM.—Salinas *Democrat*, Oct. 11: H. C. Tuttle of San Miguel canyon is hauling apples into town. They are good size, 63 of them filling a box. They are of fine luster and color, and demonstrate to a certainty that the soil on which they were grown is perfectly adapted to their growth. The trees from which these apples were gathered were set out as two-year-olds five years ago and have never been irrigated. The growth made by them has been very good, and the crop this year is very heavy. Mr. Tuttle will clear over $100 per acre on these young trees, and expects next year to double his profits. This is a good showing for sandhills that are practically of no account for cereal farming, and is but another illustration of the fact that Monterey county is destined at no distant day to become one of the greatest apple-producing sections of California.

Nevada.

PEARS.—Grass Valley *Tidings*, Oct. 10: From Clerk Lord we learn that 150 tons of pears have been shipped from Grass Valley for the season to date. From Nevada City about 100 tons have been sent out, representing 4000 fifty-pound boxes. The Grass Valley shipment is equivalent to 5600 fifty-pound boxes, making a total from the two towns of 9600 boxes. Shipments are still being made, and apples and winter pears are to follow. Then there has been more or less fruit sent from Nevada county by Colfax and Clipper Gap, Wheatland and Marysville—in the latter instance to the cannery.

Orange.

PEANUT PLOW.—Santa Ana, Oct. 9: George Phelps, a son of H. Phelps, has invented a peanut plow that is exceedingly simple and does its work to perfection. It is simply a sled, the width of a row of peanuts, with an iron knife running across the bottom, so arranged that it can be adjusted to any required depth. To this knife is attached fingers that carry the bunches of peanuts backward and set them down flat upon the ground, top upward, after having sifted the dirt from the nuts, thus overcoming the necessity of following up the plow with a pitchfork, as is the case with other plows. It will save the labor of at least two men.

SYSTEMATIC FARMING.—Santa Ana *Blade*, Oct. 9: H. Phelps is the owner of 13½ acres of splendid land, all planted to orchard. The land between the trees is planted to peanuts, and a better prospect for a large yield of nuts is seldom seen. In order to give the readers an idea of what can be grown on a small piece of land, the following figures are given by Mr. Phelps, as submitted: Sold this season: Prunes, $70; apricots, $40; pears, $20; walnuts, $100. He estimates that his peanut crop will bring him $1000. When the peanuts are gathered, he intends planting the land to cabbage, and, if everything is favorable, he calculates to take off $1000 worth of cabbage in time to plant the land to peanuts next season. Should his estimates prove correct, the yield for 12 months will amount to $2230.

San Diego.

WHEN RAISIN PACKING WILL BEGIN.—*San Diegan*, Oct. 10: Douglas Ogden, who is in from El Cajon, informs the *San Diegan* that raisin-packing will not begin in full force for a week or ten days. At present the Chicago firm is working 30 or 40 hands at the Cowles packing-house, but 150 will be used when the grapes are ready. The Boston ranch, John T. Gordon and S. M. Marshall, are also beginning to pack. The pack will be 25 per cent over that of last year.

NO DISEASED VINES.—San Diego, Oct. 10: Mr. Gordon says that State Inspector Dowling has been looking over the vineyards in the El Cajon valley for several days, and says he will report that the scare of disease as manifested last year was altogether uncalled for. He finds the vines in a perfectly healthy condition, and only in a few places does he discover even a trace of the so-called disease. By next season he is sure that it will have entirely disappeared.

FARMING EARLY THIS SEASON.—*Union*, Oct. 9: About two inches of rain fell on the Otay mesa during September, and the soil was never before in better condition for farming so early in the season. Taking advantage of this favorable condition, the farmers have already prepared considerable land for grain and hay.

VALUE OF FRUIT FARMS.—San Diego *Sun*, Oct. 8: H. F. Norcross returned last week from a trip through the northern part of San Diego county and through San Bernardino, Orange and Los Angeles counties. "Wherever I went," said Mr. Norcross, "and found small orchards of from five to ten acres, I found the people prosperous and with money in the banks. Wherever I found a country without irrigation and without orchards, I found a settlement where everybody was complaining about hard times and the scarcity of money. I will give you an instance of what a small fruit orchard does for a man: A few weeks ago a gentleman who lives at Elsinore asked me for a loan. He said he could pay it back when he had marketed his fruit. As he could not get the money in time, he secured it elsewhere. Returning home from the county above, I called to see the same gentleman. He had marketed all his fruit, and with the proceeds had paid back the borrowed money, had purchased 20 acres adjoining his fruit farm and had $1500 loaned out besides. Owing to not having much money, he had marketed his crop early. Had he held on a few days longer, he might have realized $1000 more. It is enough, however, to show that the surest way to make money in this country is to grow fruit."

San Luis Obispo.

SEEDING WHEAT.—San Miguel *Messenger*, Oct. 10: The farmers in the vicinity of Parkfield are plowing and sowing wheat. This is the earliest sowing done in the valley for a number of years.

Santa Clara.

LATE GRAPES DAMAGED.—"Kilp," writing from Carpinteria to San Jose *Mercury*, Oct. 12th, says: The damp weather is causing the grapes to rot, even on the highest lands, entailing upon the grape-growers considerable trouble and pecuniary loss. Grapes that begin to mold are only fit to make brandy of, and make a very poor quality of that. The unsuccessful attempt of the wine men to depress prices for grapes is going to add another proof to the old proverb, "out of evil cometh good," many of the farmers declaring this is the last year that they will be dependent upon wine-makers, but they will build wineries and handle their own grapes. They say they might as well be at the mercy of the San Francisco wine ring as the pettier wine-makers' ring which is said to exist in the county, as the former would not stoop as low as the latter.

FRUIT FOR MEXICO.—San Jose *Times*: A. Campiglia, the fruit shipper, has consigned ten crates of Flame Tokay grapes to a firm in the City of Mexico. Mr. Campiglia reports that he sends fruit constantly to this firm, which demands only the largest and finest that is to be had.

Sonoma.

CARELESS FARMERS.—Santa Rosa *Democrat*, Oct. 11: As an instance showing why some farmers are always complaining of hard times, a gentleman says that while driving along one of the main county roads he passed an orchard where at least 10 wagon-loads of apples were lying on the ground. The fruit was large and of fine quality, as could be seen from the samples which the gentleman had picked up and put in his pockets. Apples of this kind are now worth $15 a ton at the drier's, and such careless methods entail a loss of many dollars.

LARGE YIELD OF GRAPES.—Cloverdale *Reveille*, Oct. 11: J. G Heald informs us that he raised 15 tons of grapes to the acre on his vineyard in Oat valley. This is a great yield, and, we believe, is the best yield in the valley.

Sutter.

PEACH YIELD.—Yuba City, Oct. 10: Now that the fruit crop of California is practically harvested, we may expect to hear of the wonderful profits realized from fruit from various parts of the State. Sutter county submits the following facts and figures furnished by G. F. Starr, a prominent orchardist near Yuba City: From 98 six-year-old peach trees, 49 George's Late and 49 Salway, Mr. Starr sold to the Sutter Cannery 27,300 pounds of fruit at three and a quarter cents a pound, amounting to $887.25, besides drying a ton of fruit, worth $65. These trees yielded the snug sum of $952.25. The orchard from which this fruit was harvested is on high ground, unirrigated, and the trees are 20 feet apart, making 108 to the acre. We challenge comparison.

TREE PLANTING.—Yuba City *Farmer*, Oct. 10: Mr. Tharsing of the Sutter County Orchard Company informed us a few days since that he would put on a large force of men soon to drain and otherwise put the bottom-land of the company below town in a good condition for planting. Besides replanting where the trees were killed by the water last winter, he intends planting 150 acres more, and on the higher ground will probably build a levee to protect the trees.

CROPS IN DISTRICT NO. 70.—Those residents of District No. 70 who were fortunate enough to get an opportunity of planting their land to corn, vegetables, etc., after the water had subsided last spring, are now busy harvesting the same and the yield of such products has never been seen in that section. The bean crop is extra good and is selling at $55 per ton. This is the white bean and is a good marketable article. Ira H. Wood has 200 acres planted to beans, which he is now thrashing or having tramped out by horses. A cleaner is then used to run the beans through to separate them from the chaff and pods. Corn and potatoes, with some fields of buckwheat, comprise the balance of the late crop in that part of the county, from which the farmers have received rich returns. A large amount of land will be sown to grain this season, as the greater part of the district has been plowed and is in excellent condition for seeding.

Tulare.

BUYING LAND ON SHARES.—Traver *Advocate*, Oct. 9: Considerable land is now being sold in the 76 country under contracts providing that the purchaser of a tract of land of say 80 acres, is to plant the said tract to fruit, cultivate the same for three years, and then have deeded to him one-half of the tract. We know of one party who earned 40 acres of fine vineyard in this way, and is now planting out 80 acres more on a like contract.

GOOD RETURNS.—Traver, Oct. 9: James Hurst, whose farm is some three miles northwest of Traver, made a large profit from his young peach orchard this year. He kept account of the amount realized from eight of his trees. He sold the crop on the trees for 2¼ cents per pound. The purchaser shipped 133 boxes of 21 pounds each, or 2583 pounds; 200 pounds had been previously sold, and Mr. Hurst had 600 pounds left that he dried. The total yield of the eight trees was 3383 pounds; at the rate of 2¼ cents per pound, the trees brought him $75.12, or $1502.40 per acre. Not a bad income from young trees set out only two years ago.

FINE CORN.—Monache *Tidings*, Oct. 10: At Mrs. Harper's place, a few miles west of Porterville, there is a field of corn that beat anything we have seen of late years in California, in the way of a well-matured crop. The ears and rows on the ears were large, more than ordinarily perfect and free from worm work. We also noticed rows of sorghum cane, growing on river-bottom sand where beets or anything else refuse to grow.

Ventura.

A TRAINLOAD OF LIMA BEANS.—Huenome, Oct. 11: The steamer this evening carried 110 tons of Lima beans to San Pedro to go to Eastern points via the U. P. R. R. This shipment will make a train of ten cars, and is said to be the first entire train of beans ever shipped from California.

Yolo.

GOOD YIELD OF PEARS.—Winters *Express*, Oct. 11: T. E Boyd & Son, who are conducting H. G. Finch's ranch in Pleasant valley, gathered eight tons of Bartlett pears from 40 trees this season. This fruit netted them $500, clear of all expenses. In addition to this, the wind blew off a ton and a half of pears in one night, and these they sold to J. M. Pettengill of this place for two cents per pound for drying. When it is known that this return is from less than half an acre, it will be seen what our land is capable of doing.

TALL MILLET.—Winters, Oct. 11: Supervisor Snider informs us that he sowed some golden millet on his ranch near Washington on the 27th of July, and it was ready to cut when the rain of last week came on. Now, since it got wet, he says there is not a mowing machine that would go through it, it being so tall and thick. The millet is over six feet high and as thick as the hair on a dog's back.

Yuba.

RAISIN GRAPES.—Marysville *Appeal*, Oct. 11: From reports received Thursday, the raisin-grape growers breathe more freely than they did on Tuesday and Wednesday. The strong north wind had the desired effect, and it is now thought that all the grapes that were exposed will be saved. C. E. Williams, who is one of the most extensive raisin-grape raisers in this vicinity, was seen yesterday by an *Appeal* reporter in relation to the effect of the late rain. He stated that he had between 12,000 and 14 000 trays out exposed to the recent storm, but he believed that they would come out all right. They might be damaged some in quality, but he thought not to any great extent. Speaking of the raisin grapes, Mr. Williams said that the second crop of Muscatels was just ripening, and that he had doubled his force of help in order to handle them.

ARIZONA.

RAISIN VINEYARDS.—Phœnix *Herald*: In Section 33, T. 3 N. and 2 E., Messrs. Logan & Adams own 160 acres. In March, 1888, they planted 80 acres to Muscats. From September, 1889, to the present time these received three irrigations, in March, June and August last. The vines are simply superb in rapidity and solidness of growth. On the first of August grape-picking began. The second crop had been gathered and was drying yesterday when the reporters called. This is about 40 days ahead of California grapes, and means six weeks' monopoly of the raisin market. The raisins were not London layers, for grand party show, but they were an extra quality of ordinary family raisin, good enough for every-day use, clear-skinned and full of sugar. Next year perhaps the layer variety may be possible. But ordinary family raisins from vines two years old is satisfactory to the watchful owners, who see $300 profit per acre in a very short time. The cuttings were simply thrust into the ground, whose only cultivation, from raw desert, was the single furrow for each row of vines. Eighty thousand rooted cuttings were raised from them this year and have been already sold. The two Thompson brothers of New Haven, Conn., will each put out an 80-acre vineyard next winter, immediately east of Logan & Adams' place. These latter will add another 80 acres to their present vines. Col. Adams has also been in practical charge of his enterprise, and to his watchful skill is due the success thus far. He secured for the raisin-making, Capt. Wright, who claims the credit of producing California's first raisins. Long experience has made him master of the business and he pronounces this valley equal in every way to the Pacific Coast State as a raisin country, with the advantage of nearly six weeks' earlier maturity.

BEE INDUSTRY.—Wm. Osborn, who is in the bee business in this valley, has taken 12 tons of strained honey from 182 hives of bees this season and expects to take fully five tons more.

The Stable.

Brood Mares at the Agnew Stock Farm.

In our issue of Sept. 20th, we gave on the first page a portrait of the standard trotting stallion Dawn, owned by Harry J. Agnew, proprietor of the Agnew Stock Farm, Hillsdale, Santa Clara county, and mentioned a fine band of brood mares as also to be found on the farm. The following shows the resources of the establishment in the line of brood mares:

Maude—Bay mare, record 2:20, registered; sired by Bertrand 3262, the sire of Frank Fisk, 2:29. Dam by Hamilton Chief, son of Royal George 9. This mare is well known in California by all horsemen, having been on the turf for three years, entered in 21 races and winning 18 of them, since which time she has been bred to such horses as Guy Wilkes, 2:15¼; Woodnut, 2:16½; Director, 2:17; having had a filly by each of the former and a horse colt by the latter, and is again stinted to Director.

Emma Temple—Bay mare, standard and registered; record 2:21, in the fifth heat at Stockton in '89; sired by Jackson Temple 11042, a son of Volunteer 1758. Dam, Lizzie R, by Emigrant. This mare is also well known to turf-goers, and last year (1889) after winning at Santa Rosa, Napa and Petaluma, won also a well-contested race at Stockton, defeating such good ones as Hazel Wilkes, Alfred G, Lorita, Pink and Mary Low, getting a record of 2:21 in the fifth heat. She wound up the season by winning a race at Fresno and Visalia; she has been stinted to Dawn, 2:18¾.

Baby Mine—Black mare, standard and registered; record 2:27; sired by Nephew 1220, a son of Hambrino 820, 2:21¼. Dam, Lady Burns, by Black Boy. This mare has shown trials much faster than her record, and is also well known for her gameness; she has been stinted to Dawn, 2:18¾.

Clara P—Brown mare, standard and registered; record 2:29½; sired by Mambrino Wilkes 6083, son of Geo. Wilkes 519. Dam, Cora, by Corsican, son of Imported Corsican; stinted to Dawn, 2:18¾.

Nettie Nutwood—Bay mare, standard and registered; sired by Nutwood 600, son of Belmont 64. Dam by Ethan Allen, Jr. (Vicks) 2993. This mare has repeatedly shown miles in 2:30 when not in condition, and getting hurt was placed in the stud; she has a foal by her side by Antinous, a son of Electioneer, and has been stinted to Director, 2:17.

Angie Wilkes—Bay mare, standard and registered; sired by Guy Wilkes, 2:15¼, son of Geo. Wilkes 519. Dam, Maude, record 2:20, by Bertrand 3262; stinted to Dawn, 2:18¾.

Lyla A—Chestnut mare, standard and registered; sired by Arthurton 365, son of Hambletonian 10. Dam, Flora Langford, the dam of Lillian Wilkes, 3-year-old record of 2:17¾; Joe Arthurton, 2:20½. The produce of this mare by Sable Wilkes as a yearling, sold by Killip & Co. to B. C. Holly, the former owner of Woodnut, 2:16½, for $2600; she has been stinted to Sable Wilkes, 2:18.

Veronica—Brown mare, standard and registered; sired by Mambrino Wilkes 6083, son of Geo. Wilkes 519. Dam by Winthrop 505, son of the Drew Horse, sire of Molly Drew, 2:27; Corette, 2:19; and Oakland Boy, 2:29. This mare took first premium as a 2-year-old standard trotter at the State Fair of 1886.

Daisy—Gray mare, sired by Gov. Stanford's Mohawk Chief, sire of the dams of Lot Slocum, 2:17½; Sallie Benton (4 y. o.) 2:17¾; Pedlar (2 y. o.) 2.27¾; Eros, 2:29½, and Stanford (4 y. o.) 2:30. Dam by Gen. Taylor. This mare has been stinted to Holly's Mountain Boy.

Low M—Gray mare, standard and registered; sired by Arthurton 365, sire of Arab, 2:16¾; Joe Arthurton, 2:20½. Dam, Nancy, by Gen. Taylor. This mare is a full sister to Corbitt's Blanche, the dam of Hazel Wilkes, 4 y. o. record 2:20.

Belle—Bay mare, sired by Frank Malone, son of Ethan Allen, Jr. 2903. Dam by Paul's Abdallah, a son of Ry. Hambletonian 10. Belle was one of the noted road mares, and while owned by Hiram Cook, got a record of 2:39¾ in a roadster race at Bay District track; she has been stinted to Dawn, 2:18¾.

Istar—Bay mare, standard and registered; sired by Mambrino Wilkes 6083, the sire of Alpheus, 2:27; Gus Wilkes, 2:22; Balkan, 3 y. o., 2:29¼; Clara P, 2:29½. Dam, Narka, by Nephew 1220; sire of Voucher, 2:22; Ha Ha, 2.22¼; Bracelet, 2:21; and four others in 2:30 list.

Lady Powers—Bay mare, standard; sired by Alexander 490, son of Geo. M. Patchen, Jr. 31. Dam by Gen. Dana 1757, son of Whipple's Hambletonian, 2:25; stinted to Dawn, 2:18¾.

Laska—Bay mare, sired by Alaska, son of Electioneer 125. Dam, Sarah Kinny, by Alexander 490; stinted to Dawn, 2:18¾.

Directress—Black mare, sired by Director, 2:17. Dam, Daisy, by Mohawk Chief.

Lena Monroe—Standard, sired by Monroe Chief, 2:17. Dam, Lena Bowles by Ethan Allen, Jr., 2993. Stinted to Eros, son of Electioneer.

Electress—Bay mare by Elect, a son of Electioneer 125. Dam by Joe Daniels. Stinted to Dawn, 2:18¾.

Josie A.—Black mare sired by Doncaster, a son of Elmo. Dam, Kitty Malone by Patchen Vernon, sire Allen Roy, 2:17. Stinted to Dawn, 2:18¾.

Laura—Bay mare, sired by Rea's Nutwood, son of Nutwood, 600. Dam by Dick Patchen, a. g. s. G. M. P., Jr., 31. Stinted to Boswell, Jr.

Violet—Bay mare sired by Jack Patchen, son of Geo. M. P., Jr., 31. First dam the dam of Quinn's Patchen, the sire Marin, 2:22½. Stinted to Boswell, Jr.

Maude Woodnut—Chestnut, standard and registered, sired by Woodnut, 2:16¼, son of Nutwood, 600. Dam, Maude, 2:20, by Bertrand, 3262.

Nettie B.—Bay mare, standard and registered, sired by Altimont, a son of Almont, 33. Dam, Lizzie R., Standard, the dam of Emma Temple, 2:21. Stinted to Free Trade.

A Fine Young Stallion.

Boswell Jr.—Chestnut stallion, bred at Honolulu, Hawaiian Islands, by Harry J. Agnew, sired by Boswell, a son of the great Almont 33; first dam Maude, record 2:20 (and winner of 18 races out of 21 races); second dam by Hamilton Chief, a son of Royal George 9. This horse has not been trained but a few months, but could show miles in 2:26 and quarters in 35 seconds, as many of the Petaluma horsemen know who have timed him. At present he is in Lee Shaner's hands at the Petaluma track in order to give him a record. Boswell Jr. stands 16 hands, weighs 1100 lbs., of fine form, good bone, well-muscled and a coat of hair as fine as satin. His disposition is of the very best.

Stockton Fair Awards.

The fair for the Second Agricultural District, which closed at Stockton Saturday night, Oct. 4th, proved—according to the *Independent*—pretty good for an off season, and far more successful than was at first anticipated. The attendance at the pavilion was large nearly every evening. A bench show, at which medals were given for mastiffs, New Foundlands, greyhounds, spaniels, terriers, etc., was a feature of the affair this season. The following exhibits, at park or pavilion, in the line of agricultural and related industries, were awarded premiums:

Horses.

THOROUGHBREDS.—Stallions—Four Aces, 4 yrs old, Matt Storn, Sac.

TROTTERS, STANDARD-BRED.—Stallions—Campaign, 4 yrs old, W. H. Parker, Stockton; Dictator Wilkes, 2 yrs, L. U. Shippee; Recompense, 1 yr, Mrs. M. E. Warren, Linden. Mares—Unnamed, 2 yrs, Funck Bros., Farmington.

ROADSTERS.—Stallions — Harry N., 4 yrs, F. Nevin, 1st; Jaggers, 4 yrs, R. E. Stowe, 2d; Miles, 3 yrs, O. P. Munson, Turlock, 1st; Stonewall Jackson, 3 yrs, C. Herd, 2d; Revive, 2 yrs, Geo. Kneier, 1st; Fresno Prince, 2 yrs, C. Garrow, 2d; unnamed, 1 yr, S. Lombard. Mares or geldings—Seal, 4 yrs, old, J. S. Dunham, 1st; Maude, 5 yrs, D. Leiginger; Ella H., 3 yrs, O. P. Munson, Turlock, 1st; Hunter Prince, 3 yrs, S. Lombard, 2d; Rosalind, 2 yrs, Mrs. M. B. Larry; Lucile, 1 yr, N. Nevin, 1st; Bright Night, 1 yr, M. Belden, 2d; unnamed, under 1 yr, Joshua Cowell.

ALL PURPOSES.—Stallions—Stampede, 4 yrs, J. Cowell, 1st; John Vernon, 4 yrs, Alex. Gross, 2d; Lathrop, 3 yrs, G. H. Shedd, Lathrop (special); Frank, 2 yrs, J. N. Solomon; Jesse, sucking colt, J. Cowell.

DRAFT.—Stallions—Young Eureka, 3 yrs, C. E. Barnhardt; Granger, 5 yrs, W. L. Overhiser; Ben, 5 yrs, C. P. Allison, Lodi. Mares or Geldings—Maude, 3 yrs, C. E. Barnhardt, 1st; Vic, 3 yrs, J. Cowell, 2d; Fan, sucking filly, C. P. Allison.

CARRIAGE.—Jack & Dan, L. U. Shippee, 1st; Dolly & Queen, J. S. Dunham, 2d; Frank (single) Shippee.

MULES, JACKS AND JENNIES.—Span of mules, 1st, J. Cowell; 2d, C. E. Barnhardt. Jacks—Tommy, 5 yrs, & Goliath, 5 yrs, L. U. Shippee; unnamed, 2 years, C. C. Eastin, Newman, Maltese, 1 yr, 1st; Shippee, 2d, unnamed, 1 yr, Eastin; Juno, under 1 yr, Shippee. Jennets—1st, Lummix, 8 yrs, Shippee; unnamed, J. B. Crow, Crow's Landing; unnamed, 2 yrs, Eastin, 1st; Kate, 2 yrs, Shippee; Susie, 1 yr, Shippee; unnamed, suckling, Eastin.

Cattle.

DURHAM.—All awards—Bulls, cows & herd, Shippee.

HOLSTEIN.—All awards—bs, cs & herd—E. S Beecher.

Swine.

ESSEX AND BERKSHIRE.—Best boar, Shippee.

Poultry.

FOWLS.—Best Bantams, D. Hewlet; best Leghorns, Blk Minorcas, W. A. French; 2d Bantams, 2d Leghorns, best Cochins, Brahmas & P. Rock, Wm. Hickox.

TURKEYS.—W. A. French; (Guinea fowls, special mention.)

Agricultural Implements.

[In awards under this head "W'ks" stands for Stockton Combined Harvester & Agricultural Works, "M. & W." for Matteson & Williamson and "G. U." for Grangers' Union.]

Best combined harvester, W'ks; 2d do, Houser, Haines & Knight; combined electrical harvester, John E. Doak. Best header, W'ks; 2d do, M. & W. Best sweep, horse-power, M. & W. Combined clod-crusher, harrow, pulverizer, and leveler, W'ks; special prize, G. U. Grain-cleaning attachment for thresher, W'ks; cleaner, independent, W'ks. Harrows, M. & W.; spading harrow, six-foot-cut mower, seeder and cultivator, spring tooth, H. C. Shaw. Adjustable gang harrow, W. A. Zumalt, Farmington. Stump puller, W. Daley, Sac. Hay press, W'ks. Best road scraper, Grangers' Union; 2d, Works; 3d, Matteson & Williams. Best display agricultural impl'ts by any one house, Cal. man'f's, M. & W. Best mowing machine, H. C. Shaw; 2d, John Caine. Best plow for all purposes, G. U.; 2d, J. Caine; best gang plow, Caine; best single plow, M. & W.; 2d, G. U.; best road plow, M. & W.; 2d, G. U.; sulky plow and garden gang plow, M. & W. Best fanning mill, G. U.; 2d, W'ks. Best grain sower, G. U. Best cultivator, G. U.; 2d, M. & W.; 3d, Wm. Daley, Sac.; vineyard cultivator, M. & W. Best derrick fork, M. & W. Best farm wagon for gen'l purposes, M. P. Henderson & Son. Special mentionfor J. Caine's display. Best lift pump, best force pump & irrigating pumps, John Jackson; 2d best force pump, D. C. Crummey, Los Gatos. Best churn, G. U.

Farm Produc s (f District).

CORN.—50 lbs, raised by exhib tor—Fred Arnold.

CULTIVATED NUTS.—Best 5 lbs English walnuts raised by exhibitor—Asa Collins, Knights Ferry; soft shell almonds, A. Collins; 2d do, Mrs. Jos. Hale; 25 lbs mixed nuts, A. Collins.

GRAINS & GRASSES.—Best and most artistically arranged display of California grains and grasses, Mrs. Jos. Hale; 2d, Mrs. R. W. Miller. Exh wheat raised in district No. 2, J. M. Welsh.

BRANDY AND WINES.—Buhach Co.

Fruits.

APPLES.—Finest and best collection & best 5 varieties, Shippee.

ORANGES.—Best display and best 4 var, K. Vogt, Knights Ferry.

LEMONS.—K. Vogt.

GRAPES.—Best coll, Buhach Co.; 2d do, Mrs. D. A. Learned, Stockton; best 3 var, Buhach Co.; 2d do, Mrs. D. A. Learned; best single var table grapes, best single var wine grapes, and best 8 bunches raisin grapes, Mrs. D. A. Learned.

FIGS.—Best coll, Walter Yost, Stockton; best 6 specimens, A. Collins, Knights Ferry; 2d do, Willie Hickox, Stockton.

PEARS.—Best coll and best 12, L. U. Shippee.

PEACHES.—Best coll, B. F. Langford, Lodi; best 12 of any var, Mrs. Jos. Hale.

QUINCES.—Best 12, Buhach Co.; 6, B. F. Langford.

POMEGRANATES.—Best coll, Walton Rhodes.

OLIVES.—Best exhibit, Mrs. W. H. Buttrick, French Camp; best exh olive oil, Mrs. W. H. Buttrick.

Dried Fruits Cured by Exhibitor.

PRUNES.—E. F. Langford, Lodi; 2d, Mrs. J. Hale; rasins, Buhach Co.; figs, A. Collins, 1st; Mrs. Hale, 2d; plums, apricots, cherries, apples, pears, Mrs. Hale; peaches, B. F. Langford, 1st; Buhach Co., 2d; Mrs. Hale, 3d; nectarines, Buhach Co.

Preserves, Jellies, Canned Fruits.

Best exhibit fruits preserved in spirits, Mrs. J. Hale; 2d do, Mrs. J. C. Reid; best exh fruits preserved in sugar, Mrs. J. Hale; 2d do, Mrs. Reid; jellies, best exh 5 var or more, put up by exhibitor, Mrs. Reid; 2d, Mrs. Hale; 3d, Mrs. John Wilson; canned fruits, put up by exhibitor; & crystallized fruit, best assortment, Mrs. Jos. Hale.

Floral

Mrs. E. C. Clowes—Largest collection flowering plants in bloom; display of cut flowers during fair; 1st display of white roses, not less than 100 (made on Saturday, Oct. 4th); coll ferns; display growing ornamental grasses; best and largest display trees or plants or both.

Mrs. R. P. Bates, coll ornamental foliage plants; new and rare plants, 2d; display white roses (Saturday, Oct. 4th); display bouquets; coll plants suitable for house culture; 10 hanging baskets containing plants.

Special floral exhibit, Wednesday, Oct. 1st—Best and largest display floral pieces, not less than 6; best single floral piece, Mrs. E. C. Clowes. Lasting floral piece, Mrs. M. Severy.

Special floral exhibit, Oct. 4th—Best display of not less than 6 pieces, Mrs. J. C. Brandt; 2d do, Mrs. M. Severy; single floral piece, Mrs. R. P. Bates.

Miscellaneous.

SILK.—Best display cocoons, Mrs. J. D. Utt, Stockton; 2d, Mrs. J. C. Reid; reeled silk, Mrs. Utt; 2d, silk-worm eggs and moths, Mrs. Utt.

GRAIN, FRUITS, ETC.—Heads of Seneca Chief wheat, Mrs. Fannie L. Hammond; 100 lbs Seneca Chief wheat, N. W. Hammond; four sacks wheat imported from Australia, N. M. Welsh; watermelons, exh corn, F. M. Miller; Upland rice raised in San Joaquin Co., N. G. Griffith, Union Id; Salway peaches, L. L. Northup, Camanche; red peppers, J. W. Willy; Club wheat, J. H. Crow; disp ornamental grasses, R. P. Bates; exh vegetables, L. W. Robbins; large bunches grapes, Bush & Harlow, Hanford, special mention; corn on ear, best var, Mr. Irving, Clements; Sultana grapes, J. C. Bowden, special mention; olives on branch, Italian gardens near French Camp, special mention; Sultana grapes, 25 feet grapevine, growth since April 1st; persimmons, J. C. Bowden, spec. mention; quinces, grapes and raisins, L. W. Zimmerman; grapes, oranges, walnuts, muscadines, — Finley, Amador Co.; flowering pyrethrum plants; dried pyrethrum, flowers; insect destroyer, Buhach Co.

County Exhibit.

Best county exhibit, L. U. Shippee, Stockton, $100.

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RANCHO CHICO NURSERY.—**The catalogue of this well-known establishment is the first of the fall crop of nurserymen's publications to reach us, and it will be hard to beat in style or contents. Evidently the matter has been prepared with care. The arrangement of peaches, according to order of ripening, is an effort in the right direction and will commend the catalogue to planters. Address John Bidwell, Chico, Cal.**

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The celebrated Panorama of the Battle of Gettysburg and Museum, corner Market and Tenth Streets, San Francisco, is a wonderful production. It has captured the entire State, doing a great deal of good. There is no better way of passing an hour or so, and in studying American history, than by visiting this Grand War Panorama. If any of our readers have not seen it, it will pay them well to do so.

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The whole 160 acres (quarter-section) is unusually level, is entirely enclosed with fencing, and cross-fences partition the land into several enclosures for pasturage purposes.

The improvements consist of a modern styled, two-story, hard finished house, containing seven rooms, with walled cellar, kitchen and porches additional, surrounded with elegant shade trees, etc.; a large barn, storehouse, blacksmith shop, windmill, sheds, stables, etc.

In front of the place is a row of about 40 well-grown elm and Carolina trees. There are eight acres of orchard and vineyard, mostly in bearing, 30 acres of alfalfa, several miles of ditches and 40 acres of land checked and leveled.

The soil is dark Tulare lake bottom land, very productive, grows all kinds of tropical and semi-tropical fruits, except apples, and is especially adapted to the growth of alfalfa and for stock range. Water of good quality is found at ten feet from the surface. There are three surface wells on the place.

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The simple fact that abundance of artesian water can be had so cheaply on this land will soon make it worth more than the land is now offered for.

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Fashion Notes.

Girls' Dress.

FIG. 1.—This illustrates a dress for girls from five to twelve years of age. In this instance the dress is pictured developed in plaid and plain wool goods and plain velvet. The full, round skirt is finished at the bottom with a deep hem, and the top is gathered and joined to the body, which has a smooth front and back of lining. Arranged over the smooth front is a full front that is effectively disclosed between jacket fronts. The jacket fronts are rounding at their lower edges and curved at the top to follow the rounding outline of the velvet yoke-facing, and their upper corners are trimmed with rosettes of velvet ribbon. The full backs are arranged in gathers to correspond with the full front, and the lining exposed in round-yoke shape at the top of the front and backs is faced with velvet.

The full puff sleeves are gathered at the top and bottom; the smooth linings are trimmed at the wrists with deep cuff-facings of plaid goods, and a standing collar is at the neck.

All sorts of seasonable dress materials, either of silken or woolen texture, will make up prettily in this way, and combinations of cashmere, serge, flannel, etc., with fancy silk, velvet or novelty goods in striped, checked or plaid designs will be stylish and becoming. Rows of velvet or satin-edged ribbon, embroidered bands, fancy braid or feather-stitching may trim the edge of the skirt, and rosettes of velvet ribbon or braid may ornament the body.



Fig. 1.—GIRLS' DRESS.

Ladies' Costume.

FIG. 2.—The costume is here pictured developed in mode and dark blue cloth and dark blue velvet, with Kursheedt's standard cord-passementerie and lace edging for decoration. The foundation skirt, which is in the popular four-gored style, is concealed at the left side beneath a drapery which is arranged at the top in small plaits that are well pressed in their folds for a short distance, the fulness below falling in deep plaits to the lower edge, where two rows of lace edging form a stylish foot-trimming.

Over the smooth fronts of the over-dress, which extend to basque depth and are adjusted by the customary double bust darts, is arranged a fanciful, low-necked front. This front is widened to lap in double-breasted style, and forward turning plaits laid in its upper and lower edges at each side of the center flare into becoming fulness over the bust. The lower edges of the fanciful front and of the right smooth front beneath are joined to the top of the front drapery, which falls with graceful fulness produced by shallow plaits at the belt; and back of these plaits a deep, well pressed plait presents the effect of a panel.

The edges of the fanciful front and drapery are trimmed with cord passementerie, and the pointed girdle, which conceals the joining and is fastened with hooks and loops at the left side, is trimmed with similar passementerie. The superb adjustment is completed by wide side-back gores that extend in panels to the edge of the skirt, and backs that reach to basque depth.

The back edges of the panels are overlapped by the edges of the back-drapery, which falls at the center with fan effect to the edge. Overlapping the top of the plaits at each side are a bournous fold and backward-turning plaits which throw the fulness below into a series of stylish jabot folds. The back drapery is joined to the lower edge of the back, and straps tacked to the panels beneath the drapery secure the over-dress against possible disarrangement. The full sleeves curve well over the shoulders, and below the elbow, where the outside seams terminate in dart style, they are stylishly close-fitting; a section of cord passementerie ornaments each inside seam. The standing collar of the pattern is here omitted in favor of a becoming collarette of lace edging matching that on the skirt.

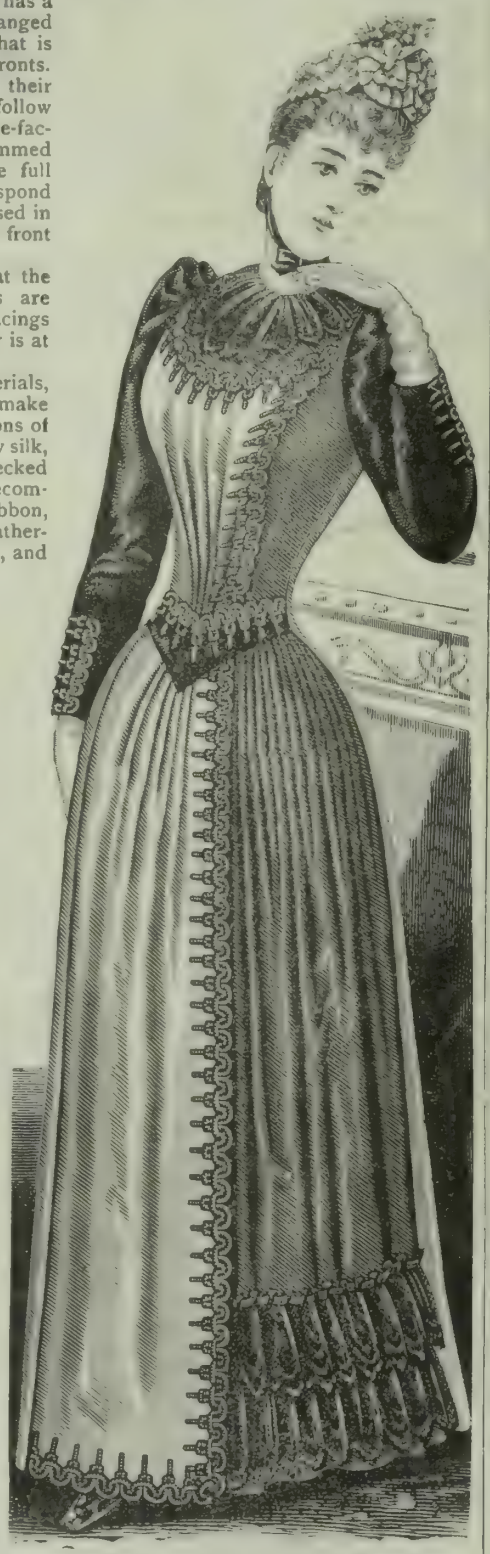


Fig. 2.—LADIES' COSTUME

Tweed, cheviot, Henrietta cloth, homespun, serge and camel's hair, as well as numerous fabrics of silken texture, will develop satisfactorily by the mode, which is particularly well suited to combinations of materials and colors. Embroidered bands, metallic braiding, passementerie, Velasquez Vandyke lace and various other handsome garnitures may be applied in any tasteful manner.

The stylish toque is prettily trimmed with silk *crepe*, ribbon loops and Autumnal foliage.

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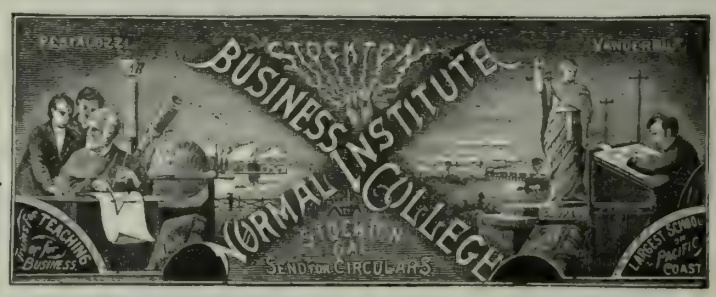
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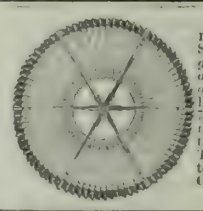


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List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING OCT. 7, 1890.

437,766.—GATE—J. A. Bacon, Phœnix, A. T.
438,062.—SAWMILL SET WORKS—E. T. Davies, Portland, Or.
437,888.—HARNESS TOOL—Henry Egbers, S. F.
437,984.—BURGLAR ALARM FOR CLOCKS—C. O. Farciot, S. F.
437,890.—HOSE-COUPLING—A. T. Gilbert, Salem, Or.
437,891.—GRAIN-CLEANER—John Grider, La Grange, Cal.
437,895.—BASEMENT, ETC., CONSTRUCTION—P. H. Jackson, S. F.
437,903.—SAFETY POCKET—E. Jacobs, Petaluma, Cal.
437,834.—VEHICLE BRAKE—W. H. Kaseberg, Wasco, Ogn.
437,860.—PLASTERERS' TOOL—Kelly & Williams, S. F.
438,085.—VALVE GEAR—F. S. McKibben, Joseph, Or.
437,865.—OIL CAN—P. J. Moore, S. F.
438,016.—DISPLAY BOTTLE—T. H. Palmer, San Bernardino, Cal.
437,717.—DEVICE FOR TRANSMITTING MOTION—C. A. Palmquist, Spokane Falls, Wash.
437,871.—PIPE MACHINE—F. M. Speed, S. F.
437,945.—LATHE ATTACHMENT—W. Swabel, S. F.
437,875.—CONCENTRATOR—C. W. Tremain, Portland, Or.
437,878.—HAT-FASTENER—P. N. Tryon, S. F.
437,805.—BARBED WIRE—W. T. Walton, Mayville, Or.
438,126.—MOUNTING GLOBES — M. Wheeler, S. F.
437,879.—SCHOOL RULER—W. H. H. Wright, S. F.

The following brief list by telegraph for Oct. 14, will appear more complete on receipt of mail advices:

California—Mahlon K. Biser, Los Angeles, washing machine; Nelson Giles, Jr., and L. E. and W. E. Brown, National City, insecticide; John Hander, S. F., fly paper; Ellsworth D. Middlekauff, Stockton, churn; James M. Miller, Vacaville, verge wire for clocks; James R. Phelps, Sacramento, harness; John M. Pray (assignor of one-half to H. H Liethead), Los Angeles, pipe-tongs; Joseph F. Prizgent, Los Angeles, shirt-measuring appliance; George C. Richards (assignor of one-half to W. T. Tuckwell), Sisson, tire-tightener; John C. Shelley, Stockton, cable railway; Thomas W. C. Spencer, S. F., automatic throw-off for cable-grips.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Carpinteria Items.

EDITORS PRESS:—For some ten days past the threshers have improved the beautiful weather by securing the beans and getting them to railway stations and boat landings.

The walnuts are being gathered with a full force.

If the weather holds good for a week more, most of the fall crops will be gathered.

Fruit dealers from Los Angeles are paying as high as two cents per pound for the best apples, boxing and packing the fruit themselves, which is the highest price paid here in several years for apples in the orchards. Some have refused two cents and will store their apples for a better price.

September closed with about one and one-half inches of rain. Grass has started finely, but must perish if no more rain falls before December.

As the weather turned dry, the beans were injured very little, and but few are lost. The Lima beans are not a full crop, but the price will, in a measure, make up in cash, as the best now bring four cents a pound delivered here at stations or landings.

Most of our crops are contracted for delivered at the cars or steamers, so the San Francisco commission men do not do quite so much work for the farmers of this place as formerly.

O. N. CADWELL.

Carpin'eria, Cal, Oct. 12, 1890.

An Index to "Looking Backward."

Mr. S. Stetson of this city, an enthusiastic convert to Nationalism, has prepared a handy guide to the best points in Bellamy's famous book, whereby he hopes largely to extend its circulation and usefulness. In the preface to this index Mr. Stetson says:

"This book has shown to thousands, for the first time in their lives, that both the necessities and luxuries of life would be secured to all in great abundance by working on an entirely new plan, so simple and sure that there would no longer be any fear of coming to want through sickness or other misfortune. The hours of labor would be reduced at least one-half, giving every one abundant time for recreation and the cultivation of faculties now unused. To read this book is a *real entertainment* for both young and old."

After giving pages and chapters in the volume for a long list of subjects, he announces that "Looking Backward" can be bought for 30 cents (about half price) of J. K. Cooper, 746 Market street, S. F. The index, on heavy book paper, may be had at the same place, or of S. Stetson, 1165 Market St., 20 copies for a dime, or 100 for 30 cents, post paid. The postage on "Looking Backward" is but one cent a copy if sent to a club ordering five or more, or four cents on a single copy.

The Daniel Best Agricultural Works.

[Written for the PACIFIC RURAL PRESS.]

The Daniel Best Agricultural Works occupies over two acres of ground in the central part of the town of San Leandro, near the depot of the Southern Pacific railroad, broad gauge. The whole of the two acres and over, which is inclosed with a handsome high board fence, is covered with workshops and machinery. The establishment has a capacity of 100 workmen. The leading outputs of these works are the Daniel Best Combined Steam Harvester, the Combined Harvester and the Remington-Best Traction Engine. Along with these are manufactured very extensively, to meet a constantly increasing market, Best's Cleaner for attachment to the Combined Harvester and Separator, which is attached to threshers, and Daniel Best's Hand Separator for cleaning grain for seed. Mr. Best's Combined Harvester and Combined Steam Harvester undoubtedly surpass very greatly all other agricultural machines in their line now made. Abundant first-class testimonials establish this. To them, at the late State Fair at Sacramento, was awarded, without reservation, the first premium and a gold medal. Mr. Best now puts his New Steam Harvester and the Remington Traction Engine together to be run as a steam traction harvester, and the two running together through one of the great grain-fields of our State excites wonder. This Combined machine stands among the highest mechanical achievements of the age, and certainly far above any other production in agricultural machinery. Mr. Best claims that this machine will, under all tests, beat all machines of its kind in the world, and he can well sustain his claim. This machine solves completely in the affirmative the problem whether wheat can be raised profitably in this country. All who have used one of the machines testify to this. Mr. Walton of Yuba City says in a letter to Mr. Best that in the one season in harvesting a little over nine hundred acres he saved more than the price of the harvester by curtailing the expenses, and this was done with horses for the pulling-power. When the traction engine is used, the saving is much greater.

But the traction engine is the grand achievement. It is simplicity itself, and as powerful as it is simple in construction. It seems impossible to have a machine of its proportions and power with fewer wheels or less machinery, and it is wonderfully substantial, standing the strain of the great pulls it makes without breakage or a twist or a displacement of any part about it; and then going at full speed, say eight or ten miles an hour, over the roughest kind of ground or road and stopping very short without the least harmful jar of any of the parts or any displacement whatever.

These engines are as secure from breaks as a wagon or carriage or a railroad locomotive. There are a number of traction engines in the market of original designs, and some imitations of the Remington-Best engine; but the Remington-Best excels them all for power, speed and durability and for handiness. It is the "steam wagon" and the power for field uses and for use on the highways the world has been looking for, and the world will be its market; and Mr. Best's belief is a safe one that it will have this market almost exclusively. It can be made of all sizes, and can be readily adapted for use in all places for pulling purposes that horses are used, and in the woods "logging" and on soft ground where horses or even oxen cannot be used and for stationary purposes as well. Much has been written and published about these engines within a recent period, and from various sources the following extracts are made:

"For fuel, straw, wood or coal can be used. It will pull 12 12-inch plows, running to the beam at a tireless speed that would soon exhaust 100 horses. It will pull a 40-foot harvester. It will go into the field and reap and thrash and clean and prepare for the market more than 100 acres of grain in a single day. It is not a ponderous, unwieldy machine. It is just heavy enough to do the work required of such a machine, and its tractability is something wonderful. It will move in every direction, back and forth, in a circle, and in all imaginable curves, and turn a square corner with the same ease that a railroad locomotive can move back and forth on the rails, and it can climb as steep a hill as a team of horses can with a loaded wagon, and it will climb over a larger log than a team of horses can be driven across. It will plow and seed your land, and then with the Combined Harvester reap and thrash, clean and sack your grain, and haul it to market for you. The cost of plowing with it is about 60 cents per acre, and the cost of harvesting, the same or less. During the whole season the machine needed no repairs."

Mr. Best will be pleased at all times to answer inquiries about his engine and the agricultural implements manufactured by him, and give information as to details, price and terms. Mr. Best is an inventor, and thoroughly understands all branches of work in his establishment, and he superintends the whole. He employs none but first-class mechanics, and uses nothing but first-class material, and he warrants every piece of machinery that leaves his factory.

The engine manufactured by Mr. Best is the only traction engine manufactured at San Leandro, and it is the original Remington engine with Mr. Best's patented improvements.

At the State Fair, in September, it took the first premium, and was awarded a gold medal. Its performances there were the wonder of all spectators. It pulled, under inspection of the committee, seventy-two (72) tons of gravel over the common road and through the streets of the city loaded on eight (8) great heavy wagons. In a field where the ground was not in very good order for plowing, it made three (3) rounds of three-quarters (¾) of a mile each, making a total distance of two and a quarter (2¼) miles in thirty-five (35) minutes, drawing twelve (12) plows and turning over a breadth of eleven (11) feet. The competing engine was just *sixty-five* (65) minutes, almost double the time in making the same rounds.

Training School for Nurses.

UNDER THE DIRECTION OF THE FABIOLA HOSPITAL ASSOCIATION.

We publish the following complimentarily and with pleasure, having full faith in the advantages to be gained by a worthy and well-conducted institution for the public good and those who may become in any way connected with it through our circulation.

The Fabiola Hospital Association has made arrangements for giving a two years' course of training to young men and women desirous of becoming professional nurses.

Those wishing to receive such a course of instruction must apply to the Association at their regular meeting, the first Friday afternoon in each month, either in person or by letter.

The most desirable age for candidates is from 20 to 35 years; they must be in sound health, and must present on application a certificate from two responsible persons (one, a physician preferred) as to their good character and good health. Upon recommendation they will be received six weeks on probation.

The first three months pupils will receive no compensation; for nine months $10 per month will be allowed for expenses, and the second year pupils will receive $15 per month.

This is in no wise intended as wages, it being considered that their education during this time is a full equivalent for their services.

Pupils are required to wear at all times while on duty in the wards dresses of material that can be washed, simply made, and such caps, cuffs and aprons as may be prescribed.

The second year pupils will be expected to perform any duty assigned them by the matron or superintendent, either to act as nurses in the hospital, or to be sent to private calls among the rich or poor.

When the full term of two years is completed, the nurses thus trained, receive (after final examination) diplomas certifying to their knowledge of nursing, their ability and good character, signed by the medical examining committee and the officers of the Society.

It is expected that nurses will bear in mind the importance of the situation they have undertaken, and will evince at all times the self-denial, forbearance, gentleness and good temper so essential in their attendance on the sick, and also to their character as Christian nurses.

The physicians and matrons have charge of the Training School, under the direction of the Fabiola Hospital Association, and the nurses are subject to the rules of the hospital.

Their fitness for the work and the propriety of retaining or dismissing them at the end of six weeks of trial, are determined by the instructors in charge of the school and the Association, who can discharge them at any time for misconduct or inefficiency. Further information can be had by addressing Mr. John Yule, President, or Dr. Avery, Physician, Fabiola Hospital, Oakland, Cal.

Russia is not America.

"Tokology, a Book for Every Woman," is so popular in America that it is hard to realize the state of things in a country that could forbid its publication and sale. The medical council of Russia pronounced against the work, claiming that it causes distrust of the profession. It is supposed, however, that this is only a pretext, and that it is forbidden on account of the indorsement of Tolstoi, who had it translated and wrote a strong recommendation in the preface to the Russian edition.

In this country, many physicians urge their patients to follow its teachings. S. A. Porter, M. D., Conesville, Ia, writes: "'Tokology' should be in the possession of every married man and woman. I say this, because it teaches men how to be husbands from the standpoint of true manhood, and women to be true wives and intelligent mothers."

"Tokology" cannot be bought of dealers, but must be procured direct of the publishers or through agents, for whom no work is more popular. Price postpaid, $2 75. Address Alice B. Stockham & Co., 161 La Salle St., Chicago, Ill.

Mr. Skillman's New Importation.

Theo. Skillman sailed from Havre Oct. 1st, with his new importation of draft stallions, comprising Percheron, Shire and Suffolk Punch. Mr. Skillman expects to arrive in Petaluma on or near Nov. 1st, and will be glad to have intending purchasers, or any one interested in good horseflesh, examine his stock. To make room for this new lot, the imported draft and coach horses now for sale at Magnolia Stock Ranch will be closed out at very reduced figures. For information apply to ERNEST SKILLMAN, Petaluma, Cal.

A TASTY LITTLE PAMPHLET is that sent forth by the Famous Manufacturing Co., Randolph and Canal streets, Chicago, telling, in dainty green and crimson typography, what users say of the "Champion" Hay Presses.

TWENTY-FIVE THOUSAND people attended the memorial services for the late Mrs. Booth, wife of Gen. Booth of the Salvation Army, at the Olympia in Hammersmith, England.

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PART III: ORCHARD FRUITS.—The Apple; The Apricot; The Cherry; The Peach; The Nectarine; The Pear; Plums and Prunes; The Quince.
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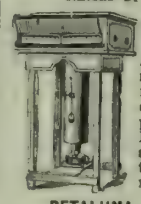
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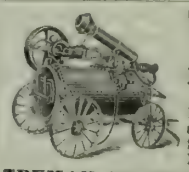
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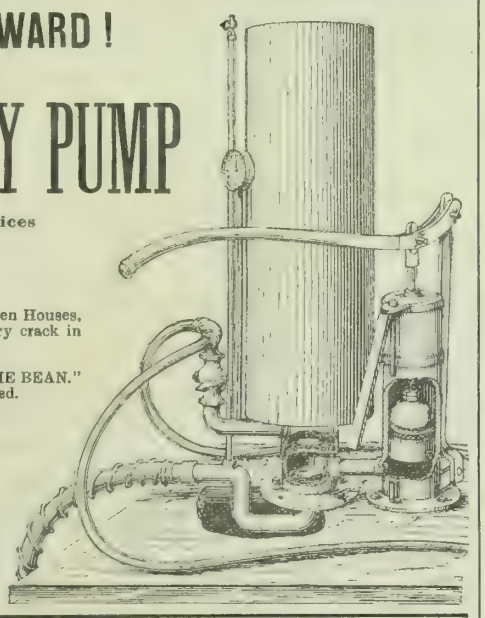
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Oct. 15, 1890.

General trade in farm products has been fairly active the past week, with a strengthening tendency in nearly all lines. Money continues fairly easy. At the East the money market is growing easier, which is reflected in a more active grain market. The wheat market at the East is also improved by nominal freights to Liverpool. The English wheat market is advancing, The following is to-day's cablegram:

LIVERPOOL, Oct. 15.—Wheat—Steady. California spot lots, 7s 2½d to 7s 5½d; cargoes off coast, 37s 3d; just shipped, 37s 3d; nearly due, 37s 3d; cargoes off coast, firm; on passage, quiet but firm; Mark Lane wheat, steady; French country markets, steady; wheat and flour in Paris, steady; weather in England, unsettled.

Foreign Grain Review.

LONDON, Oct. 13.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: English wheat is 5s below August prices, and undersells imported wheat. Foreign wheat is selling freely. Californian recovered 9d of the September decline and others 3d. This, in the face of colossal imports, indicates the strength of the market. The large quantity on passage only menaces trade for the next three months. Contracts for later delivery are small, and before winter is over there may be a deficiency rather than an excess. Maize is offered at 23s. At to-day's market, wheat was steadily held; Californian was 6d better on the week. Maize was firmer. Barley had fair sale. Oats were slow. Good barley and fine flour, especially American patent and straight, closed dearer.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Thursday	7s4½d	7s5½d	7s5½d	7s6½d	7s6d	7s6d
Friday	7s4½d	7s5c	7s5½d	7s6d	7s6d	7s6½d
Saturday	7s4d	7s5½d	7s6d	7s6½d	7s6d	7s6½d
Monday	7s4½d	7s5½d	7s6d	7s6½	7s6d	7s6d
Tuesday	7s5½d	7s6½d	7s7d	7s7d	7s7d	7s6½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	37s3d	37s3d	37s3d	Firm.
Friday	37s3d	37s3d	37s3d	Quiet.
Saturday	37s3d	37s3d	37s3d	Steady.
Monday	37s3d	37s3d	37s3d	Steady.
Tuesday	37s3d	37s3d	37s3d	Quiet.

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per bushel:

Day.	Oct.	Nov.	Dec.	Jan.	May.	June.
Thursday	104½	105½	106½	107½	110½	...
Friday	106½	107½	108½	109½	111⅛	...
Saturday	104½	106½	106½	107½	109½	...
Monday	105½	106⅜	107½	108½	110⅜	...
Tuesday	105½	106½	107½	108⅜	110⅜	...

The closing prices for wheat have been as follows at Chicago for the past week, per bushel:

Day.	Oct.	Dec.	May.	June.
Thursday	99	102½	106⅞	...
Friday	100½	103⅛	107½	...
Saturday	99⅛	102⅜	106⅛	...
Monday	100	102	106⅜	...
Tuesday	100½	103¼	107⅜	...

NEW YORK, Oct. 15.—Wheat—$1.07⅞ for cash, $1.06⅞ for November, $1.08 for December, $1.11¼ for May, and $1.04 for July.

CHICAGO, Oct. 15.—Wheat—$1.00½ for November, $1.03¼ for December and $1.07⅜ for May.

Eastern Wool Markets.

NEW YORK, Oct. 10.—The wool markets are still in active condition. Buying is mainly for immediate consumption, and very little speculation is noted. As the new Tariff bill will completely shut out many lines of foreign goods, manufacturers are preparing to supply the demand which must soon arise. The importations for the past few weeks have been unusually large, as dealers were anxious to secure as large stocks as possible before the Tariff bill went into effect. The foreign market continues very firm, and advanced prices are well maintained. Dealers here are easily obtaining 42c ₩ lb. for the best grades of Australian wools. The demand for carpet wools shows considerable strengthening, and values are advancing.

Honey

NEW YORK, Oct. 13.—The weight of honey is too much for the grade of tin used in the cans. Resoldering interrupts trade, and is no guarantee for safe further shipment after landing. The market is as before.

Hops.

NEW YORK, Oct. 13.—Hops are in more general demand; good shipments abroad. The new States offer few choices as yet. California and Pacific have had the chief run of trade all the week, and the quality is unusually satisfactory. State, new, prime to choice, 45@47c; common to good, 40@43c; 1889, good to prime, 30@32c; common to fair, 25@28c; 1888, 15@20c; old Olds, 8@15c; Pacific Coast, new, prime to choice, 38@40c; low grades, 36@37c; 1889, 30@33c; 1888, 15@25c; California's old Olds, 8@15c; 750 German arrived. Exports, 1288.

Crop Reports.

WASHINGTON, Oct. 10.—The October estimates of the yield per acre for the entire breadth of cereal crops, computed by the Department of Agriculture, are as follows: Winter wheat, 10.8 bushels per acre; spring wheat, 11.5; wheat crop, 11.1; oats, 19.8; barley, 21; rye, 11.8. The condition of corn is 70.6 instead of 70.1 as last month. Buckwheat is 90.7 instead of 90.5; potatoes are 61.7 instead of 65.7; tobacco is 84.4 instead of 82.4. There is practically no change in the general condition, except a reduction of four points in potatoes and an increase of two points in tobacco.

The effect of winter frosts upon wheat is shown by the lower rate of yield to have been severe. Some of the higher rates in the principal States are: New York, 15.2; Pennsylvania, 12; Ohio, 12.5; Michigan, 15.2; Illinois, 11.5; Missouri, 11.2; Kansas, 13.5; California, 12; Oregon, 15.

Crops show a very low yield throughout the South, where the acreage is small. In the Ohio valley the variation in the yield in different counties, as on farms in the same country, has some extraordinary range, from five to twenty-five bushels, and in extreme cases from one to thirty bushels. One county in Illinois claims the best crops in years and another poorer crops than were expected. The Rocky Mountain areas made good averages in spring wheat on limited areas. Dakota's yields vary from a bushel or two to 25 bushels and make an average of nine bushels per acre. Minnesota returns 12 and Wisconsin 12½ bushels. The estimated yield of oats is 19.8 bushels, which is the lowest ever reported, probably reducing the aggregate product more than 200,000,000 bushels.

Local Markets.

BARLEY

	Buyer Season. H.	Buyer Season. L.	Seller 1890. H.	Seller 1890. L.	Buyer 1890. H.	Buyer 1890. L.
Thursday	149	148⅝	...	...	142½	142
Friday	149½	149½	...	...	142½	142½
Saturday	149½	149	...	...	142⅝	142
Monday	149⅝	149	...	...	142⅝	142⅜
Tuesday	148⅝	148⅝	...	...	141¼	141¼

WHEAT.

		S. S.	Nov.	B. '90.	B. S.	S. '90.
Thursday	h.	....	....	135½	143⅞	....
	l.	....	....	135	143½	....
Friday	h.	....	....	136½	144⅜	....
	l.	....	....	135⅞	143⅝	....
Saturday	h.	....	..	135	143⅜	....
	l.	....	....	135½	143¼	....
Monday	h.	....	....	135½	143⅜	....
	l.	....	....	135¼	143⅛	....
Tuesday	h.	....	....	136⅜	144¼	....
	l.	....	....	135½	143⅜	....

BAGS—The market is dull at 6½@7c. Importers look for better prices after the turn of the year. They claim that not enough can be manufactured on this coast, while the increased duty (2c per bag) will compel them to advance prices.

BARLEY—The market is very strong under a good demand and strong holding. On Call, trading has been light. The following are to-day's Call Board sales:

Morning Session: No sales. Afternoon Session: Buyer season—100 tons, $1.48½ ₩ ctl.

BUTTER—The market is exhibiting more strength for gilt-edged in rolls. Sales are reported at 36c to 37½c a pound. Other grades are in oversupply. Pickled butter continues to go out freely. The market shows a firmer tone.

CHEESE—Mild is in fair demand at full prices. There is an over-supply of old, sharp cheese, which keeps down the more choice mild.

EGGS—The market has made a sharp advance, closing very strong. Strictly choice fresh laid selected eggs are wanted. Eastern are coming in more sparingly.

FLOUR—The market is quiet but steady. The export movement is increasing.

WHEAT—The market for sample parcels is dull, but large holders are not selling. All that is being placed comes from speculators. In futures, trading is quiet, but there appears to be a firmer feeling. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—300 tons, $1.36; 1700, $1.35⅞. Buyer season—200 tons, $1.44; 500, $1.44⅛; 200, $1.44¼ ₩ ctl. Afternoon Session: Buyer season—100 tons, $1.43⅞ ₩ ctl.

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Oct. 14th, were as follows:

Flour, qr. sks.	61,710	Middlings, sks	1,339
Wheat, ctls.	291,603	Alfalfa, "	....
Barley, "	29,280	Chicory, bbls.	315
Rye, "	1,141	Broomcorn, bdls.	123
Oats, "	7,478	Hops, bls.	942
Corn, "	7,100	Wool, "	3,336
*Butter, "	557	Hay, tons	2,067
do bxs	249	Straw, "	95
do bbls	9	Wine, gals.	241,110
do kegs	157	Brandy, "	1,400
do ½ do	51	Raisins, bxs	9,480
†Cheese, ctls	735	Honey, cs	370
do bxs	120	Walnuts, sks	57
Eggs, doz.	28,060	Flaxseed, sks	3,255
do " Eastern.	36,390	Mustard, sks	1,567
Beans, ctls.	17,595	Almonds, sks	862
Potatoes, sks.	31,769	Peanuts, sks.	607
Onions, "	1,946	Popcorn, sks.	62
Bran, sks.	8,063	Beet sugar, bbls.	....
Buckwheat, sks.	25	do do sks.	....
*Overland....ctls.		†Overland....ctls.	

Cereals.

The Liverpool *Corn Trade List* says: The Russian wheat crop is turning out very unsatisfactory, and some reports go so far as to say that the yield is, after all, very little better than last year, when the crop was officially estimated at 172,000,000 bushels, while at one time it was thought that the crop might equal that of 1888, viz., 312,000,000 bushels. This is a wide margin, and there is perhaps almost as much exaggeration in the one estimate as in the other. As, however, the Minister of Agriculture now considers that the crop will not exceed an average, it may be approximately estimated at 216,000,000 to 224,000,000 bushels, thus giving 72,000,000 to 80,000,000 bushels to export.

The London *Agricultural Gazette*, Sept. 29th, reports as follows: In South Australia heavy rainfall occurred during the greater part of August; warm weather was then, Aug. 20th, wanted for the wheats, which, however, were said to be of robust habit, good color and well rooted. In Southern Russia, the Danubian provinces, Italy, Switzerland and some other parts of Southern Europe, welcome rainfalls have occurred, and wheat-sowing is said to be progressing favorably. In Western Europe, especially in France, there has been, as a rule, sufficient moisture for the planting of wheat. In India, the wheat pits are about being opened, and supplies are expected to increase at the ports, particularly at Bombay.

The local wheat market has held quiet but firm. Farmers are virtually out of the market, and when exporters come in as buyers, they will have to pay higher prices. The absence of ships is against us, but freer arrivals are expected after the year. The coal-miners' strike in Australia is against vessels receiving cargoes from there for this port, and to come in ballast they would have to get more for wheat charters. With inward cargoes, the charters for outward cargoes of wheat are less, but without inward cargoes or cargoes for ballast only, then the charters for outward cargoes of wheat are higher. This is better illustrated at the East. The *Mark Lane Express* under date at London, of Sept. 29, in speaking of the high freights on wheat from Austria-Hungary to England, owing to the high protective duties of the former country causing high outward freights, says: "Grain freights from the Atlantic seaports of the United States are free, vessels taking the stuff for ballast so as to avail themselves of the high freights and large passenger traffic from Liverpool to New York. The brisk freight or heavy shipments from Liverpool to New York is due to importers in the latter country getting all the goods they possibly can before the increased duties under the McKinley tariff go into effect." It is quite likely that outward freights from New York will be higher from now on. The price of wheat at Chicago and New York was advanced to around $1.75 per cental by the cheap outward freights, while here with better wheat, buyers "haggle", over paying $1.35 for the better grades. English advices report that the farmers in that country and on the continent are free sellers of wheat, selling more than at this time last year, but notwithstanding which prices do not shade off much.

Barley has held to strong prices throughout the week under a free demand and strong holding. Continued clear weather is largely in favor of the grain, owing to its admitting of all kinds of outdoor work requiring more or less teaming. The supply of barley is light, and before the beginning of a new crop year it may be exhausted. The English barley crop is light and "off color."

Oats are strong at full prices. The strength exhibited by barley is in favor of oats, owing to more feeding of the latter due to the higher cost of the former. The grade of oats this year is said to average better than usual.

Notwithstanding receipts are free, corn shows a strong tone, with a slight advance obtainable for desirable parcels.

Rye is steady, as is buckwheat.

Feedstuff.

Dry weather is causing a stronger market for feedstuff. Another advance has been made in bran, middlings and rolled barley. An increase is reported in feeding.

Hay shows more strength, with higher prices obtainable for all grades. The demand is free while the supply to draw from is light. This is particularly the case with the better grades. The strength of the market proves the correctness of the RURAL PRESS' position early in the season. We then stated that higher prices would prevail before the rains set in.

Fruits.

Berries are firm under lighter receipts.

Peaches, plums and figs are going out. Quotations will be withdrawn after this week. Good-keeping pears move off fairly well. Apples are easier under heavy receipts and forcing sales of defective consignments. More of the better kinds and good keepers are being shipped to China, Japan and Mexico.

Grapes show a firmer tone, with an advance for the more choice good keepers. Clear, dry weather has admitted of more drying; besides this, all the moldy and otherwise defective grapes have been marketed—put on the market at the best obtainable prices. This necessarily lessened the supply. Wine grapes are a turn better. The supply is said to be short, causing some wineries to bid up so as to get stock.

Melons are weaker. Cooler weather is restricting the consumptive demand.

Dried fruits are essentially unchanged. Dried grapes are quite firm under a good inquiry. There is considerable bear talk about prunes, but with the French markets higher we cannot see how Californian will rule lower. Plums are firm. Peaches are not offering so freely, yet buyers are disposed to bid down. Apples are quiet, but there is a good, healthy tone. Pears are steady, as are nectarines and figs.

The raisin market is reported strong, with well-known brands fetching top prices. Some buyers are trying to depress the market, but so far without effect. The European markets are reported strong. The cry of large damage by rains to our crop is entirely wrong. The truth will bear telling at any and all times. Had the rains continued a few days, or had cloudy, damp weather prevailed, then the damage would have been large, but neither occurring the loss is small. Heavy shipments are being made overland.

Parties are reported to be contracting for new crop oranges.

Live-stock.

Bullocks show a stronger tone. The condition continues first class in all respects. Mutton sheep are steady. Grain-fed hogs are strengthening The demand is improving. The horse market is dull. Milch cows are more inquired for.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4½@4¾c ₩ lb; dressed, 7@8c ₩ lb.; heavy, 3¾@4c ₩ lb.; dressed, 6½@7½c ₩ lb. Stock hogs, 3¼@3½c ₩ lb.

BEEF—Stall fed, 6¼@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¼@5½c ₩ lb.; second quality 4¾@5c ₩ lb.; third quality, 4c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6@8c ₩ lb.; large, 4@6c.

MUTTON—Wethers, 7½@8c ₩ lb.; ewes, 7@7¼c ₩ lb.; lamb, spring, 9@10c.

Vegetables.

Garden truck is becoming scarcer, causing a slight appreciation in prices.

Onions are very strong at another advance. There is a good home and shipping demand.

Potatoes are higher, with a good, strong tone at the advance. Receipts are increasing, so is the demand. The shipping inquiry shows a steady gain. With rainy weather receipts are expected to fall, which, it is said, will cause still better prices. Sweet potatoes are lower.

Cabbage is lower. Marrowfat and also Hubbard squash are steady.

Miscellaneous.

Exports the past week by sea were as follows. Flour, bbls, China, 8271; Japan, 2007; Honolulu, 1897; Panama, 300; Central America, 3245; Mexico, 305; South America, 350. Wheat, ctls, Dublin, 45,504; Honolulu, 230; Havre, 69,110; Cork, 40,750. Barley, ctls, Honolulu, 1316; rolled barley, lbs, Honolulu, 95,158. Apples, bxs, China, 330; Honolulu, 800; Japan, 285; Mexico, 267. Beans, lbs, China, 11,637; Japan, 5070; Honolulu, 21,412; Victoria, 2226; Panama, 2884. Dried fruits, lbs, China, 490; Japan, 2110; Honolulu, 3775; Central America, 406. Canned fruits, cs, Japan, 99. Hops, lbs, China, 129; Japan, 246; Japan, 768. Brandy, gals, Honolulu, 6171. New York, 1307. Bran, sks, Honolulu, 3638. Wine, gals, Honolulu, 10,388; Mexico, 1445; New York; 60,990; Central America, 665. Raisins, bxs, Honolulu, 210; Mexico, 109. Potatoes, sks, Honolulu, 978. Onions, sks, Honolulu, 302; Panama, 100; Mexico, 111.

Beans are irregularly strong. Receipts are increasing and so is the demand. The crop at the East is said to be short.

Poultry is barely steady, overland receipts being against the market. Dressed turkeys are putting in an appearance.

Wild ducks, geese and hares are strong at a slight advance. Quails are lower.

Honey is coming in quite freely, but all received goes into distribution at unchanged quotations.

Hops are strong, with few to be had from first hands. The bulk offering from second hands has been placed.

Wool is reported quiet, but firm, for the better grades.

In nuts, the market is reported easier here, but stronger at the East. For some kinds of nuts the market rules very strong, with a slight appreciation for one or two kinds.

From the *Commercial News* of Oct. 15th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	273 244	207,411
On the way to neighboring ports	20,880	9,565
In port, disengaged	8 332	39,818
In port, engaged for wheat	67,128	77,696
Totals	369,584	334,490

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Oct. 8, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls.	2,686,447	2,949,044
Flour, bbls.	317,118	309 222
Barley	120,754	415,402

Dried Fruits, Etc.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations.

Prices named, unless otherwise specified, are for fruit in sacks. Add for 50-lb. boxes 1c per lb., and for 25-lb boxes 2c to 1c per lb.

Apples, sun-dried, quarters, common	7 @	—
" " " prime	8 @	—
" " " choice	9 @	—
" " sliced, common	9 @	—
" " " prime	9½@	—
" " " choice	10 @	—
" Evap. bleached, ring 50-lb. boxes	14 @	—
Apricots, sun-dried, unbleached, common	1½ @	—
" " " prime	12½ @	—
" " " choice	1 1⅛ @	—
" " bleached, prime	15 @	—
" " " choice	17 @	—
" " " fancy	18 @	—
" Evap. choice, in boxes	18 @	—
" " fancy, "	14 @	—
Figs, sun-dried, black	2 @	3
" " white	— @	—
" " washed	— @	—
" " " fancy	8 @	10
" " " pressed	5 @	6
" " " unpressed	2 @	3
" Smyrna boxes	12 @	14
" do sacks	10 @	12
Grapes, sun-dried, stemless	3½@	4
" " unstemmed	2 @	3
Nectarines, Red, sun-dried	10 @	13
" evaporated, in boxes	13½@	14½
" white, sun-dried	12 @	14
" evaporated	16 @	17½
Peaches, sun-dried, unpeeled, common, bleached	14 @	—
" " " prime, "	16 @	—
" " " choice, "	18 @	—
" " " fancy	20 @	—
" evaporated " choice	19 @	—
" " " fancy	21½@	—
" sun-dried, peeled, prime, bleached	20 @	—
" " " choice	23½@	—
" " " fancy	26 @	—
" evaporated, " in boxes, choice	25 @	—
" " " fancy	27½@	—
Pears, sun-dried, quarters	8½ @	9½
" " sliced	9½@	10½
" evaporated, in boxes	10½@	10½
" " ring "	11 @	11
Plums, pitted, sun-dried	9½@	10½
" " evap. in boxes, choice	10½ @	11½
" " " fancy	11 @	12½
" unpitted	5 @	8
Prunes, Cal. French, ungraded sizes	8½@	9½
" " " graded " 90 to 100	8 @	—
" " " " " 80 to 90	9 @	—
" " " " " 70 to 80	9 @	—
" " " " " 60 to 70	10 @	—
" " " " " 50 to 60	11½@	—
" " " " " 40 to 50	11½@	—

Fancy sell for more money.

RAISINS.

Halves, quarters and eighths, 25, 50 and 75 cents higher respectively than whole box prices.

London Layers, choice ₩ bx	$1 80 @	2 10
" fancy, "	2 25 @	2 50
Layers, ₩ bx	1 50 @	2 00
Loose Muscatels, common, ₩ bx	1 15 @	1 35
" choice, "	1 50 @	1 75
" fancy, "	1 80 @	1 90
Unstemmed " in sacks, ₩ lb	4 @	6
Stemmed " " "	4 @	7
Seedless " " "	6 @	7
" ₩ 20-lb bx	1 15 @	1 25
" Sultanas, unbleached, in bxs	1 15 @	1 25
" " bleached " " "	1 25 @	1 30

CALIFORNIA HONEY.

Comb, dark, 2-lb. frames, 60-lb. cases, ₩ lb.	4 @	5
" amber, " " cs. new "	7½ @	8½
" white " " "	9 @	12
Extracted, dark, 5-gal. cans, 2 cans to case, ₩ lb.	4 @	4½
" amber, " " " "	4½@	5½
" white, " " " "	5½@	6
Comb, 2-tins, 2 doz. to case, ₩ doz	— @	—
Extracted, " " "	— @	—
" 4-lb. tins, 1 doz. "	— @	—
Beeswax, per pound	21 @	24

Rope.

Baling, Duplex, lb	12
" Manilla, lb	14
Twine, for hops, balls, tarred, lb, Manilla	16
" " grape vine, balls, lb "	16½
" " " coils, lb "	16½
" spring, lb "	18
" binder (650 ft. to lb), lb	15½

Duplex twine 3c per lb less.

STEAM ENGINES AND BOILERS — James L'ffel & Co., whose advertisement of farm engines appears on another page, issue a neat illustrated catalogue of stationery and portable engines, turbine wheels, etc., which may be had on application to them by mail.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Oct. 15, 1890.

BEANS AND PEAS.			
Bayo, ctl	3 50	@ 4 00	
Butter	2 00	@ 2 30	
Pea	2 90	@ 3 25	
Red	2 50	@ 2 75	
Pink	2 20	@ 2 35	
Large White	—	@ —	
Small White	2 90	@ 3 25	
Lima	—	@ —	
Fld Peas,blk eye	1 60	@ 1 75	
do green	1 25	@ 2 00	
do Nlles	1 35	@ 1 55	
Split	6	@ —	
BROOM CORN.			
Choice to Extra	60 00	@ 75 00	
Fair to Good	45 00	@ 55 00	
Poor	40 00	@ —	
CHICORY.			
California	5½	@ 6	
German	6	@ 6½	
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair,lb	15	@ 22½	
do good to choice	25	@ 32½	
do Giltedged	35	@ —	
do pickled	20	@ 22½	
do in kegs	17	@ 20	
do Creamery in rolls	36	@ —	
Eastern do	—	@ —	
do do, in tubs	12	@ 25	
CHEESE.			
Cal. choice mild	10	@ 11	
do fair to good	7	@ 9	
do gilt edged	—	@ 12½	
Young America	11	@ 12½	
N. York Cream	10	@ 12½	
Western	9	@ 10½	
EGGS.			
Cal. ranch, doz	42½	@ 45	
do do sel'cted	47½	@ —	
do. store	37½	@ 40	
Est'rn,cld st'rage	—	@ —	
do fresh	25	@ 30	
do selected	32½	@ —	
do to arrive	—	@ —	
FEED.			
Bran, ton	17 00	@19 00	
Feedmeal	28 00	@29 00	
Gr'd Barley	30 00	@31 00	
Middlings	23 00	@25 00	
Oil Cake Meal	25 00	@27 00	
Manhattan Food Per 100 lbs	7 50	@ —	
HAY.			
Compressed	14 00	@19 00	
Wheat, per ton	12 00	@17 00	
do choice	18 00	@19 00	
Wheat and Oats	12 00	@16 00	
Wild Oats	12 00	@15 00	
Tame do	12 00	@15 00	
Clover	—	@ —	
do ch'ce red top	—	@ —	
Barley	9 00	@13 00	
Barley and Oats	10 00	@14 00	
Alfalfa	12 00	@13 00	
Straw bale	70	@ 80	
FLOUR.			
Extra, City Mills	4 25	@ 4 50	
do Co'try Mills	4 25	@ 4 50	
Superfine	3 25	@ 4 00	
GRAIN, ETC			
Barley, feed, ctl.	1 33½	@ 1 37½	
do Choice	1 40	@ —	
do Brewing	1 40	@ —	
do do Choice	1 45	@ 1 47½	
do do giltedg'd	1 50	@ —	
Chevalier once	1 50	@ 1 52½	
do com to good	1 32½	@ 1 45	
Buckwheat	1 75	@ 2 00	
Corn, White	1 25	@ 1 30	
Yellow, large	1 25	@ 1 30	
do, small	1 25	@ 1 30	
Oats, milling	1 70	@ 1 75	
Surprise	1 75	@ 1 80	
Choice feed,ch'c	1 70	@ —	
do good	1 65	@ —	
do fair	1 65	@ —	
do Gray	1 50	@ 1 60	
do Black	1 65	@ 1 90	
Rye	1 20	@ 1 30	
Wheat, milling, Gilt edged	1 41½	@ —	
do Choice	1 38½	@ —	
do fair to good	1 36½	@ —	
Shipping, cho'ce	1 35	@ —	
do good	1 32½	@ —	
do fair	1 28½	@ —	
Sonora	1 25	@ 1 30	
HIDES.			
Dry Ight to h'vy	10	@ 11	
Salted	5	@ 8½	
HOPS.			
Oregon, 1890	32½	@ 37½	
Cal 1890 Choice	35	@ 37½	
do Fair to G'd	32½	@ —	
ONIONS.			
Silver Skin	2 25	@ 2 70	
NUTS—JOBBING.			
Walnuts, Cal. lb	9	@ 10	
do Ch'ce	11	@ 12	
Almonds, hd shl.	5	@ 6½	
Softshell	14	@ 15	
Paper shell	16	@ 17½	
Brazil	11	@ 12½	
Pecans	9	@ 11	
Peanuts	5	@ 6	
Filberts	14	@ 16	
Hickory	6	@ 8	
Chestnuts	15	@ —	
Pine nuts	7	@ 8	
POTATOES.			
Early Rose, sks.	70	@ 90	
Chile	75	@ 1 00	
Peerless	75	@ 1 10	
River Reds	1 00	@ 1 25	
Humboldt	—	@ —	
Petaluma	—	@ —	
Burbanks	60	@ 1 25	
Sweet	75	@ 1 00	
POULTRY AND GAME.			
Hens, doz	5 00	@ 7 00	
Roosters,old	5 00	@ 6 00	
do young	4 50	@ 6 50	
Broilers, small	2 50	@ 3 50	
do large	4 00	@ —	
Fryers	4 50	@ —	
Ducks, tame	4 00	@ 5 00	
do large	5 50	@ 7 00	
Geese, pair	1 25	@ 1 75	
Turkeys, Gobl'r.	18	@ 21	
Turkeys, Hens	16	@ 18	
Pigeons	1 75	@ 2 50	
Rabbits, doz	1 00	@ 1 25	
Hare	1 50	@ 2 00	
Venison	6	@ 8	
Dove	50	@ 75	
Quail	50	@ 1 00	
Snipe, English	1 50	@ 2 50	
do Jack	50	@ 75	
Ducks, Mallard	3 00	@ 4 00	
do Sprigs	1 75	@ 2 25	
do Teal	1 50	@ 1 75	
do Widgeon	1 25	@ 1 50	
do Small	1 00	@ 1 25	
Geese, Gray	2 00	@ 2 50	
do white	1 50	@ —	
Brant	1 25	@ —	
EGG FOOD.			
Manhattan, lb	12	@ —	
PROVISIONS.			
Cal. Bacon. Heavy, lb	10½	@ 11	
Medium	12	@ —	
Light	13	@ 13½	
Extra Light	—	@ —	
Lard	9	@ 11	
Cal. Sm'k'd Beef	11	@ 12	
Hams, Cal.	13	@ 14	
do Eastern	14	@ 15	
SEEDS.			
Alfalfa	8	@ 8½	
Canary	3½	@ 4	
Clover, Red	11½	@ 11½	
White	17½	@ 20	
Cotton	20	@ —	
Flaxseed	2	@ 3	
Hemp	4	@ 5	
Italian Rye Grass	10	@ 11	
Perennial	7	@ 9	
Millet, German	5	@ 6½	
do Common	5	@ 6	
Mustard, yellow	1 90	@ 2 25	
do Brown	2½	@ 3	
Rape	1½	@ 2½	
Ky. Blue Grass	14	@ 16	
2d quality	13	@ 14	
Sweet V. Grass	75	@ —	
Orchard	12	@ 14	
Hungarian	7½	@ 8	
Lawn	27½	@ 40	
Mesquit	6	@ 7	
Timothy	6	@ 7	
TALLOW.			
Crude, lb	3	@ 5	
Refined	6	@	
WOOL, ETC. SPRING—1890.			
Humboldt and Mendocino	19	@ 24	
Sac'to valley	15	@ 22	
Free Mountain	18	@ 24	
S Joaquin valley	12½	@ 17	
do mountain	17	@ 22	
Cala'v & F'th'll	15	@ 24	
Oregon Eastern	13	@ 22	
do valley	20	@ 25	
So'n Coast, def	10	@ 14	
So'n Coast, free	12½	@ 19	
FALL—1890.			
North'n, choice	15	@ 17	
do defective	12	@ 14	
Mountain Free	11½	@ 14	
San Joaquin defective	8	@ 11	
Southern do	8	@ 11	

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Oct. 15, 1890.

Bananas, bunch	1 00	@ 3 00	
Cranberries	9 00	@10 50	
Limes, Mex	4 00	@ 5 50	
Lemons, Cal., bx	2 00	@ 4 00	
do Sicily, bx	7 00	@ 8 50	
do Malaga	7 00	@ 8 50	
Pineapples, doz	3 00	@ 5 00	
Strawberries chest	5 00	@12 00	
Huckleberries lb	9	@ 12	
Figs, box, black	1 00	@ 1 25	
Pears, bx	50	@ 90	
Peaches box	50	@ 1 00	
do choice	1 25	@ —	
Apples com box	40	@ 60	
do choice	90	@ 1 25	
Grapes, box	10	@ 40	
do Muscats	40	@ 60	
do Rose of Peru	30	@ 50	
do Tokay	30	@ 70	
do Blk Hamb'rg	15	@ 45	
do Isabella	40	@ 50	
do Queen	75	@ 1 00	
do Malvoise	30	@ 50	
do Cornichon	70	@ 80	
do wine Zinfandel	10 00	@16 00	
do other wine black kinds	8 00	@12 00	
VEGETABLES.			
Okra, dry, lb	6	@ 10	
do green bx	1 00	@ 1 25	
Parsnips, ctl	1 25	@ —	
Peppers, dry, lb	12	@ —	
do green, bx	25	@ 40	
do Bell	40	@ 50	
Turnips, ctl	75	@ —	
Beets, sk	—	@ 1 00	
Cabbage, 100 lbs	50	@ 60	
Carrots, sk	50	@ 65	
Tomatoes, bx	20	@ 60	
String Beans	—	@ —	
Lima do	3	@ 3½	
Squash, summer, bx	25	@ 50	
Marrowfat, ton	8 00	@10 00	
Hubbard	20 00	@25 00	
Garlic, lb	10	@ 15	
Green corn ch'ce	20	@ 25	
do do com sk	75	@ 1 00	
Egg Plant, bx	35	@ 50	
Cauliflower doz	40	@ 60	

BEST RAM TOO!—It appears that in the awards for sheep, at the late State Fair, our old friend Andrew Smith of Redwood City got away with first premium for best Shropshire ram, any age, as well as for all other Shropshire exhibits. It was not so reported, in the list published last week, and both he and we desire to note the correction which is certified by Secretary E. F. Smith of the State Board of Agriculture.

THE PACIFIC BUSINESS COLLEGE, as may be seen by reference to our "educational" advertisements, still holds out varied inducements to those who would perfect themselves in penmanship, stenography, typewriting, bookkeeping and the many different branches, a knowl edge of which is desirable to those engaging in mercantile pursuits.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE. Oct. 8-14.	Olympia. Rain	Temp.	Wind	Weather.	Portland. Rain	Temp.	Wind	Weather	Eureka. Rain	Temp.	Wind	Weather.	Red Bluff. Rain	Temp.	Wind	Weather.	Sacramento. Rain	Temp	Wind	Weather.	S.Francisco. Rain	Temp	Wind	Weather.	Fresno. Rain	Temp	Wind	Weather.	Keeler. Rain	Temp.	Wind	Weather.	Los Angeles. Rain	Temp	Wind	Weather.	San Diego. Rain	Temp	Wind	Weather.
W.	.00	56	NE	Cl.	14	56	Nw	Cl.	.00	50	N	Cy.	.00	62	N	Fr.	.00	62	Nw	Cl	00	58	W	Cl.	00	68	Nw	Cl	.00	68	W	Cl.	00	64	SE	Cy.	.00	66	S	Cy
T.	.00	60	NE	Cl	.00	62	Nw	Cl	.00	54	N	Cl.	.00	62	N	Cl.	60	64	W	Cl.	.00	56	W	Cl.	00	69	SW	Fr.	.00	52	S	Cy	01	60	W	Fr.	.01	62	W	Cy.
F.	.00	58	Nw	Cl.	.00	62	0	Cl.	.00	52	Nw	Cy.	.00	64	S E	Cl	00	62	Nw	Cl.	00	54	W	Cl.	.00	64	W	Cl	.02	64	W	Cl.	02	58	W	Fr.	00	62	W	Cl.
S.	.01	50	S	Cy	.T	52	S	Ry.	.00	5	Nw	Cl.	00	70	S E	Fr.	00	64	S	Cl	00	50	W	Cl.	00	66	N	Cl.	.00	58	S	Fr.	.00	62	W	Cl.	00	64	W	Cl.
S.	.00	56	N E	Cl.	.01	54	N	Cy.	00	50	Nw	Cy.	.00	68	0	Fr.	00	64	E	Cl	.00	54	W	Cl.	.00	70	Nw	Cl.	.00	60	0	Cl	00	66	W	Cl.	00	70	Nw	Cl.
M.	.T	52	S	Ry.	.00	56	S	Fr.	.00	48	Nw	Cy.	.00	72	SW	Cl.	....	....	....	....	00	50	W	Cy	.00	74	Nw	Cl.	.00	66	N	Cl.	.00	70	W	Cl.	00	72	Nw	Cl.
T.	.00	54	Nw	Fr.	.00	56	SW	Cl	.00	52	N	Cl.	00	72	Nw	Cl.	00	70	Nw	Cl.	00	58	W	Cl	.00	72	Nw	Cl.	.00	66	S	Cl.	00	70	W	Cl.	00	68	SW	Cy.
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EXPLANATION. Cl. for clear; Cy, cloudy; Fr., fair; Cm., calm; indicates too small to measure. Temperature w.nd and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

California Fruits East.

CHICAGO, Oct. 9. — The Porter Bros. Co. sold seven carloads of California fruit to-day at auction at the following prices: Tokay grapes, $2.35@2.70 per full crate, 90c@$1.65 per half crate; Black Morocco grapes, $1.65 per half crate; Cornichon grapes, $1.30; Salway peaches, $1.25@1.45; Georgia's Late peaches, $1.30@1.40; Muscat grapes, $2.50 per full crate, 75c@$1.35 per half crate; Verdelle grapes, $2.40; Blue Malvoise grapes, $1.55 per half crate.

The Montgomery Auction Co. sold to-day for account of the Earl Fruit Co. California fruits as follows: Salway peaches, $1.25@1.50; Muscat grapes, $1.20 per half crate, $2.35@2.25 per full crate; Tokay grapes, $2.45@2.40 per full crate, $1.35@1.25 per half crate.

CHICAGO, Oct. 11.—The Porter Bros. Co. sold four carloads of California fruit to-day at auction at the following prices: Tokay grapes, $2.65@2.80 per full crate; 70c@$1.10 per half crate; Muscat grapes, $2.75 per full crate; Cling peaches, 65c@$1.50, the bulk of them in very bad order; Winter Nelis pears, $1.30@1.40 per half box.

The Montgomery Auction Co. sold to-day for account of the Earl Fruit Co., the W. R. Strong Co. and others, California fruits as follows: Beurre Clairgeau pears, $3; Winter Nelis pears, $2.25; Vicar pears, $2.25; Easter Beurre pears, $2.70, Beurre Diel pears, $2.45; Glout Morceau pears, $2.45; quinces, $2; Tokay grapes, $2.55@2.25 per full crate, $1.20@1.15 per half crate; Muscat grapes, $2.15 per full crate, $1.10 per half crate.

The grapes were more or less moldy, owing to the recent rains. Some in bad order sold for less. The rainy weather, the large quantity of fruit and the day being Saturday, had a depressing effect on the market.

NEW YORK, Oct. 11.—Evaporated peaches are neglected, Cha ago and Philadelphia seeking the trade here. Apricots are strong at 18½@19c in sacks; 19@20c for boxes. Prunes are in good offering, with sales slow and easier at 13½@14c. Layer raisins are wanted at $2.50@2.75; loose quiet, at $2.10@2.25 for good marks.

NEW YORK, Oct. 11.—Fresh fruit has a steady sale at good prices. Many Tokays turn out soft and musty, which the cheap trade, however, repack and use. Sold 52 cars at auction. Peaches per package, 80c@$1.80. Quinces, boxes, $2.65@2.99. A few Bartlett pears in boxes, $5; Winter Nelis, boxes, $2.10@3.55; half boxes, $1.40@2.10; Glout Morceau and Easter Beurre, halves, $1.70@2 20; wholes, $2.95@4.10; Duchess, $2.70@3.10; Beurre Diel and Beurre Hardy, $4.10@4.90. Others, $2.10@4.40. Prunes, $2.25@3.60, the latter German. Plums, $2.25@2.35. Tokay grapes, double, $1.85@5.70, single, $1.10@2.75. Cornichon, single, $1.50@2.35, double, $3.10. Muscat, packages, $2.65@3.35. Others, 60c@$1.90. The California Fruit Union sold three cars at auction. Peaches, $1.20@1.55; Beurre Clairgeau pears, $3.12@3.37; Tokay grapes, single, $1.50@1.85, double, $3.25@3.31; Muscat, double, $4.25, single, $1.35@1.99.

New York will have a steam-heated pier this fall for Florida oranges, with a capacity of 1500 boxes.

CHICAGO, Oct. 13.—Porter Bros. sold five cars of California fruit to-day at the following prices: Quinces, $1.85; Bartlett pears, $3; Tokay grapes, full crates, $1.75@2.60, half crates, 50c@$1.30; Muscat, half crates, 55@85c; Black Morocco, half crates, $1.10@1.60; grapes were in poor order; Coe's late Red plums, $2.05.

CHICAGO, Oct. 13.—The Montgomery Auction Co. auctioned California fruit to-day for account of the Earl Fruit Co. and the W. R. Strong Co. and others, at the following prices: Winter Nelis pears, $2.15; Beurre Clairgeau, $3.30; Beurre Diel, $2.55; d'Alencon, $2.55; White Doyenne, $2.35; Easter Beurre, $2.20@2.25; Vicar, $2.20; Glout Morceau, $2.55; Pound, $2.20; quinces, $1.75.

NEW YORK, Oct. 13.—The *Commercial Bulletin* reviews the prune situation at home and abroad and says: At the prices quoted for the new crop of Turkish prunes for shipment, importers hesitate to forward orders. Sultanas for forward delivery are quoted at 8@8½c for four sizes. French are in strong position abroad and bids of 45f have been made and declined, 46f being quoted as the inside rate for four sizes. Spot goods are not obtainable below 10¼c, while to arrive 10c is asked. Sales of 50s and 70s for shipments have been made at 59f, but 60f are asked for additional quantities. Of California we notice a sale of one carload of 50s and 60s, to arrive, the price being reserved.

CHICAGO, Oct. 15.—The California dried fruit market so far this week has been quiet and offerings are moderate. Peaches, unpeeled are selling at 13 @20c ₱ lb; peeled, 30c; apricots, good to choice, 16@20c; dried grapes, 5½@6c; raisins, loose Muscatels, ₱ box, $1.80@2; London Layers, $3.15@2.50; prunes, ungraded, ₱ lb, in sacks, 10@12½c; in boxes, different sizes, 10½@13c. In green fruits there is more doing. Peaches average $1.25@1.50 ₱ box; pears are ranging from $1.50 to $2.50 ₱ box for small Butters; $3.75@4 for Clairgeaus and Hardys; Quinces, $1.75@2; grapes, bf cases, Tokays and Muscats, $1@1.50.

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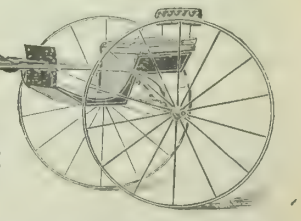
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6¾	foot Spring Tooth Harrow and Seeder	$100.00
8	" " " " " " with Improved Buckeye Cas or.	128.00
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14	" " " " " " " " " "	205.00

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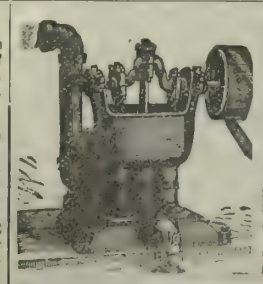
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Fanciers' Monthly.—The *California Cackler* has recently been purchased by Chas. R. Harker, for years editor of the New York *Poultry Bulletin* and author of a number of interesting articles in the Rural Press. Mr. Harker is well known everywhere to fanciers of thoroughbred fowls, dogs and pet stock. The *Cackler* will be greatly enlarged and improved, and hereafter will appear as the *Pacific Coast Fanciers' Monthly*. It will be published at San Jose, Cal., and be a finely illustrated magazine, especially interesting to those who keep poultry for pleasure or profit or indulge in blooded dogs, fowls, pigeons, cage birds, etc.

California's Stallions.

I beg to announce that, with a view of perpetuating the forms and characteristics of the leading stallions of California, I am issuing a series of lithographic likenesses. Each portrait issued will be an acknowledged likeness, the result of a close study of the horse and an artistic treatment of the subject. In order to secure for the series an immense advertising value, from a breeder's point of view, 4000 copies, at least, of each portrait will be issued.

Terms, $100 for first issue of 100 copies. In quantity, for advertising purposes, copies will be furnished at low rates.

H. Boyd, Artist.
268 Golden Gate Ave., San Francisco.

Not Partial to Gamblers.—Just before the final adjournment of the 51st Congress, President Harrison vetoed a bill to prohibit book-making and pool-selling in the District of Columbia for the purpose of gambling. The President's objection to the bill is that it does not prohibit book-making and pool-selling, but on the contrary, permits it in the case of the Washington Jockey Club and other clubs owning race-tracks. If that form of gambling is to be prohibited—and the President thinks it should be—the prohibition should apply to all places and persons.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

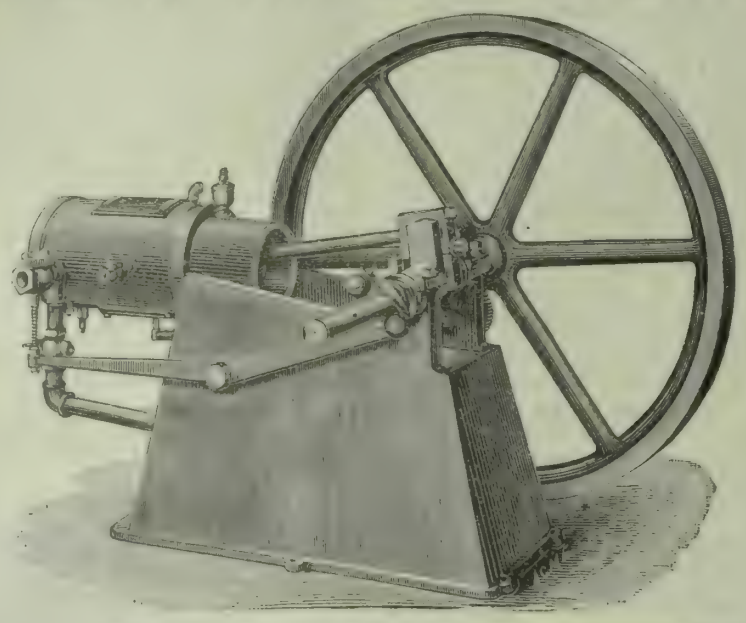
The Mississippi Constitutional Convention last week adopted a section which forbids the Legislature authorizing any lottery, nor shall the sale of any lottery tickets be allowed in the State.

For Sale.—Valuable land in Tulare county artesian belt. 160 acres, 1½ miles southwest of Tulare city; 480 acres, 7 miles southwest of Tulare, with large flowing artesian well, well-finished two-story horse, large barn, etc.; 160 acres, 2 miles southwest of the above; 480 acres 3 miles southwest of Pixley and about 4 from Alila. For sale by owner in lots to suit at low prices, low interest and very easy terms. For further information, address LAND OWNER, Box 2517, S. F., or A. T. DEWEY, No. 220 Market Street, San Francisco, Cal.

Swedes in Vermont.—The experiment of colonizing the town of Peru, Vt., with Swedes is reported to be a success, and work in that line will be extended with the hope of reclaiming deserted farms.

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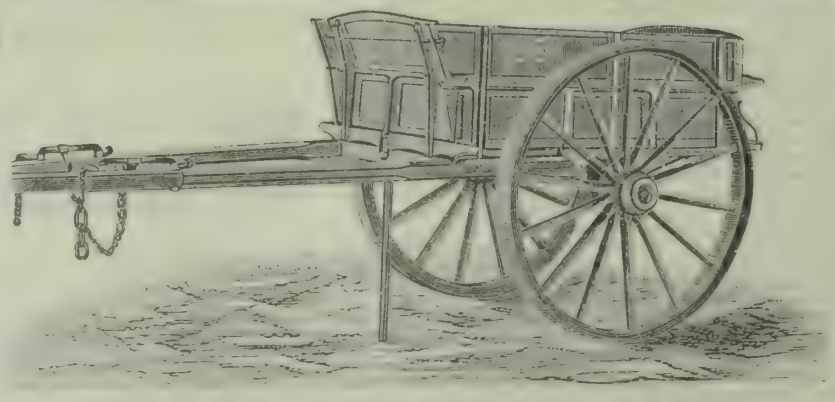
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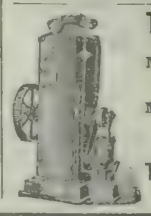
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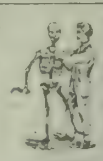
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JAMES V. COFFEY of San Francisco.
GEORGE H. SMITH of Los Angeles.

For Secretary of State,
W. C. HENDRICKS of Butte.

For Controller,
JOHN P. DUNN of San Francisco.

For Treasurer,
ADAM HEROLD of Placer.

For Attorney-General,
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STANLEY C. BOOM of Humboldt.

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For Clerk of Supreme Court,
J. D. SPENCER of Stanislaus.

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NOTICE.—"The polls must be opened at sunrise of the morning of the day of election, and must be kept open until five o'clock on the afternoon of the same day, when the polls shall be closed."—(Section 1160 Political Code, Statutes 1889, page 209.)

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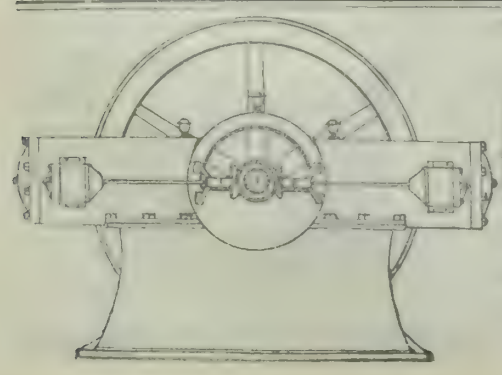
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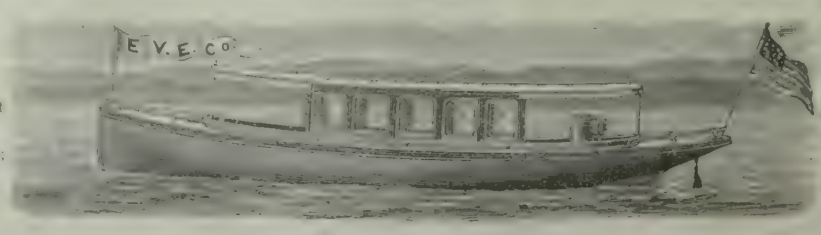
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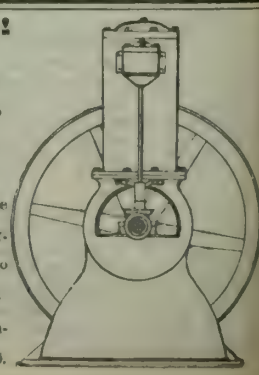
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STARK NURSERIES, Stark Bros. Nursery Co., Louisiana, Mo. Founded **1835. Oldest** in the West. **Largest** in the World. **BEST** of everything. Nearly 600 salesmen sell our stock in almost every State and Territory; volume of annual sales now exceeds that of any other Nursery. We sell *direct* through our own salesmen, without the aid of tree dealers or middlemen, and *deliver* stock, freight and all charges paid.

NO TREES Like Co. Nurseries, Louisiana, Mo. Last and bear like **whole root** trees; or like plum, prune and *apricot* trees on *Myriana*, the best plum stock grown. **Idaho** and other **New & Old Fruits** (by mail); ornamentals, root grafts—*everything*. No larger stock in U. S. No better. No cheaper.

JAPANESE TREE CO.

(Formerly Japanese Tree Importing Co.)

MAKE A SPECIALTY OF THE HARDY, SEEDLESS Oonshiu Orange Trees so highly recommended by all the leading horticultural papers. N. B.—Our Manager, Mr. H. E. Amoore, who has lived 28 years in China and Japan, is now traveling there in search of new fruits. Address him at Yokohama, Japan. All kinds of Japanese and Domestic Fruit Trees. Order at once for winter and spring delivery.

WHITE ADRIATIC FIGS

The undersigned has 10,000 one and two-year old trees of this popular variety, which will be ready for next season's planting.

The Knights Ferry White Adriatic is conceded by all to be the best Fig produced in America.

For prices and full particulars, address,

H. R. SCHELL,
Knights Ferry, Stanislaus County, Cal.

THE OREGON NURSERY CO.

OF SALEM, OREGON,

Offer for Fall, 1890, a general assortment of first-class, well-grown Nursery Stock, hardy and iron-clad. Late-keeping Winter Apples a specialty. Price list free.

THE OREGON NURSERY CO.,
WIRT BROS., Proprietors. SALEM, OREGON.

TREES! TREES!

—AT—

VENTURA NURSERIES.

300,000 Soft Shell English Walnuts and White Adriatic Figs a specialty. Price on application.

O. P. COOK.
Nurseries, four miles east of Ventura.

TREES, PLANTS AND VINES

For the Season of 1890-91.

Having decided to re-establish the GENERAL NURSERY BUSINESS at Oakland, Cal., I have purchased the ENTIRE NURSERY STOCK grown by Mr. James Shinn at Niles, Cal., embracing a most complete assortment of unusually fine stock, grown without irrigation, that I am offering at reasonable prices.

All the Leading Varieties of APPLE, PEAR, CHERRY, PLUM, PRUNE, APRICOT, NECTARINE and ALMOND.

Fine Stock of ORANGES, LEMONS, OLIVES, NUT TREES and FIGS.

The Only Stock of PERSIAN WALNUTS (Kaghazi) on the Pacific Coast.

300,000 GRAPE VINES (Strong Roots). Small Fruits, Berry Bushes, Etc., Etc., in Large Quantities.

ORNAMENTAL and SHADE TREES, Roses, Standard Roses, Clematis, Trailing Vines, Plants, Etc., Etc., in Great Variety.

Packing Grounds at Niles, Cal., Unsurpassed Facilities for Shipping. Correspondence solicited.

W. P. HAMMON,
Business Office, 960 Broadway, OAKLAND, CAL.

FRUTO LAND AND IMPROVEMENT CO.

Rancho Fruto, Elk Creek P. O., Colusa County, Cal.

— OFFER FOR SALE —

MUSCATEL, GORDO BLANCO AND MUSCAT OF ALEXANDRIA

ROOTED VINES!

Grown in Foothills of Coast Range. Disease Unknown. True to Name.

Address R. WATTS, Elk Creek, Cal.

OUR SPECIALTIES:

Cultivated Wild Oats,

Red Top, Timothy, Red Clover, Kentucky Blue Grass,
ALFALFA SEED, Etc.

W. H. WOOD & CO., 117 to 125 J Street, SACRAMENTO.

TREES AND VINES

We are prepared to furnish the leading varieties of fruit trees and vines for planting season of 1890 and 1891. Our trees are grown in rich alluvial soil, entirely free from scale. An inspection of our stock is respectfully invited. Write for prices.

CHILES & GODFREY,
Davisville, Cal.

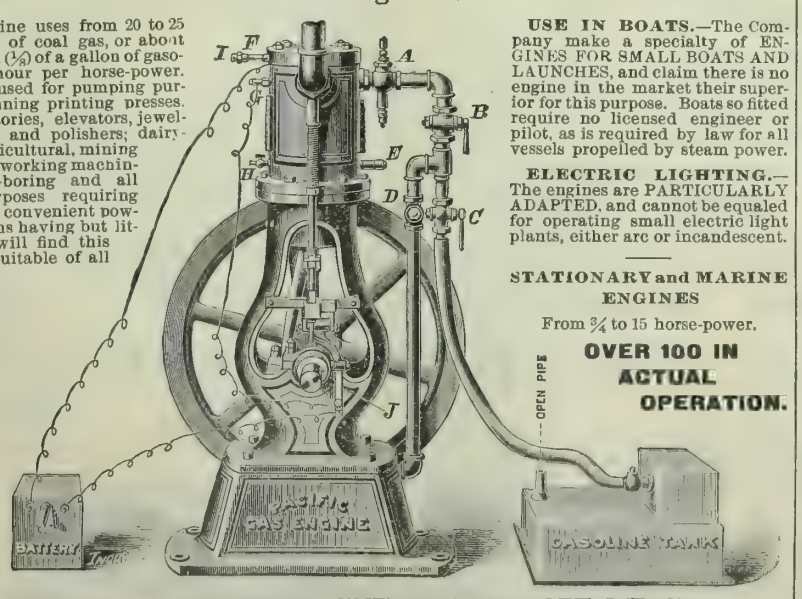
THE

PACIFIC GAS OR GASOLINE ENGINE.

PATENTED JUNE 17, 1890—NOS. 430,504, 430,505, 430,506.
Also in Great Britain and other foreign countries.

Starts Instantly Without the Necessity of Boiler, Fire or Experienced Engineer.

The engine uses from 20 to 25 cubic feet of coal gas, or about one-eighth (1/8) of a gallon of gasoline per hour per horse-power. It can be used for pumping purposes, running printing presses, small factories, elevators, jewelers' lathes and polishers; dairymen's, agricultural, mining and wood-working machinery; well-boring and all other purposes requiring cheap and convenient power. Persons having but little space will find this the most suitable of all motors.



USE IN BOATS.—The Company make a specialty of ENGINES FOR SMALL BOATS AND LAUNCHES, and claim there is no engine in the market their superior for this purpose. Boats so fitted require no licensed engineer or pilot, as is required by law for all vessels propelled by steam power.

ELECTRIC LIGHTING.—The engines are PARTICULARLY ADAPTED, and cannot be equaled for operating small electric light plants, either arc or incandescent.

STATIONARY and MARINE ENGINES

From 3/4 to 15 horse-power.

OVER 100 IN ACTUAL OPERATION.

READ THESE TESTIMONIALS.

ALAMEDA, April 8, 1890.

PACIFIC GAS ENGINE CO.—GENTLEMEN: Permit me to add my testimonial to the many you have received indorsing your engine. As you are aware, mine was a Regan engine which gave me considerable trouble. I had to remove the head and raise the tappet valve every time I wanted to start the engine. I sent you the engine; you removed all the Regan appliance except the cylinder and stand. You put in your appliances, head, sparking device, inlet valve, and, in fact, changed it to the Pacific Gas Engine, which now works splendidly. I have not had to remove the head for any cause since you made the change (over two months). It gives me no trouble; my boy, 14 years old, attends to it.

The change from the Regan to the Pacific is a decided improvement. I can also get a third more power since the change, and I cheerfully recommend your engine as being simple, effective, and cheap. Respectfully yours,

B. S. HILL, S. W. Cor. Encinal Ave. and Morton St.

MAYFIELD, March 26, 1890.

PACIFIC GAS ENGINE CO.—We have given your little 1-H. P. engine a splendid advertisement. A fire broke out at 2:30 o'clock this morning, in a tenement house on my premises. I started the engine, connected the hose, and by its use saved at least $3000 worth of my property. I saved my blacksmith shop, lying 12 feet from the burning building, my barn and my dwelling. Three times the fire started in these buildings, and I extinguished it every time. The engine never faltered, and threw water between 50 and 60 feet high. The whole town was astonished, and they acknowledged that I saved at least $20,000 worth of property.

A fire department is being organized here, and I think they will have one of the engines on a truck for fire purposes. *They cannot be beaten.*

Hoping that all of your customers will be as well pleased with the engine as I am, I remain, Yours truly,

JOS. P. PONCE.

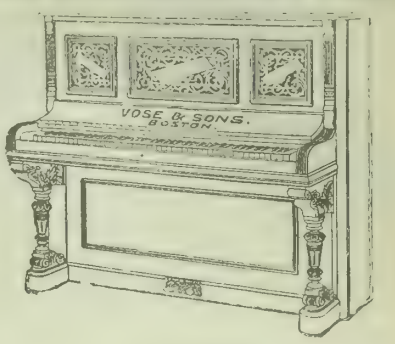
PACIFIC GAS ENGINE CO.,

Send for Circular and Price List. **230 FREMONT STREET, SAN FRANCISCO.**

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Established 1856,

Largest and Oldest Piano House West of the Rockies.



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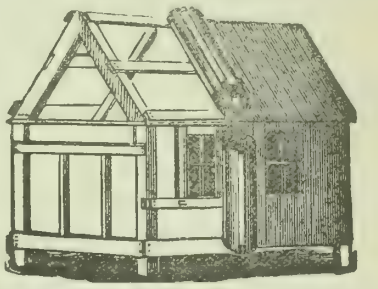
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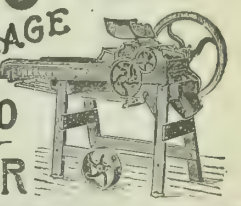
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Used extensively on Houses, Factories, Warehouses, Etc. Absolutely Water-proof. Send 2c for Illustrated Catalogues and Samples.

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AGENT FOR PACIFIC COAST,
304 MARKET STREET, SAN FRANCISCO.

Freeman's ENSILAGE AND FEED CUTTER



Strongest, Most Durable, Easiest Running, and in every way THE BEST FEED CUTTER made. All Sizes, for Hand or Power. Carriers any length. For Low Prices and Best Discounts, and for Illustrated Catalogue, E." Valuable "Ensilage Encyclopedia" free to all who mention this paper. Also Manufacturers of the Celebrated Centennial Fanning Mill, and a full line of Horse Powers and Horse Power Jacks. **The Freeman Implement Co., Portland, Or.**

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FRENCH COOKING RANGES

TINWARE,

Kitchen and Bakery Outfits, Grate Bars, Bake Ovens and Furnace Castings.

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BEST TREE WASH.

"Greenbank" 98 degrees **POWDERED CAUSTIC SODA** (tests 99 3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by

T. W. JACKSON & CO.,
Manufacturers' Agents,
104 Market St. and 8 California St., S. F.

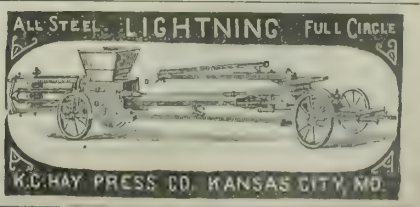
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CHAS. R. STORY, Sec'y, R. H. MAGILL, Gen. Ag't.

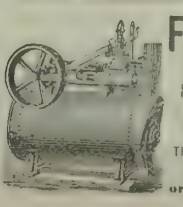
Home Mutual Insurance Company,

216 Sansome Street, San Francisco.

INCORPORATED A. D. 1864.

Losses Paid Since Organization	$3,033,420 31
Assets, January 1, 1890	821,517 09
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	244,384 14





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Upright and Horizontal.
Simple, Effective, Durable.
Write us before buying.
For free Pamphlet address
THE JAMES LEFFEL & CO.
SPRINGFIELD, OHIO.
or 110 Liberty St., New York.

The Whole Country Needs Fertilization

ADMONITION TO FARMERS!

GUAYMAS, MEXICO, September 9, 1890.

E. B. CUNNINGHAM, ESQ., Agent Mexican Phosphate and Sulphur Company—DEAR SIR: In answer to your question as to the value of phosphates for worn-out lands, I will state that it is my opinion the [illegible] settled portions of California afford a good field for the use of phosphates. These lands have been cropped for years without any restoration of the chemical constituents necessary for an abundant [illegible] therefore show plainly that they need assistance artificially to produce crops good in quantity and quality, let the crop be whatever it may.

Take, for instance, San Joaquin and Santa Clara valleys, and what do you see? Many crops that are so imperfect in quantity and quality that the eye at once detects the defect. The only relief that can be resorted to must be infused into the soil to replace the chemical properties that have been extracted by previous crops, and the writer is of the opinion that a liberal supply of phosphates will accomplish [illegible]

The attention of the cultivators of the soil is sharply turned to rotation of crops, hoping thereby to wealth out of their lands without fertilization. Some have turned their attention to beet cultivation soil worn out by other crops. Beet or other seeds will not grow successfully unless the soil will nourish them.

This summer I saw several crops of beets on excessively cropped lands, the majority of which showed that there was something wanting to complete the plants to ample size and in quantity that should be expected of sugar beets under favorable circumstances. If a good crop is not obtained, there is deficiency in profit. It costs as much to cultivate soil deficient in chemical properties as it does if ample nutrition was in the soil. Under the former condition a deficient crop is certain, while under the latter condition he may reasonably expect an ample crop with profit.

Fields often are allowed to go to weeds, supposing thereby to enrich the soil. This is an uncertain method and not profitable. Your weeds have grown up and seeded; the dead stems can only add a limited addition to fertilize the soil, while the seeds of the same will cause much expense to exterminate them from the future crops. Besides, while thus only weeds as a crop, no profit was realized, while if a supply of phosphates had been applied to the soil, a profitable crop of beets or corn would be had. Besides, the weeds would have been exterminated during the cultivation of the said crop. I am, Sir, your obedient servant,

EDWARD PALMER, M. D.

THE MEXICAN PHOSPHATE AND SULPHUR CO.

Manufacture three grades of this Superior Fertilizer of the following analyses:

GUARANTEED ANALYSIS.	Brand [A] for Sugar Cane, Sugar Beets, Etc.	Brand [B] for Grain, Gardens, Lawns, etc.	Brand [C] for Fruits, Vineyards, Etc.
Phosphoric Acid	10 to 11 per cent.	15 per cent.	12 per cent.
Potash	9 to 10 "	2 "	5 to 6 "
Ammonia	3 to 4 "	2 "	3 to 4 "

And will sell in lots to suit.

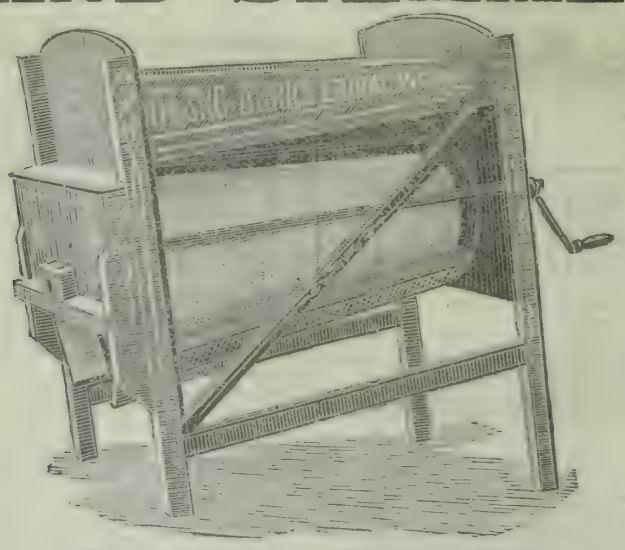
PARTICULARS AND CIRCULARS MAY BE HAD OF THE UNDERSIGNED.

H. M. NEWHALL & CO.,

AGENTS.

309 & 311 SANSOME STREET, SAN FRANCISCO, CAL.

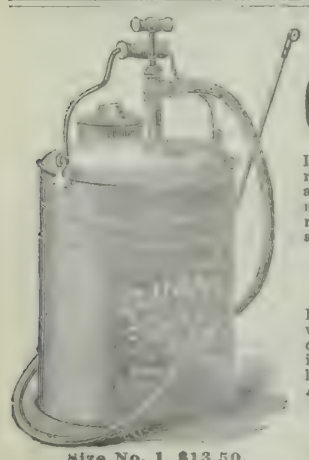
HAND STEMMER.



Send for Catalogue of RAISIN MACHINERY to

FRESNO AGRICULTURAL WORKS, FRESNO, CAL,

Or G. G. WICKSON & CO., 3 and 5 Front St., San Francisco.



Size No. 1. $13.50.

THE CELEBRATED

CLIMAX SPRAY PUMP

Is now manufactured only by R. S. CHAPMAN, he having purchased all rights for same. These pumps have been greatly improved in material and workmanship, and are the best and most economical machines in the market today. The Climax No. 1 (represented by this cut) is the cheapest reliable sprayer made, and is especially adapted for effective work in the average orchard.

THE IMPROVED CLIMAX NO. 2

Is a double pump mounted on a 50-gallon barrel and equipped complete with two lines of hose, spray tips, extensions, shut-off valves, etc. This outfit has just been improved and perfected for the season of 1890-91, and is especially desirable in large orchards where economy in material and labor is necessary. Send for descriptive catalogue and testimoniale. Address all communications to

R. S. CHAPMAN,

18 California Street, San Francisco, Cal.



THE BEST FENCE YET!

Cheap, Durable, Portable and Safe.

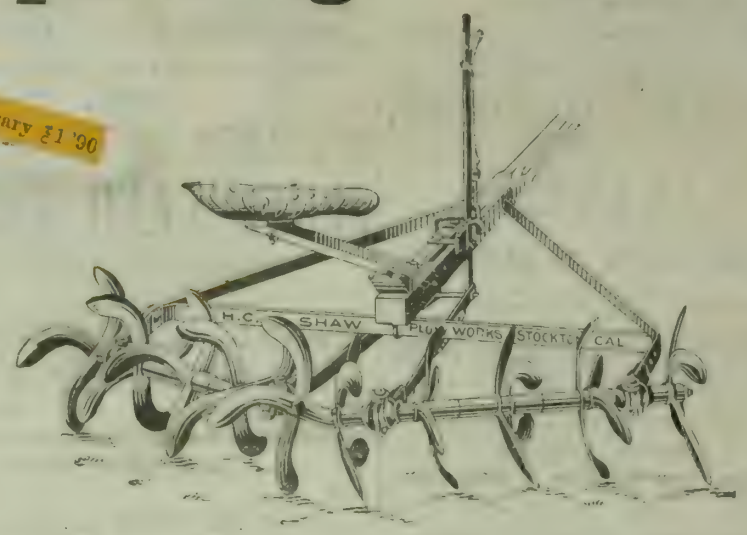
THE SPALDING HUMANE WIRE FENCE is composed of eight No. 12½ galvanized steel wires, woven into four cables of two wires each; interwoven every five feet is a corrugated iron stay or guard, and held in place by wire staples, thereby holding the cables firmly in place, preventing them being spread apart and letting stock through. The stays or guards are corrugated and an inch and three quarters in width, making the fence as visible as a boardfence, which is a very essential point. Write for circulars and prices. Address BIRD-TURNBULL MFG. CO.,

195 La Salle St., Chicago

THE "TRIUMPH"

—ALL METAL—

Spading Harrow.



The Best Pulverizer in the World!

JUST THE THING FOR WORKING SUMMER FALLOW LAND.

Specially Adapted for Orchards and Vineyards.

FOR TWO HORSES. Works the soil about six feet wide. Angle of teeth adjustable to work the soil at desired depth. THIS HARROW is something entirely new. IT IS THE GRANDEST ACHIEVEMENT of its inventor, C. LA DOW, who is the recognized authority on Harrows, there being but few leading Harrows at the present time not built under his patents. We have made exclusive arrangements for its sale and it can be obtained only through us or our agents.

THE NAME "SPADING" refers to its action on the soil. The action of each cutter is like that of a small spade, lifting and turning the soil from a depth of four to six inches, doing more perfect work than is possible with any other Harrow in the world. THE BLADES are made from spring steel, in operation vibrating and shaking off sticky soil. IT NEEDS NO SCRAPERS to clean the revolving cutters.

Considering the immense amount of labor done, the draft is very light, as the pulverized soil passes through the gangs of revolving cutters, being left smooth. THE GANGS are so arranged that the most uneven ground is thoroughly harrowed and left level. IT LEAVES NO FURROW or ridge; when the field is harrowed it is all left smooth.

The Golden State

LATEST IMPROVED

WINE AND CIDER PRESS.

This is a Compound Screw and Lever Press, is very powerful, strong and durable, and does not easily get out of order. It is easily worked by one man, who stands in one place and moves the lever up and down, the same as a pump handle. This manner of operation is much easier than the old way where the operator is compelled to walk back and forth.

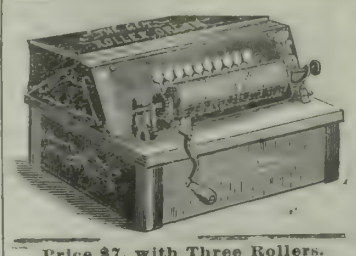


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F. W. Krogh & Co.

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Price $7, with Three Rollers.

18,000 NOW IN USE ON THE PACIFIC COAST

And Still Booming.

THE ROLLER ORGANS

Have no equal and the price is in reach of all. Saves its cost in one night for dance music. Any one can play them. Plays sacred and popular songs and dance music.

We sell all kinds of musical instruments at bedrock prices. Circular free on application. All goods sent C. O. D., subject to examination before paying.

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2257 Mission Street, near Nineteenth, San Francisco, Cal.

C. D. LADD,

Guns, Fishing Tackle, Ammunition.



SPORTING GOODS OF EVERY DESCRIPTION.

529 & 531 KEARNY STREET,

Send for Catalogue and mention this paper. SAN FRANCISCO.

PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XL.—No. 17. SAN FRANCISCO, SATURDAY, OCTOBER 25, 1890. DEWEY & CO., Publishers, Office, 220 Market St.

CALIFORNIA STATE LIBRARY

Arizona Experiment Stations.

Agricultural Experiment Stations are to be located and equipped in Arizona on some such plan as adopted by Prof. Hilgard for the pursuit of the work in this State. There will be the central station on the grounds of the Territorial University at Tucson, and there will be outlying stations at various points.

We recently had the pleasure of a visit from Prof. F. A. Gulley, Director of the Stations and Professor of Agriculture in the University. He is a young man of wide experience in experiment and investigation, and thoroughly in earnest in his purpose to do everything he can for the development of the agricultural resources of his new country. The main station at Tucson is away from all irrigating ditches, and it is proposed to supply ten acres with water by means of a surface well and a centrifugal pump. It was once intended to sink an artesian well, but the project was abandoned as being too venturesome. This ten-acre plat will be filled with specimens of all the vegetable life that are designed to be studied, with a view to their adaptation to the local climate and soil.

The Phœnix *Republican* says that 10 or 12 acre plats are desired in several parts of the Territory for the purpose of extending the usefulness contemplated for the work.

In the Salt River valley, Prof. Gulley thinks that cotton will yet prove a profitable crop, and intends to devote especial attention to the cultivation of its different varieties. Semi-tropical products of the soil will be amply experimented with, as well as plants of the colder north.

We shall be glad to hear of the other sites selected for the branch stations and to aid the enterprise as far as possible by enlisting the support and interest of our readers in that important part of the coast.

Nurseries and the Census.

Among a number of special investigations being made in the Agricultural Division of the Census, is one of "Nurseries." Few persons have any idea of the tens of thousands of acres and millions of dollars of capital invested, and the large number of persons who find employment in this work of growing the young fruit and forest trees, and the shrubs and vines that go out to increase the products, the comforts and attractions of millions of homes in our country. Many of the large nurseries are now located west of the Mississippi river, among which may be mentioned one of 400 acres in Nebraska, of which 85 acres are devoted to baby forest trees alone, each acre containing 300 000 to 400,000, or some 30,000,000 to 40,000,000 trees in all. They sell at from 50 cents to $1.50 per thousand, according to kind, quantity and quality.

As has been previously stated in the RURAL, Mr. J. H. Hale, Special Agent of the Census, who has these matters in charge, is now in California in pursuit of his work. He will find large nurseries here, as well as in the great Central West, though they are devoted to fruit rather than forest tree propagation. Mr. Hale is visiting the various parts of the State in pursuance of his work, and last week was in the flourishing fruit region of Yuba and Sutter counties. No doubt many of our readers will have opportunity of meeting him and assisting in his work.

A Bearing Olive Tree.

Bearing olive trees are familiar objects in a few regions of California, but in other regions of the State and in distant parts where the RURAL circulates, few people have seen a mature tree. It is, of course, a question perhaps as to what is the mature age of a tree which has such a long life as the olive, but if maturity means bearing profitable crops, a 16-year-old tree is well entitled to such distinction, for by that age it will have paid the grower several times the cost of its growth and training.



A NEW CALIFORNIA SEEDLING PEACH—PHILLIPS' CLING.

The tree shown in the engraving is one of the oldest trees on the Quito olive and vine farm near Los Gatos, in Santa Clara county. This farm is one of our foremost oil-producing establishments, and its future is great, for there is a large acreage of younger trees and of trees recently grafted over into improved varieties. The tree shown is of the Mission variety, and it has been given what is called high pruning—such as meets Mr. Cooper's idea of beauty and utility in a tree, for he practices high pruning on his fine place in Santa Barbara. Other growers, however, believe in lower training, though the olive is usually grown higher than ordinary orchard trees. Across the foreground of the engraving is an olive branch—possibly one dropped by the dove when it was bearing its welcome burden to old Noah. We may, however, regard its introduction in the RURAL this week as a sign that the flood of political jargon is about over, and that after another week the country will be again saved by the election of a new Governor and Legislature.



A SIXTEEN-YEAR-OLD OLIVE TREE ON QUITO FARM.

The Yosemite Annex.

We alluded last week to the establishment of a new national park to be named "Sequoia" from the grand native trees, which it will protect from the inroads of timber-cutters. Perhaps all may not be aware that the United States Government has arranged for another national preserve in California, by a law setting apart 48 townships of land adjoining the Yosemite as a national park. The nominal area of the reservation is 967,000 acres, being 36 miles in the greatest extent north and south and 48 miles in east and west lines. But all this area is not included, because of a clause inserted later which reserves from the provisions of the Act all of the present Yosemite grant now owned and controlled by this State, and also all lands for which patents have been issued to bona fide settlers under the land laws. This leaves the Yosemite proper under its present control. The adjoining park in the vast area above mentioned will be under the direct control of the Secretary of the Interior.

The lands set apart for this vast park are townships 1 and 2 N., in ranges 19, 20, 21, 22, 23, and 24 E.; townships 1 and 2 S., in ranges 19, 20, 21, 22, 23, 24 and 25 E.; and townships 3 and 4 S., in ranges 19, 20, 21, 22, 23, 24, 25 and 26 E., M. D. M.

This park area includes the watershed for all the wonderful falls of the Yosemite, the picturesque Hetch Hetchy Valley and a valuable sugar-pine forest of about 80,000 acres, besides immense tracts of other timber.

A New California Peach.

We give herewith an engraving of a new California Seedling peach which is likely to take high rank among our valuable local varieties. It appeared as a chance seedling in the famous Abbott & Phillips orchard in Sutter county, and its merit was instantly recognized by Mr. Joseph Phillips, one of our foremost fruit men, who submitted the peach to local canners and secured their emphatic approval. The writer had the pleasure of examining and testing the peach at Mr. Phillips' place last year, and was assured that its discoverer had not put too high an estimate upon it.

The peach was first given the name Phillips' Cling in the book "California Fruits and How to Grow Them," where, on page 308, the following brief description is given: "Fine, large, yellow cling, no color at pit, which is very small. Exceedingly rich and high colored. Described by Mr. Skinner, superintendent of the Marysville cannery, as the best peach he ever used."

Mr. J. T. Bogue, the enterprising Marysville nurseryman, was quick to see the value of this new peach of Mr. Phillips and secured the right of propagation, and he offers the trees in his circular for 1890–91, which has just been issued.

The engraving, which was prepared by the Dewey Engraving Co. directly from specimens of the fruit, shows well some of the characteristics of the variety. Its clean, globular form and fineness, as well as the exceptional smallness of the pit, as compared with the bulk of the peach, are well brought out. Its richness of color, fine-grained, dense flesh and full sweetness and flavor are other characteristics which are possessed in a notable degree by the variety. It ripens in the Marysville region the last of August.

CORRESPONDENCE

Correspondents are alone responsible for their opinions.

From Humboldt County.

NUMBER LI.

EDITORS PRESS:—At Garberville we were glad to again meet with a wagon-road, as we were somewhat tired of our journey through the Elk ridge country over pack trails. Owing to the mountainous nature of the country, wagon-roads are scarce and a large part of the freighting is done by pack trains. It is quite worth a visit to this county to view a pack train of mules laden with bags of wool weighing from 150 to 200 pounds each, two of them being securely lashed upon each animal. Lumber, machinery and merchandise of every description is "packed" upon mules. E. Parker has a large train of mules and does a regular freighting business from Shelter Cove to the interior.

Leaving Garberville, we turned to the westward by a well-kept mountain-road, and an eight-mile journey found us again at Briceland and ready for a survey of the coast section of the county south of Eel river. However, before we leave we must again observe that this section of the county has a most healthful and delightful climate, and is destined to become one of the great fruit-producing districts of our State, and we believe that intelligent prospecting would develop some extensive coal mines here, as coal has long since been discovered in various places near Garberville, on the east branch and at Briceland, and is found in several localities between here and the place of the recent developments of coal mines in Mendocino county. The coal does not show in large quantity near the surface, and it is possible that a large outlay of labor and capital will be necessary to a satisfactory development. The formation is sandstone and appears to have a great depth, which must be penetrated before a large bed of coal could be reached; yet we are confident of the existence here of large coal-beds.

People here are hopeful that a railroad will be built to the new coal mines in Mendocino county, as from that point a road could easily be constructed to connect with the Eureka & Eel River road, 22 miles south of Humboldt Bay, and thus form a through route to San Francisco and the interior of the State. The road would necessarily pass near here and open a market for fruits and other farm products, which is the only thing necessary to make Southern Humboldt a very desirable country to reside in. Excellent fruit lands now sell for from $8 to $12 per acre, and the advent of a railroad would cause a very material increase in land values. There is also a large acreage of Government lands, but such lands are mostly rough and heavily timbered; yet a large part of this land would yield good fruits if cleared and properly cultivated, and if connected by rail with a market, the tanbark and other merchantable timber would, perhaps, nearly or quite defray the expenses of clearing.

There is an abundance of large game. Deer are somewhat plentiful. I have just finished a supper of fat buck! Black and brown bears, panthers, etc., afford amusement for the hunter and his hounds; and the hunter for small game can satisfy his murderous propensity on grouse, jack-rabbits, squirrels, quail, etc.

T. B. L.

Ventura Notes.

EDITORS PRESS:—The weather here is delightful now and farmers are more cheerful in hopes to secure the entire crop of Lima beans.

In riding through Santa Clara valley, one sees many bean-floors and farmers at work threshing out their crops, or, in Ventura parlance, "tramping."

The owners of threshing machines claim they are not making expenses, the straw is so heavy and beans so light. Some of them are charging as high as 40 cents per cwt.—double the usual price. All over this fruitful valley the beans lay piled in blackened, melancholy heaps, suggestive of approaching winter.

Here and there the corn yet stands in the fields, its dry, blade-like leaves turned gray and making sad music in the autumn wind. Sometimes one finds it cut and in shocks as in the Eastern States. There was but a small amount of corn planted the past season, but the yield per acre promises well and will bring a good price.

Hay was short both as to yield and the number of acres seeded. Prices range from $10 to $15 per ton; but we do raise something besides "corn and beans" and fruit. Mr. Chrisman, 2½ miles east of Ventura, has raised some mammoth sweet potatoes; one bunch of ten he showed me which weighed 15 pounds. These were raised in one hill and attached to one stem.

A potato from another hill measured 20 inches in length, but people won't buy such large products, so Mr. C. remarked. "What is the use of having rich land if one cannot sell the produce?" Buyers prefer medium-sized vegetables, *not* curiosities.

Our Supervisors have taken a table at the Chamber of Commerce exhibit at Los Angeles, making an appropriation sufficient to continue the display for six months. We were shown some mammoth apples that were to be sent down, also walnuts, beans, popcorn, and several varieties of flowers. Most of the things sent for exhibition, in our humble opinion, should be average in size and quality. Californians are quite apt to put the "best foot foremost." Why not?

Mr. L. E. Mercer, one of Ventura county's beemen, is collecting material for exhibition at the Los Angeles Fair, which opened Tuesday. The exhibit is large and of great variety.

La grippe is showing itself again, but not so universally as last season. M. E. D.

Ventura.

SHEEP AND WOOL.

The Sheep at the Oregon State Fair.

A writer for the Portland *Rural Spirit* gives a description of the sheep exhibits at the Oregon State Fair, including notes of what the Oregon breeders are doing, which will interest our wool-growing readers:

There were 156 sheep and 17 head of Angora goats of all kinds on the grounds, exclusive of a lot of he goats brought in for sale near the middle of the week from California.

The sheep may be divided as follows: Sixty-eight merino, 48 Cotswolds and 24 Shropshires. This includes a few grades of each class.

There were some half-dozen Cotswolds and two merinos sold on the grounds.

There can hardly be said to have been competition among the exhibitors, and some of the premiums were not taken for lack of sheep. Two of the pure-bred merino classes, 2 and 3, were covered with competitive entries and that of graded fine wools, for wool and mutton. These were all representatives of the flock of D. M. Guthrie and John Minto—the fine wool and mutton sheep of Messrs. Halley and Savage being an outgrowth of the latter flock.

Mr. Minto showed in Classes 2 and 3, which, formerly listed as Spanish and American merinos respectively, are now called American and cross-bred merinos, the rule being the latter shall be a combination between the French and Spanish families. This cross-bred class was dropped from the lists in 1889, but is reinstated at the request of the North Pacific Sheep Breeders and Wool-Growers' Association. Mr. Minto, who, as our readers know, has been the advocate of this cross as a means of improving the mutton-making qualities of the merino, had a full exhibit in the list (the rams all hornless) and received all the awards.

Mr. Carey took a new departure as a breeder. He has heretofore shown the merino of the Vermont type carefully prepared. He had his best sheep of this kind at this fair, but it was remarked they did not show as careful preparation as last year. The fact is, Mr. Carey became a convert to the ideal Mr. Minto has advocated and has been working to realize for the past 28 years, and had on exhibition at this fair a fine young ram of the National Dickenson Delaine Mutton-wool merino, registry lately established. This young ram is accidentally hornless, which adds to his value in the Carey's vein, and is otherwise a fine example of the points claimed for the family. He was, however (improperly, as we think), shown in the class of merinos, based on the Vermont type, calling for a very different scale of points, and, as the judges seem to think, with many others, that the horns must go, this smooth-bodied, well-grown yearling, verging close upon two years old, took the blue ribbon in the American merino yearling contest, beating even his owner's horned yearling, which was properly entered.

The Committee on Awards made the following remarks:

"In passing our judgment on your exhibit of sheep this season, we were very much pleased to find that several very fine specimens of fresh blood had been imported recently, which we esteem of great importance; at the same time we do not overlook the unremitting energy of John Minto in seeking to improve his merinos by mating different varieties in order to secure both stamina of constitution and staple of wool, both of which we believe he has attained."

The Cotswold Victory.

The premium offered for the best ram of any age or breed for wool and mutton was won by the Cotswold ram Dexter 3036, owned by David Craig of Macleay, Or. He had in competition a Shropshire and a Devon long wool. The ram Dexter is a grand type of the Cotswold sheep. He was the largest sheep on the fair grounds and a great attraction at the pens. Mr. Craig informs the *Spirit* that the demand for Cotswolds was never better than at present, selling more freely and at better prices than usual, and that the Cotswolds offered for sale at the State Fair were all sold. The Cotswolds have been in Oregon for a long time, and they have proved to be a good, hardy sheep, raising nearly all their lambs, giving a large carcass of meat and showing a heavy fleece of long, staple, lustrous wool.

The Wool-Growers' Association.

The North Pacific Sheep-Breeders and Wool-Growers' Association re-elected the officers of last year: John Minto of Salem, president; James Withycomb, Jr., of Hillsboro, secretary; H. H. Savage, Salem, treasurer.

The association thanked the State Board of Agriculture for the line of new pens erected and asked for two more such lines, resolved in favor of more stringent legislation in behalf of sheep husban dry and determined to make an effort to institute registries of the thoroughbred flock of the State.

HORTICULTURE.

The Robe de Sergent Again.

EDITORS PRESS:—Regarding a letter from Mr. Felix Gillet read at the September meeting of the State Horticultural Society, and wherein Mr. John Rock and myself are mentioned, permit me to say that it is worse than unprofitable to carry on a discussion with this gentleman, because he either does not read or does not understand what has already been written and also because he is never present at our meetings, and in this instance at least is playing at cross-purposes.

Pardon the following quotation from his letter:

"At the time that we started in California (six years ago), the discussion of that prune question with a view of straightening up our prune nomenclature, and when we were yet in doubt whether we had the true d'Ente or Robe de Sergent of the French *under the name of Petit d'Agen or French prune*," and so on.

The Robe de Sergent, by which I mean the prune now generally accepted as such in Santa Clara valley and elsewhere, has no analogy whatever with Petite d'Agen or French prune, or with what Mr. Gillet has repeatedly sent down to our meetings as the true d'Ente or French prune. Neither Mr. Rock nor myself have ever made any such claim for it. I imported it from Messrs. Transon Freres, Orleans, France. One of the firm has spent some time in California, and while I was in Europe last spring they offered to send with me to the south of France a young man in their employ. They do an immense business in this country and are, perhaps, as competent as Mr. Gillet in judging of the best varieties of prunes grown in their own country.

The prunes which Mr. Gillet has repeatedly sent to the State Horticultural Society meetings are nothing more nor less than our common, every-day French prune, or Petite d'Agen, and which may not be superseded after all. I can call the secretary or any members present to testify that the samples I showed at August meeting from my own orchard and which two years ago I showed from the orchards of S. H. Shaw of Sonoma and H. L. Gibbs of Calistoga *were larger* than those sent down by Mr. Gillet, and precisely the same prune.

At the Fruit-Growers' Convention held at Sacramento some years ago, Mr. W. H. Aiken exhibited French prunes from many different localities, all of which were as fine or finer than Mr. Gillet's best, and if Mr. Gillet will go to Santa Cruz next month I am sure he will there see a duplication or improvement on what I have mentioned. The vast valleys and plains of California do not all stand still while Mr. Gillet continues his very laudable researches.

To return to the Robe de Sergent, it is the name by which it has become known in California, although, as I have frequently said, I do not think it is the correct name. As a nurseryman as well as orchardist, I am the servant of the public in this matter, and for the last three years I find there has been a greatly increasing demand for this prune, and almost entirely from the Santa Clara valley, the great prune center of the State. They surely know something about the prune there. What is the reason for this demand? In the words of Dr. Kimball of Haywards, "they sold for 3½ cents more per pound than the French." I carried a limited stock of this variety in my nursery for several years and sold scarcely a tree. It was not known and was bearing in but a few orchards.

To show further that Mr. Gillet does not know this prune, he says "it ripens two or three weeks earlier than the French." Of the samples I took to the August meeting, the French prunes were riper than the Robe de Sergent, neither has the wood any resemblance to the Duanes Purple, as he states.

I should have stopped, Messrs. Editors, when I remarked that this discussion is without profit, and so it will continue to be, I am afraid, until Mr. Gillet will bring his prunes to our meetings and be willing to admit that there are prune-raisers to be met with occasionally outside of Nevada county.

The Robe de Sergent is a distinct variety of prune originating in France. It is no more a "type" of French or Petite d'Agen than Sonoma Seedling (Cook's) apple is a "type" of Skinner's Pippin because both originated in California. LEONARD COATES.

Napa, Cal.

The Cuthbert Raspberry Again Ahead!

EDITORS PRESS:—By this mail I send you specimen branches plucked at random from a patch where thousands just like them are growing and fairly weighting down the bushes with the tremendous winter crop which they are just beginning to bear.

I send boughs heavy with ripe fruit and fruit in all stages of progress down to the fairy-like white blossoms, *so thickly set* that one wonders how it will be possible for the vine to bring so much on to perfection, and *still they do it* every time!

The other day, just for curiosity, I counted on a branch not more than 18 inches long 350 berries from bloom to ripe berry!

Last year I imported every new red raspberry to be had of any Eastern grower. This year they grew and fruited right alongside of the Cuthbert, with the same soil, care and cultivation, and again the unrivaled Cuthbert red raspberry has proved herself unmistakably the "Queen of the Market." L. U. MCCANN.

Santa Cruz.

[The specimens received by mail bear out the description which the writer gives of this well-known variety.—EDS. PRESS.]

Peaches—Vine-Knot.

EDITORS PRESS:—I would like to inquire, through the PRESS, which peach is the most profitable bearer, the Early Crawford or the Foster, and which needs the least thinning, and which resists the curl-leaf the best. I would also like to ask if there is a way to get rid of black-knot on old grapevines.—INQUIRER, *Los Gatos.*

[We would like comparison of views and experiences on both these points. The Foster is, according to our information, earlier than the Early Crawford, superior to it in firmness and color of flesh, and less red at the pit, which is also smaller. Both are practically resistant to the curl-leaf. As to bearing and thinning, our experience is too narrow to warrant conclusion. What say others?

If a vine is not too badly knotted, it can be helped by paring or chiseling off the knots and covering the exposed surfaces with paint or grafting wax; but some old vines are too thoroughly diseased to be recuperated in any way. EDS PRESS.]

Date Palms and Citron Trees.

Prof. E. W. Hilgard, Director of the University Agricultural Experiment Stations, has received the following letter from Prof. H. E. Van Deman of the Division of Pomology of the U. S. Department of Agriculture, concerning the date palms to which allusion has been made in previous issues of the RURAL:

Prof. E. W. Hilgard, Berkeley, California—DEAR SIR: I have this day started the imported date trees mentioned in our previous correspondence by way of the Southern Pacific railway. We have been keeping them here about a month longer than was expected, because we found it very difficult to destroy the scale insects which came with the plants from Africa. The Entomological Division has been treating them with kerosene emulsion and finally a spraying of resin solution. It is now thought that the insects are all killed, but I will warn you to be on lookout and if anything of the pest mentioned should appear, you will know what to do.

I have sent a full set of all the varieties to the station at Tulare in care of Mr. Julius Forrer, the foreman. The names of the trees are as follows: Amhat, Nakleh-el-Pashs, Seewah, Hazaneh, Zeb-el-Abed, Sultaneh, Amreeyeh, Rasheedeh, and one male plant. Also, Deglet Nour, Rars and M'Kintichi.

To the station at Pomona were sent nine trees, being one each of the following varieties: Amhat, Nakleh-el-Pasha, Seewah, Hazaneh, Zeb-el-Abed, Sultaneh, Amreeyeh, Rasheedeh, and one male plant. It is not necessary to give you any directions regarding their planting, because yourself and Mr. Klee, who will no doubt supervise the planting personally, know perfectly well what to do. I would merely suggest that the male plants be put in the center of the groups.

There are three varieties of which I had but three plants each, and one set of these went to New Mexico, another to Arizona, which of course only permits the sending of one to your State, and I thought that Tulare was the proper place to send them.

I also sent to Pomona a box containing citron trees, which I obtained from Catania, in Sicily. These are the choicest varieties that could be found there, and were budded at my special order. There are six trees of Cedro Vero, which is a variety bearing rather small fruit, but very good in quality; two of Testa di Turco; two of Pereltone and two of Limonziana, making 12 trees in all. These you will know best what to do with, but I suppose that you will set them out at Pomona and propagate from them. We think that they are entirely free from insects, as they have been kept here under strict watch since last spring.

I have had numerous applications for plants of both the date and citron, but of course it was impossible to supply them, and I have now already turned over several of these applications to you and will continue to do so. I think the date trees have been wisely placed both in your State and in Arizona and New Mexico.

One colony of the plants is at National City, California, one at Yuma, Arizona, another at Phœnix, and another at Las Cruces, New Mexico. A few of the tubs contained double plants or rather two plants, and I have thus been able

to order a division made in such cases, and these extra plants, four female and one male plant, will be sent to Indio from National City and placed in the care of the Southern Pacific railroad there. I know that you will wisely control the distribution of the young plants which may be grown; but in the cases where colonies have been placed in the hands of private individuals, an agreement has been made in writing and properly certified, giving this department entire control of the distribution of the young plants. They have been procured at public expense and are the property of the people, and shall be placed in their hands. Trusting that the plants will reach you in good condition, I am, H. E. VAN DEMAN,
Pomologist.

Washington, D. C., Oct. 11th.

AGRICULTURAL ENGINEER

A Californian in Holland.

Dr. W. M. Ryer, owner of Ryer island and well known in discussion of tule-land reclamation, writes from Holland to the *Evening Bulletin* as follows:

Within the boundary of the State of California are large tracts of swamp and overflowed lands which, when reclaimed and subjected to the cultivation they are susceptible of receiving, will by their products become capable of supporting a population equal in numbers to that which now inhabits the entire State. To many persons this statement may appear extravagant, and to others, who have doubts upon the practicability of reclaiming and cultivating these tracts of land, it may seem a declaration which should be followed by the proofs. The misfortunes which have attended the efforts to reclaim the swamp lands of California present many good reasons to doubt a result so important, and if it is not shown to be more from the inefficiency of the means used than from the impracticability of reclaiming this land, then those who doubt do so wisely.

At this time the swamp and overflowed land of California is either in a condition as profitless as when first surveyed or is imperfectly reclaimed and carelessly cultivated. To go upon these dismal swamps and look at them as they are in a natural state, or in the so-called condition of reclamation, it becomes difficult to bring the mind to the belief that upon land exactly the same in the quality of its soil and in its relation to the floods of the rivers and the tides of the sea, there now is maintained and has existed for centuries as high and refined a civilization as can be found among the nations of the earth. In relation to these waste lands of California, it may be said, "What has been done may again be done when like conditions exist." Upon swamps originally like the overflowed land in the Sacramento and San Joaquin valleys and on the margins of the bays of San Francisco and Suisun in the centuries past, a people founded a nationality whose record is among the proudest for deeds of dauntless courage on the fields of battle and for daring and enterprise on the seas.

To give any portion of the military or naval history of this remarkable race is not within the line or intention of this article; the desire is to briefly direct your attention to the mighty works of civil engineering and patient labor done on the lowlands of the Netherlands to illustrate what may be done on the lowlands of California.

The Manner of Reclamation.

The entire Kingdom of the Netherlands contains 12,650 square miles. This is an amount of land equal to a strip of country 42 miles wide and 300 miles long. Such an extent of land could be taken from the San Joaquin and Sacramento valleys and leave a marginal surplus. The number of the population, as estimated upon the last census of 1886, is at this time 4,800,000 people. The larger part of the entire State is protected from the storms and tides of the North Sea and from the currents and overflow of the river Rhine and other rivers of lesser magnitude by sand dunes and by dikes. The land thus protected from the ravages of the sea and rivers is drained by canals, whose water is pumped by windmills and by steam-power into the rivers or the sea, which at many places have an elevation of from 15 to 30 feet above the level of the canals. Do not understand that the greater portion of the reclaimed land in Holland is of a level so low as these figures would indicate, for these depths are only found in such "Polders" as the Haarlem, the Beemster, and perhaps a half-dozen like reclamations.

The last reclamation of importance was made in the construction of the North Sea Canal, extending from Amsterdam westerly to the North Sea, a distance of about 18 miles. This work was commenced by the construction of an immense dam of 1½ miles in length, across an estuary of the Zuyder Zee, known as the "i j" (pronounced 1). In the center of this dam were made five stone locks, three of which are adapted to the passage of vessels and two are for the regulation of the water in the canal. At the North-sea entrance to the canal there are three locks of granite, brick and iron, which act as barriers to the waters of the ocean and permit of the entrance and exit of the largest steamships engaged in commerce between Amsterdam and other seaport cities. This great work was commenced in 1865 and finished in 1876. The canal extending from Amsterdam to the Helder, through which the commerce of Amsterdam was formerly conducted, became insufficient as the tonnage of modern vessels increased.

To realize the importance of this great enterprise, imagine a dam built across the Bay of San Francisco from the drydock or Potrero Point to the nearest shore of Alameda, and at a distance of three-quarters of a mile from the city shore, and in the Bay of San Francisco, five enormous locks of granite, whose foundations are 40 feet below the surface of the water. Now see with your mind's eye two long levees or dikes whose foundations sink nearly 40 feet below the water level, and constructed as jetties are when made at great depth, but watertight; these levees or dikes running parallel to each other at a distance of 300 feet and extending a distance of 15 miles toward San Jose, and in the middle of the bay.

Now fancy, or bring your imagination to picture, the largest steamships which enter the Bay of San Francisco steaming through this canal, and all the water now in the bay on either side of the canal pumped out, and the bottom of the bay transformed into dry land, upon which an industrious and frugal people have built towns and happy homes, and have cultivated the land into pasture and grainfields.

The steamships which pass from Amsterdam to the Atlantic ocean course along a canal whose waters are, for long distances, 20 feet above the land on both sides of it. This land was, 20 years ago, the holding-ground for ships' anchors; it is now cultivated into productive fields of grain or is devoted to pasture for cattle and has upon it thriving villages. The immense quantity of water which the bay contained was pumped into the ship canal after the dikes were completed, and by this channel they were discharged into the sea. The land thus recovered from the ocean was sold to the farmers for about $450 per acre, and it thus paid about one-third of the cost of the canal. The city of Amsterdam paid about one-fifth of the cost of the canal, the balance was paid from the National Treasury. As a work of water engineering this canal and the approaches to it from the North sea and the city of Amsterdam, rank among the highest of modern achievements.

To fully appreciate the engineering ability demonstrated by the works of Holland engineers in the construction of dams, dikes, jetties, etc., you should go upon those which are exposed to the storms of the North sea, which at times rage with all the violence of the Atlantic or Pacific oceans. Those who doubt the practicability of reclaiming the marsh lands of California should stand upon the dikes and dams of the Netherlands and the parts of North Germany contiguous thereto when the sea breaks during storms, with all the violence seen at Seal Rock or the entrance of the Bay of San Francisco, upon the outer side of those dams and dikes, while on the inner side, and lower than the natural surface of the sea, the industrious and happy people pursue their usual course of life, having confidence that no danger exists behind such barriers.

Unfortunately, practical water engineering, as taught in Holland, is not taught in any of the collegiate institutions of America. Certainly none of the graduates of these institutions have demonstrated any special knowledge of this subject in the works in California. With works constructed as they are in Holland, the swamp lands of California would be cultivated without fear of overflow, and the product of this cultivation would contribute immensely to the wealth of the State.

Canals of Irrigation and Drainage.

After the land is securely diked, the next work of importance in the reclamation is the drainage and the irrigation. As the largest portion of the reclaimed land in Holland is below the river or sea level, it becomes necessary to dig canals to drain it and to raise the water from these canals to such channels as will carry it to the sea. Holland is a country where the rainfall occurs in every month of the year, and it is more abundant than in California, so that both rainfall and seepage require lifting to higher levels.

In the "polders" or lands reclaimed from the water, the canals are made at distances from 400 to 800 feet from each other and usually parallel. The end sought is to drain the land when too wet, to irrigate when too dry, and to partition the land into fields, the canals acting as fences and as resources for manure, for the vegetation which grows in the water is raked out, put in piles, rotted and spread on the land to enrich it. The reclaimed land of Holland is as productive in grain, vegetables and pastures as the best found in Europe, and seems to have lost but little of its riches, even where cultivated for centuries. This is due to the depth and richness of the soil and the application of manure taken from the canals and the beds of peat. The division of the farms into fields by the canals enables the farmer to confine his cattle on one field, while the others are reserved for the harvest of hay, grain or other products.

The Holland Windmill.

Among the structures illustrated by paintings and engravings until they have become associated with the name of Holland, and come before the mind when it is directed to this country, are the windmills. Comparison of their unique and graceless outlines are made with modern windmills much to the credit of the latter, especially so when the valuable services rendered by the former are lost sight of.

The Holland windmills are usually built upon piles driven into the ground until a firm foundation is reached. They are either round or many-sided, with a base of from 25 to 50 feet in diameter, decreasing in dimensions to their summit, and are of a hight of from 40 to 60 feet. The fans are of great length, usually from 15 to 30 feet, always four to each mill, and made by crossing at right angles two very large timbers of from 30 to 60 feet in length. The fans are made oblique by a framework of light slats, so crossing as to support the sail. Over this frame a canvas sail is drawn when required for use and withdrawn when it is desired to have the mill motionless. The mills are so constructed in the interior that each revolution of the fans will cause, by a system of cogs, many revolutions of an Archimedean screw pump, which is placed at its lower part in the canal of supply, and at its upper part to the canal of discharge, at an incline of about 40°. These screws are from four to eight feet in diameter, and are so incased to confine the water that in a fair wind a great volume of water is raised from the lower to the higher level.

Before the use of steam pumps these mills were a necessity in the reclamation of the swamps of Holland, and as they are very effective and are less costly in their workings than steam machinery, they have continued to keep in a cultivable condition the larger portion of the land. These mills were and are now used as saw and grist mills, and for these purposes they do the work required well. For the simple lifting of water it is doubtful whether modern science has discovered anything better than the Archimedean screw, whether propelled by wind, water or steam; and it is also doubtful whether there are any more effective windmills in existence, or any more capable of resisting the storms and tempests than the windmills which are so prominent in the landscapes of Holland, and which so often suggest the ludicrous to the traveler.

As valuable for the purpose of drainage as are the windmills, it must not be understood that all the improvements of modern steam machinery have been omitted. On the contrary, the steam pumps used in pumping out the waters of Haarlem lake and the bay known as the "i j," at the time of their reclamation, are models of effective machinery.

THE VINEYARD.

Mr. Dresel's Experience with Resistant Vines.

Julius Dresel of Sonoma, who has had long experience with resistant vines, gives the *Index-Tribune* an account of his success as follows:

We are now in the midst of our vintage and every one may judge for himself how dreary an aspect the vineyards present around Sonoma, a place famous all over the United States for the best wines in California. I therefore think it opportune to make some remarks about that strange sight of an intelligent community listlessly standing by, waiting for something to turn up, while the vineyards, once the pride of our eyes, fall dead, acre after acre, from the extended flats at the mouth of our lovely valley clear up to the tops of our lofty hills. Strange indeed!

Finally, something happy really turns up. The prices for grapes actually rise from 30 to 50 per cent. Zinfandel bring $15 to $17 and Gutedel and Riesling $16 to $20. Cabernet Sauvignon is in demand for even $27, but not to be had. Besides, there is good reason that similar prices will prevail for the next few years and better wine prices may follow in consequence.

With $15 and $20 per ton the wine-grower can make his occupation a profitable one, and with this the main objection against replanting is void. The phylloxera has certainly lost some of its terrors since the resisting American stock has been planted and grafted with entire success on a stretch of over 400 acres between Haubert's and Rufus' vineyards.

Twelve years ago Dresel & Co. began to introduce Lenoir from Texas (at $40 per ton) and Riparia, Herbemont, Elvira and other resisting stock from Missouri, all of which were dropped in favor of Riparia on account of its good growing qualities and remarkable adaptability to all kinds of soil. Riparia did equally well on the hillsides and flats, in sandy or clayish as well as in loamy soils.

In grafting, its junction with the scion presented no difficulty. Stem and graft developed about evenly and bear abundantly to the present day red or white grapes of French or German origin, of high flavor or of neutral character. At present, dead vineyards are more worthless than naked land. By renewing them with resisting stock the value of the land may be raised to $300 and more per acre. Therefore I advise replanting. Cuttings are cheap. Lenoir and Riparia may be had in Sonoma and Napa. They should be planted in the nursery for one year, remain two years in the vineyard, then grafted in the third year during March, April and May, and in the fifth year they will bring a fair crop. Cleft grafting is quickly done. Anybody can learn it easily enough. An experienced hand can finish from 150 to 200 in a day.

The most important thing to observe in grafting is: Cut the stock even with the soil, or better, half an inch above it, and then heap the soil in a mound around the graft to protect it against wind and sun. After the graft has taken, say in September, remove the mound and any roots that may have grown from the scion. Now the vine is perfect. If the grafting has been done below the surface of the soil, it will be necessary every year to dig around the plant and remove all roots that will form on the scion, or else these roots will draw the nourishment from the leaves to the detriment of the resistant roots below. Phylloxera will then appear, kill the upper roots, and the vine becomes sickly or dies.

I expressly state that we met, apart from the costs, no serious drawback in this replanting experiment of our 150 acres, and assert that it would be a tedious search to find a single vine that has died. On the other hand, we will be pleasantly remunerated this year by the sale of 50,000 gallons of wine raised exclusively on American stock.

In plain view of these facts, how is it possible that so many of my fellow-wine-growers in Sonoma valley persistently decry my happy success in replanting, spreading the ridiculous report that the resistant stock in our vineyard was dying out as fast as the remnants of the old plantations? Is it not a curious freak of human nature to belittle a promising result instead of sympathizing with an experiment that might redound by imitation to the general benefit of our devastated valley?

Colonel Gardner of the Census Bureau, when taken through our vineyard, was astonished at what he called a wonderful crop of grapes in so young a vineyard, and he made a corresponding report to Washington about the success of resisting stock at Sonoma.

For those who still doubt the correctness of my statements, I refer to the testimony of so experienced viticulturists as Messrs. D. D. Davisson, O. W. Craig, Chas. Kohler and John O'Brien of Sonoma and I. DeTurk and L. Burris of Santa Rosa, who have visited our vineyards for investigation, and left convinced, as I am myself, that our fellow-wine-growers could do no better than replant dead vineyards with American resistant stock at their earliest convenience.

Eastern Grapes on Our Southern Coast.

EDITORS PRESS:—In the RURAL of Aug. 30th, H. S. Harvey of Hueneme asks why the hardy Eastern grapes are not raised here, such as Concords, Delawares, Marthas, etc.

I have seen no reply, so will give a bit of my experience in the culture of a few varieties:

1st—*Iona*, which is first class as to flavor, a good grower and a fair producer.

2d—The *White Niagara*, a rank grower, good flavor and heavy yielder for an American grape.

3d—The *Brighton* is good flavor, strong grower and produces very well; red in color, similar to Iona.

4th—*Salem*, which is of the *best flavor*, good grower, but so far a very shy bearer.

5th—*Delaware* is a smaller grape, sweet and good flavored, but not a good producer. Red in color, similar to Salem.

6th—*Empire State*, a rank grower, similar in color to Niagara, but smaller and produces much less.

7th—*Prentiss*, a white grape of fair flavor, a good grower, but refuses to give me much fruit.

8th—*Worden*, a fine black grape, nice flavor and productive. Does not grow as fast as some of the other varieties.

9th—*Moore's Early*, similar to Worden, but some earlier.

I have some other varieties, but so little difference in flavor and appearance it is not worth the while to make any note of them.

My first choice is Iona; second, White Niagara; third, Worden.

The American grapes do not stand close pruning like the Muscats, etc. They have a *wild* habit of growth, good to cover a trellis, rocks or trees.

All have a little *twang* of the wild grape, very pleasant to the taste. Are not so subject to mildew as Mission or Muscats.

O. N. CADWELL.

Carpinteria, Cal., Oct. 12, 1890

[This record of experience is very valuable. Will other growers take part in the discussion? EDS. PRESS.]

ELECTRICITY IN FISHING.—It has long been known that light has a strong influence in attracting fishes in deep water. Some very interesting experiments have recently been made in the use of the electric light, which, different from other lights, can be lowered to great depths in the sea. In the course of these experiments, it has been found that the electric light has a large future before it in the fishing business, and particularly in deep-water fishing. At present the cost of miles of line and netting required for a complete fishing plant is very considerable, cumbersome and unwieldy, the latter especially in bad weather. Instead of extensive nets each fishing boat with a small electric-light plant and a few hand-nets would be able to accomplish much more than would be possible with the present cumbersome outfit.

ELECTRICAL PRODUCTION OF CAUSTIC SODA.—Caustic soda and chloride of lime (bleaching powder) is now produced from salt by means of electricity more readily and cheaper than by the old methods.

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

Thoughts of the State Grange.

EDITORS PRESS:—It is with pleasure one reverts to the recent gathering at Watsonville of so many of the prominent agriculturists of the State, accompanied, as they were, by the gentler members of the household, to cheer and brighten the week's vacation afforded by the annual convocation of the Patrons of Husbandry.

That these yearly socials are growing in interest and popularity goes without saying, and to say that the last one excelled all former meetings in these two essentials, is merely to note the progress making throughout the rural districts by the people most in need of fraternal culture.

The men and women are yet of middle age who would have marveled during their youthful years at such a cultured congregation of farmers and their wives and children as were recently assembled at Watsonville, and to whom the various exercises and duties were a matter of course, carried out with the ease and ability of veterans.

Were this ease and grace all the fruits gathered from our noble Order, the harvest would be ample for the toil involved; but it makes us all akin, and awakes and strengthens a sympathetic tie to which we were strangers a quarter of a century ago. That there is much yet to learn cannot be gainsaid, and this is no truer of the adult than it is of the unfolding mind of the youth who takes his position on the stage of action while his predecessor is approaching the exit.

I am sure every Patron present, like the writer, was proud of the fact that he was a member of the Order, proud of the noble men and women of the State Grange, and last but not least, of the good people of Watsonville, whether within or without the Grange. To the latter it was a week's severe labor, but it was a labor of love; a sacrifice tendered with open hearts and hands; an offering that can no more be blotted from memory than the home of our childhood. My pen is inadequate to do justice to the occasion, and our friends must accept the will for the deed. I cannot see how the social feature could have been improved upon, and will therefore not dare to make a suggestion.

As to the business of the Grange, there is always room for improvement; and while the recent meeting was better in this respect than the last, ay, better than any former occasion, something more can be done to render the business easier, speedier and more satisfactory to all concerned.

The scheme of standing committees to hold from session to session was a good one, giving them ample time to digest the business intrusted to them, for in the Grange, as in all deliberative bodies, the chief work is performed in the committee-room. But these are of no consequence unless they receive work to do which should come from the subordinate Granges as they spring up during the year. Such questions should first be sent to the Master of the State Grange and by him distributed to the several committees. Such a course would facilitate business very much and give more time for social enjoyment. Again, no sessions of the Grange should be held in the forenoon of the two first days of the meeting. This would give committees the much-needed time to prepare their work, and the afternoon and evening meetings would be enjoyed by all and would afford plenty of time for the business in hand. After the first two days, three sessions a day could be had without hindering committee work.

No new business should come before the Grange the last two days of the session except by unanimous consent. This would prevent hasty legislation, except on very meritorious questions.

The work of framing bills to be presented for State legislation should, in my judgment, be abandoned. It cannot be done as it should be, then why attempt it? The Grange should content itself by instructing, by resolution and otherwise, the public servants as to its wishes on the several topics of public concern. Bills may and should be prepared by committees, and by them urged into laws. The plans here briefly outlined if adopted would, it seems to me, enable the State Grange to transact more business, in less time, and do it better, and the work would not interfere with the social feature, which no one desires to curtail. Fraternally. G. O.

Yuba City, Oct. 21, 1890.

Sacramento Pomona Grange.

Sacramento Pomona Grange will meet with Enterprise Grange on the first Saturday in November at 2 o'clock sharp. All the officers and members are requested to be present. The meeting will be conducted in the fourth degree, and all fourth-degree members are cordially invited. Grangers, come to this meeting. Come together, talk together, and let us see what benefit the Grange has been to us, and how we can make it more beneficial.¶

A. A. KRULL, Sec'y.

The Farmers' Defensive Movement.

At the late session of the National Farmers' Congress at Council Bluffs, its President, Hon. R F. Kolb of Alabama, said: "Under this banner are marshaled the disciplined veterans of the Grange, side by side with enthusiastic recruits of the sub-alliances, all animated by one holy purpose in a united effort for home and country. This great defensive movement of the farmers has already inaugurated a peaceful but profound revolution, as important and beneficial in its effects and results as those achieved at Yorktown or Runnymede. This revolution to-day extends from the St. Lawrence to the Gulf, and from the Atlantic to the Pacific; has a deeper and more enduring power behind it than is generally credited, and it is one that may truly be termed an 'irrepressible conflict.' Partisans may revile, the press may ridicule, hirelings may prevaricate and the slaves to money may scoff and seek to belittle, but the great masses of the people are aroused to the dangers which threaten their liberty, to the power that contracts finances, and, by control of money, regulates wages and dictates prices for the fruits of your labor and the products of your toil. The situation is understood. The problem is comprehended. The remedy is well known. The irrepressible conflict between organized capital and the producers and laborers is on hand. It will abide with us until a solution shall be had. It will be the controlling idea, the overshadowing purpose in politics, until it shall be settled. * * *

"The South is with you in heart, in sympathy and in action; and with our prejudices abandoned, the bitterness and acrimony of the past forgotten, and a stern determination to join hands and efforts in this great conflict for self-preservation and disenthrallment, there can be no doubt that the three million producers and laborers will march to the same music, with the same grand inspiration and the same holy purpose, and with guidance from on High, that the day is not far distant when patriots from one end to the other of this grand and glorious country can rejoice that the Government of the people, for the people and by the people, has been reassured with equal rights to all and special favors to none."

The Barbecue.

On Wednesday, the visiting Grangers were treated to an old-fashioned barbecue by the citizens and members of the local Grange. The responsibility of cooking the meats, beef, mutton and pork was placed upon Robert Johnson, who was assisted by his sons. A trench was dug in the lot adjoining the opera-house, and when the viands were served, the Grangers went into ecstasies over the cooks and their cooking. The barbecued meats were served in the plaza. Four long tables, with a seating capacity of 450 people, were spread, and with true Californian hospitality, food was provided for double the number of guests.

The tables were guarded by the Watsonville Cadets, while their sister organization, the Zouaves, a company of public-school girls, costumed in dainty white gowns, set off with scarlet turbans, waited upon the guests. It was a magnificent spread—solid and substantial—and savory enough to make even a dyspeptic reporter's mouth water. The viands were served on wooden plates, and there was an abundance of Martinelli's celebrated Pajaro Valley cider to wash down the feast. The banqueters' appetites were sharpened by the cheery strains of the Watsonville band, and their ears tickled by the singing of a chorus of school children.

A. P. Roache officiated as Master of Ceremonies, and announced the first toast, "The Grange and Its Objects," which was responded to by Senator Johnston of Sacramento. Other toasts were responded to, in brief, pithy speeches, as follows: "The Honest Granger," B. A. Osborn; "All the Worthy Ceres of the Union," Mrs. N. A. Sanders of San Jose; "California," Walter Greer of Sacramento; "Why is the Grange Non-partisan?" C. J. Cressey of San Jose; "All the Worthy Floras," Miss Matie Johnston of Sacramento; "The Foundation of Our Order," S. T. Coulter of Santa Rosa; "Equality for All," Thomas McConnell of Elk Grove; "All Worthy Pomonas of the Union," Miss Rosa Ostrom of Wheatland; "J. A. Brigham, the National Worthy Master," E. W. Davis of Santa Rosa.

Like the reception, the barbecue, in the language of an honest Granger, "took the bakeshop."—*The Rustler, Oct. 11.*

National Grange Session.

Official Announcement.

WASHINGTON, D. C., Oct. 14, 1890.

Dear Sir and Brother:—In accordance with the provisions of its Constitution and the resolution adopted at the session of 1889, the twenty-fourth session of the National Grange of the Patrons of Husbandry will be held in the city of Atlanta, Georgia, commencing on "the first Wednesday after the second Monday in November" (12th), at 11 o'clock A. M.

Accommodations for the National Grange have been secured at the Kimball house ($2.50 per day) and at the Markham house ($2 per day), including heat and light. By order of the Executive Committee. JOHN TRIMBLE,
Secretary National Grange.

What Is Nationalism?

Or, An Independent View of Nationalism.

[Written for the RURAL PRESS.]

One of the editorial notes in a late issue of the San Francisco *Bulletin* says that the "Nationalist fad prevails in Los Angeles."

1st. The Nationalist idea is quite generally abroad in the land and is by no means peculiar to Los Angeles.

2d. We shall soon discover that it is less a "fad" than a coming fate which is being forced upon us by the onward trend of events, whether we like it or not, and can no more be resisted, or even avoided, than mountain streams and rivers can resist or avoid reaching the ocean. The rapidly growing and relentless tendency to combine the energies and forces of both nature and human nature is of itself and in its own way settling the matter for us by constantly, and without asking our permission, finding expression in larger aggregations, not only on the part of capital and private corporations, but of labor and labor organizations. This principle must, like "the brook," "go on forever," and the human institutions which move along its surface must continue to move or sink to the bottom until imperfect or fragmentary combination is at last swallowed up and assimilated by the general aggregation, governed by the popular will and in the interest of the whole.

3d. While it is true that between this end and all monarchical forms of government there is an organic, irrepressible and uncompromising conflict, it is equally true that it is the only logical and complete answer to the instinct and demand for a government of, for and by the people.

Hence, while this force is naturally calculated to overturn monarchies and thrones by violence, it is through the very elasticity of our institutions and through the normal workings of their central doctrine far more likely to be peacefully absorbed and made all-potent and controlling in our nation through evolution.

4th. How is this to be accomplished—after Bellamy's or some other plan? Whenever a combination has the power and disposition to control State and National legislation and uses that power for selfish ends and to the detriment of the State and the general public, war is virtually declared between that combination and the Government; in other words, the people. Of course the war may consist of battles in the air and the clouds and be bloodless, but it is war nevertheless, and war that cannot cease till one party surrenders horse, foot, cannon and commissary stores, or till both parties are like the "Kilkenny cats"—rendered powerless for good or evil.

Perhaps we have not yet reached the point of actual active war between private pools and the people; but unless the public is either a big knave, coward or fool, we are certainly approaching that end when great corporations control our elections, and when Wall street boldly pools and corners silver in order to pick the pockets of the people by compelling Government to pay a cent more per ounce than it is really worth and to then—after the U. S. Treasurer has made his purchase—allow the metal to drop back to its market value. That Wall street has done this very thing within a few days, no one pretends to deny; and that Jay Gould and his associate pirate, Col. Jim Fisk, did a far more criminal thing in the gold market a quarter of a century ago is still a "Black Friday" memory that can be proved by our national records. And that there is any remedy for these and kindred evils, except the national absorption of all great private corporations and the Government control of our mines and finances just as fast as their conduct comes in conflict with the public welfare, no thoughtful man will attempt to prove or claim.

This, as far as it goes, will be Nationalism; and this is just what the united voice of labor, including the farmers, is beginning to demand all over the country.

5th. Corporate greed, no matter whether pitted against a few "strikers" or against government, never knows when it has got enough nor when or where to stop. If Wall street is allowed to swindle the combined people through their servant Windom, to the extent of one cent on each ounce of silver, who or what short of the nation itself is to limit Wall street's demand?

That which is true of the Wall-Street silver-pools is equally true of all great corporations and combines, inspired by the one sole purpose to get all they can and divide it among private parties.

6th. This war between the great private aggregation and the nation, if not already declared, is, in spirit and fact, already upon us. The Boss Buckley idea, which is just now incarnated in the saloon monopoly, must, by the natural law of progress, sooner or later extend from the great city and single State to the General Government; and then it will either control the nation—as Buckley is said to control San Francisco, if not California—or the nation must capture, convict and "convert" it and set it to work for the general good, as New York did Boss Tweed and as Minnesota did Cole Younger. And this will, to all intents and purposes, be Nationalism.

Whether Bellamy's proposed and peculiar methods are to accompany the principle when in operation, is of minor consideration, and for the people themselves to decide. This will regulate itself when the time comes, as all other great changes do. National systems, no less than the human system, are, if alive, constantly undergoing change, and the questions of inward diet and outward dress must be determined by the necessities and demands of the subject.

Just now, there is a widespread feeling that private corporations are not supplying the general public with proper rations and convenient clothing, saying nothing about certain unsatisfactory rules and regulations they have cunningly imposed upon Uncle Sam for the management of his large family.

By a singular coincidence other families across the sea are in a similar state of unrest and discontent. The cause of this is that through various educational influences, the common people, especially in Christian countries, are growing out of their childhood into a sense of their rights and responsibilities.

Guns, bayonets and "strong governments," so called, are powerless to prevent this growth, which must and will find legitimate and adequate expression, no matter what incidental change in governmental ideas, or what inconvenience, or even suffering, may be involved.

It is not in a special but broad sense that the writer is a Nationalist. He is rather an evolutionist, no less in a social than political and spiritual sense—as the three are one—ready to work with all organizations, or outside of any, whenever people are found honestly and intelligently striving for higher human conditions, believing that "all roads" perseveringly traveled in this spirit ultimately lead to the one grand general result, and that with this result we shall at last all be satisfied, unless it may be a few foreordained "kickers," who, if walking on their two feet, insist upon being permitted to travel on their heads and two hands while they "kick" to get back on their "pins," and who, if put back, are never even then satisfied till they can lie down on their backs and hitch along horizontally while they look up and "kick" and swear at the "spots on the sun."

San Francisco. JAMES G. CLARK.

Substantial Progress.

No better argument can be given of the healthy condition of the Grange than the state of its finances. By reference to the Treasurer's report, it will be seen that there is a balance in the General Fund of $648.26, and $1200 29 in the Lecture Fund—a total of $1848.55, now in the Grangers' bank to the credit of the State Grange. This is an increase of over $800 in the last year. It is expected that much of the Lecture Fund will be expended in securing and keeping competent organizing Lecturers in the field to revive and encourage Granges and stimulate an interest in the Order throughout the State. The Grange is alive and growing, and at no time has the Grange's influence been more needed than now. Ignorance, oppression and corruption is on every hand. The wholesome and educating influence of the Grange can do and is doing much to purify our Government and to create a love for that noblest of pursuits—agriculture. O.

Semi-Annually Is Good Enough.

EDITORS PRESS:—The $105 deposited to the credit of Granger V. Roache is to draw interest at the rate of six per cent, compounded, *semi annually*—not *quarterly*, as stated in last RURAL PRESS I. C. STEELE.

Pescadero, Oct. 20, '90.

BRO LEONARD RHONE, Master Pa. State Grange, writes: "We have done very good Grange work in Pennsylvania this year, having organized 83 new Granges and reorganized 24, adding over 7000 members. Still New York leads us in the number of new organizations."

THE thanks of the State Grange are due the Watsonville papers and the Santa Cruz *Surf* for their true and efficient reports of the session. Special mention is made of Miss Raymond of the *Surf*, whose daily articles were thoroughly appreciated.

NATIONAL GRANGE MEETING.—The National Grange will meet in Atlanta, Ga., the 12th of next month. Bro. S. T. Coulter, P. M., Sister Coulter and some other representatives of the Order are expected to go with the W. M. from California.

State Horticultural Society.

The next meeting will be held in the hall of the State Board of Horticulture, 220 Sutter St., S. F., on Friday, Oct. 31, at 12:30 P. M. It will be the Annual Meeting and election of officers will be held. The subjects for discussion will be: "Orchard Fertilization," introduced by President Hilgard; "Abnormal Growth of Vegetation," by Dr. Gibbons, and a general discussion on "Orchard and Vineyard Cultivation." All interested in these subjects are invited to attend. E. J. WICKSON, Secretary.

CANADIAN EGGS FOR ENGLAND.—A test consignment of Canadian eggs is reported to have reached London Oct. 21st, in excellent condition. They bear comparison with Normandy eggs. Several cases found buyers at 10 shillings per 100. The top price for the best eggs on the market is 11 shillings.

The Sixth District Fair.

Written for the PRESS by CLARA SPALDING BROWN.]

The eleventh annual fair of the Sixth District Agricultural Association opened at Los Angeles on Tuesday morning, the 14th inst. It was a success in all its departments, although the date this year was so late that it was not possible to exhibit all the varieties of fruit that are raised abundantly within the district.

The display of farm products, manufactures, art and fancy-work, etc., was in the Chamber of Commerce rooms on Main St. The secretary of that organization, H. Jay Hanchette, was the busiest man in town, as he superintended the arrangement of the exhibits, aiming (as he was overheard to say) "to please everybody."

Twenty-five localities in Los Angeles, Orange and Ventura counties were represented. Every available bit of space in the large hall was occupied by the permanent exhibit of the Chamber and the entries for the fair.

Westminster and Orange county in general filled two long tables near the entrance, connected by a pyramid of apples and placarded, "No Irrigation." There were big watermelons, muskmelons, potatoes that would make a "son of Erin's" mouth water, Hubbard and crookneck squashes, plates of large, handsome apples, sugar beets, red peppers, tomatoes and onions of generous size, and other proofs of the richness of Santa Ana valley soil. Beside one of the tables was a row of such pumpkins as "Peter, Peter," must have kept his wife in. Westminster pumpkins have always been famous for their size. Among the exhibitors on these tables were Frank Cook, P. Mefford, Larter Bros., John R. Davis, A. C. Junkins, U. Penhall, O. J. Buck, G. W. McKisson, J. H. Glines, Wm. Mallet and Josiah McCoy. A case of beautiful hand-made horseshoes was shown by J. B. Browne of Santa Ana, adorned with blue ribbons won at the Sacramento State Fair and the Orange County Fair of this year.

Geo. W. Ford, a nurseryman of Santa Ana, exhibited baskets of improved soft-shell walnuts, the paper-shell and common hard-shell walnuts and two-year-old walnut trees; also one-year orange buds.

Ventura county had one table of miscellaneous exhibits and another covered with honey, hives and bees from the apiary of L. E. Mercer & Sons. This was by far the largest exhibit of honey in the hall. Mr. Mercer, who had charge of the tables, informed me that it was nothing compared with what he intended to exhibit at the Chicago World's Fair, and that Ventura county proposed to maintain a permanent display hereafter in Los Angeles. Mr. Mercer showed a scale hive in which 350 pounds of honey were made from April until June, the largest amount in one day being 18 pounds, on the 17th of May. He also showed an active swarm of bees with their summer's work, amounting to 186 pounds.

The only dates in the hall were on the Ventura table, and the largest display of grapes was from that county. The lateness of the season and the recent unfavorable weather has made the grapes of this section rather scarce. N. W. Blanchard of Santa Paula sent wrapped lemons, Lew Walker showed plums, and others entered apples, peaches, sugar beets, corn, potatoes (one of a white variety weighed 4¾ pounds), gypsum from the Ojai valley, etc. C. Kenney of Sespe had a frame supporting noble clusters of grapes. Mrs. Mercer exhibited a rose-sprout that grew 14 feet in four weeks beside her house in Ventura.

A long table filled with fruit dried and preserved by the Baker patent process, was exhibited by the Pasadena Drying and Packing Company. There were figs, peaches, apricots, pears, French prunes, plums, etc., in piles and boxes, cans, etc. The fruit in cans does not have to be sealed. If it does not make sufficient juice of its own, it is covered with water that has been subjected to the same process as the fruit and will keep indefinitely. Pickles of all kinds, tomatoes, watermelons, almost anything eatable, can be thus preserved and retain their natural flavor. It is claimed that the dried fruit is one-quarter heavier than that which has been evaporated or sun-dried, and superior in quality. Mrs. W. R. Baker made a large display of jellies.

Pasadena Highlands does not irrigate and challenges any other section as to the result. The largest exhibitor was E. Dane, who showed pomegranates, grapes, Hungarian prunes, plums, Salway and Heath cling peaches, eight varieties of apples, orange quinces, Kelsey's Japan plums, Eureka lemons, White Smyrna figs, also California black and brown Ischia figs, Rose of Peru and Muscat grapes, pea beans, Canada flint corn, and a fine array of dried fruit in boxes.

Philbrook and Stetson of Pasadena exhibited orange and lemon juice in bottles, tomato catsup, plum pudding and mincemeat in cans, and canned beans warranted to surpass those of Boston. E. A. Bonine, Pasadena, entered spiced fruit and marmalade.

Artesia showed a table full of products raised without irrigation. John F. Branch, manager, called attention to some mammoth ears of Illinois dent corn, a variety which was introduced here by him 15 years ago. At first, it matured in 90 days, as it does in Illinois, but now it takes much longer. He also showed yellow Iowa dent corn, King Philip corn, and red, black and white popcorn. Some Osage orange apples were curiosities. Walnuts were sent in by S. Dievendorf; onions of several pounds' weight by J. W. Miller. On the table were the citron of commerce, peanuts, apples, Winter Nelis and other late pears, chestnuts, seedless Sultana and Rose of Peru grapes, and a hill of six sweet potatoes whose weight aggregated 38 pounds.

Duarte exhibited boxes of lemons and limes, a pyramid of Valencia late oranges, orange wine made by Mr. Merrill, which took the first premium at the citrus fair last spring, marmalade, jelly and canned fruit put up by Mrs. S. A. Crane, dried plums and prunes by Bliss Bros., and 10 pounds of comb honey from the apiary of W. W. Bliss.

The Pomona Wine Co. showed port, claret, Zinfandel, white wine, etc.; R. F. House, pickles; the Pomona National Hose Coupler Co. an improved coupler for fire-plugs and for ordinary hydrants, also an improved lawn-sprinkler. Ira F. White & Son, who have just patented the "Suicide" gopher and mole trap, a double-ender, announced that they would be ready to supply the trade the latter part of November. This trap appears to be a great improvement on all others, as it cannot be covered up from behind.

Vernon made a good showing of apples, nuts, lemons, pears, pomegranates, etc. E. L. Henck of Vernondale exhibited giant blackberries. The Buena Park Canning Co. displayed canned milk and coffee. J. C. Whitaker, of same place, barley, corn, pea beans and peanuts.

C. O. Coffman of Rivera showed large watermelons, and Jas. Root made a fine display of pressed figs and of apples.

E. P. Norwood, Cucamonga, entered raisins, Italian chestnuts, soft-shell almonds, walnuts and pampas plumes.

Alhambra was represented by W. L. Phillips with quinces and pomegranates, and A. B. Kingsley with pears.

On the Fruitland table were the largest egg plants on exhibition—monsters; a specimen of gumbo, cabbages, grapes, peanuts, apples, pears, tomatoes, oranges, big beets and pumpkins, quinces, peaches, persimmons, etc.

Whittier's sugar beet *beat* them all, standing a good six feet above the table. A large can of sorghum, dried fruits, canned goods, cut flowers, apples, quinces, corn and walnuts made an attractive exhibit from this settlement, which always takes pride in showing what can be done by a new community in this climate.

H. Burlingame of Gardena had a miniature bale of alfalfa, on which a card stated that the ground where it was raised produced seven crops a year, averaging two tons per acre.

Cheeses were shown by Anderson Rose, Ballona; Mitchel & Harsman, Downey; J. W. Patterson, Artesia. Butter, by Sessions & Bigelow, Los Angeles, and T. J. Kearns, Downey.

Cahuanga's table had overhanging it a large banana tree, bearing two fine clusters of fruit. All the fruits now in the market were represented; among them some boxes of ripe guavas. Here and on the Pomona table I found a fig called the New Pacific, which was highly spoken of. It looks somewhat like the White Smyrna, after being dried, is waxy and rich, a heavier fig than the Smyrna. Jas. Root of Rivera also showed this fig dried.

John Bangle and T. J. Kearns of Downey displayed soft-shell walnuts and mammoth apples. H. D. Engelhardt, Glendora, dried fruit; R. Baldridge, Covina, strawberries.

Reaching nearly to the ceiling was a cluster of cornstalks 22 feet high. Several other clusters measured 15 feet and over. The largest of the many big pumpkins weighed 225 pounds and was from the University, a suburb of Los Angeles.

Norwalk had the honor of producing the largest watermelon, a 97-pounder.

O. N. Wilson exhibited honey and fruit from his ranch in the San Fernando valley. Two young ladies entered raw silk and cocoons.

Owing to a regulation forbidding names of exhibitors to be put upon the cards until after the premiums were awarded, I am not able to give credit to every one.

Exhibits were made on the stage and in the gallery by the Los Angeles box factory, Olive Milling Co., L. A. Paint Co., L. A. Cracker Co., Baker Iron Works, broom factories, etc. There were stoves, pianos, mantels, harnesses, pottery, woodenware and samples of other industries.

The art room was crowded with pictures and other rooms with bric-a-brac, curios, and mineral specimens.

There was considerable fancy-work on exhibition, but not so much as at some of the previous fairs. Very little bread and cake was entered.

At the Park.

To many people Agricultural Park was the chief attraction. Here were the blooded horses, the cattle-pens and the poultry exhibit. The attendance each day was very good. Several interesting races occurred each afternoon and good music, balloon ascensions, a ladies' tournament and other diversions added to the pleasure of the occasion.

The stock exhibit was superior to any heretofore made in the southern part of the State. The herd of Guernseys owned by Sessions & Bigelow of Los Angeles was supposed to be the only one in Southern California, but it is reported that there are a few head of this breed owned by a Mr. Cox in the northern part of San Diego county. Eastern dairymen consider the Guernsey the coming cow, as she is larger than a Jersey, a larger milker, and produces as rich a quality of milk. The skin of the Guernsey has a creamy tinge, especially at the end of the tail.

Sessions & Bigelow also exhibited Berkshire swine, among them a five-months-old boar that took first premium at the Sacramento and Oakland fairs. C. A. Coffman, Ranchito, breeder of Berkshires, had a fine lot on exhibition.

C. B. Woodhead, Santa Fe Springs, showed Jersey, Durham and Holstein cattle; J. D. Durfee, El Monte, a large herd of Jerseys; Horace Locke, Los Angeles, Jerseys and graded stock.

E. Younger & Son, San Jose, brought their celebrated sweepstakes herd of Durhams here, said to have won more premiums and gold medals than any herd in the State. They have the largest single exhibit of cattle on the grounds.

Every stall in the horses' quarters was filled, all the classes being well represented. There were thoroughbred stallions, dams with colts, mares and fillies, roadsters, drawing and carriage horses, Shetland ponies, etc., from the stables of J. W. Robinson of Edgemont Park, J. Gries of Compton, F. Estudilla of San Jacinto, C. A. Durfee, Elias Williams, J. W. Gardner, N. A. Covarrubias and L. Snodgrass of Los Angeles, A. Rose of Ballona, J. C. Newton of Farmdale, Capt. A. B. Anderson of San Gabriel, Isaac Keene of Pasadena, J. G. Denman of Norwalk and others.

There was a fine lot of racers, owned by L. J. Rose of Sunny Slope, E. J. Baldwin of Santa Anita, J. G. Hill of Ventura, Matt Storn, the Chino ranch and other breeders. The fastest trotting time up to the date of this writing was made by Lucy R., owned by Walter Maben, who won a heat of the 2:28 class race in 2:22¼. She was the winner of the race. There was much good running done.

Mr. S. Tyler of Pasadena, superintendent of the poultry exhibit, said it was the finest show of the kind ever seen in Southern California. Though not so large as some previous ones, the collection of fowls was more valuable. Mr. Tyler, who was the largest exhibitor, was awarded the premium for best display and a number of first premiums for special varieties. There were Golden, Silver and White Wyandottes, Light Brahmas, Buff Cochins, Plymouth Rocks, Pekin ducks, Toulouse geese, Silver-spangled Hamburgs, Houdans, Langshans, Brown and White Leghorns, Partridge Cochins, White-faced Black Spanish, White Minorcas, White Holland turkeys, Golden Seabright bantams, Indian game chicks, Black-breasted Red games, Golden Duckwing games, pigeons of different varieties and rabbits. The exhibitors were S. Tyler, Isaac Keene, L. S. Syme, T. Kern, W. H. Dwight, G. C. Clapp, all of Pasadena; A. C. Ruschaupt, C. F. Paul, J. D. Mercer, E. R. Terwilleger, W. H. Syme, W. H. Lyons, all of Los Angeles.

Glimpses of the Fairs.

Arroyo Grande.

The *Herald* for Oct. 11th says: "Yesterday evening witnessed the closing of the most successful fair that Arroyo Grande has ever held," and the bare enumeration of the various displays of cereals, vegetables, fruits, flowers, fancy-work, etc., with the premium list, fills nearly four columns, in which the familiar names of E. Leedham and J. V. N. Young, W. H. Findley, C. Grieb, J. S. Brooks and others often recur.

We notice, among the striking exhibits, that C. E. Carpenter had the largest watermelon, weight 58 pounds; G. O. Taylor had six squashes, the largest of which weighed 220 pounds, and the other five 825 pounds. T. H. McClure showed a 31-pound turnip; Leedham, a 50-pound cabbage; J. V. N. Young exhibited 24 varieties of apples, which were exceedingly fine, and several others pressed him closely. D. F. Newsom had a good display of lemons, quinces and almonds, but we could not do justice to the different exhibits unless we named them all, and for that, space is wanting.

Hollister—San Benito County.

San Benito county's first annual fair opened most favorably on the 8th, says the Hollister *Advance*. The races were well attended, and the pavilion exhibit of the county's resources, though gotten up on very short notice, was superb. One of its features was a collection of products of orchard, vineyard and farm, designated generally as the *Free Lance* exhibit, gleaned from all portions of the county and marvelous in variety and quality. The display of fruits, vines, wines and brandy made by Supervisor Palmtag was remarkable. G. F. Mitchell's butter and cheese, and Mesdames J. H. and Geo. Shaw's exhibit of canned, preserved and dried fruits attracted no little attention. D. H. F. McPhail made a wonderful display of minerals, comprising 144 samples from the cabinet of Prof. Frank B. Abbe of San Juan, cinnabar from the New Idria and Gipsy mines, coal from the Trafton and Matthews mine, etc. There was also a fair show of fancy breeds of poultry. Visitors from abroad were surprised at the excellence of the exhibition as a whole.

Sonora—29th District.

The 29th Agricultural District, embracing the counties of Calaveras and Tuolumne, held its first fair at Sonora, Oct. 2d to 4th. The exhibits of live-stock were numerous and of a high grade, while the display of farm products and fruits in Opera hall was such as to surprise all visitors. The receipts at the hall were over $1300. A new pavilion and race-track will be built for next year's fair. The directors are greatly complimented for th unselfish, untiring and successful work.

Quincy—11th District.

From the Quincy *National's* extended report of the fair held at that place Sept. 22d to 27th, we gather that the show of horses, especially colts, far excelled that of '89, while the array of Durham, Holstein and Jersey cattle, both from Plumas and Lassen, was an exceedingly fine selection. The annual address was delivered at the courthouse Friday evening, by Hon. J. D. Goodwin, to a throng of appreciative hearers. The display of fruit, etc., at the pavilion was generally conceded to be the finest yet made in the district. Especially commended were the apples, pears, peaches, plums, prunes and potatoes from Lassen county, the corn from Genesee valley, and the parsnips, squashes, watermelons and muskmelons of Lassen and Plumas. The exhibit of canned small fruits, jellies and jams was very extensive, and the varied display of tastefully designed and finely executed needlework was praised highly.

Yreka—10th District.

The 11th annual fair of the Mount Shasta Agricultural Society began at Yreka, 2d inst. There was a very creditable display of live-stock. The agricultural products on exhibition excelled any previous display at that place. The attendance was large and the fair successful financially.

Susanville—Lassen County.

The first annual fair of Lassen county opened at Susanville, Oct. 6th. The *Advocate* of the 9th says: "The attendance has been much larger than was expected; the gate receipts have been correspondingly high, and the general interest of the public from all over the county shows that the idea of a Lassen fair for Lassen county was a good one. We have made a splendid start....The stock exhibit is very good, including over 200 entries and showing some of the finest breeds in the State."

At the schoolhouse, which was used as a pavilion, there were 1350 entries, embracing large, heavy wheat and barley, oats and rye; alfalfa six feet tall; a magnificent hop-vine loaded with fragrant blossoms; potatoes, cabbages, apples, pears, plums, etc., not only big, but close-grained, solid and full of flavor; "rose-scented butter, all sorts of preserves, luscious fruits in jars, jellies and jams, fancy cakes, good home-made bread and biscuits and all the thousand and one delicacies which are the pride of the good housewife, or of the good girl who hopes some day to be a wife;" besides ornamental plants, needlework and pictures.

At the track, in addition to the races, nine ladies gave a beautiful exhibition of graceful riding.

Nevada City—17th District.

The fair for the 17th Agricultural District opened this year on Tuesday, Sept. 23d. The *Tidings* of fair week says: The pavilion at Nevada City is attracting much attention, and the general expression is that it is one of the best exhibitions yet given in the county. The mercantile displays are very handsome, while the fruit and vegetable display was never excelled. The mineral exhibit was very comprehensive, and the needlework and art departments well filled.

Among the many entries of field and garden products, we notice that J. M. Hales had 12 varieties of cultivated grasses and eight of grain; J. R. Balch, five varieties ornamental grasses, broomcorn, peach melon, stock beets; J. F. Kidder, sweet corn, potatoes, cabbage, tomatoes, watermelon, carrots, parsnips, cucumbers, beets, summer squash, pumpkins, green peppers, egg plants, celery, ocher, cauliflower, beans. Henry Hansen and Mark Thornton also made varied showing of vegetables.

In the horticultural department, we name but a few characteristic displays: S. N. Stranahan, 15 varieties apples, 2 of pears, plums, figs, grapes, 17 of dried fruits, nuts; A. C. Gillespie, 54 varieties apples, 22 of peaches; Mrs. E. D. Bridges, 72 varieties apples, 9 of nuts, 11 of dried fruits; John R. Balch, 22 varieties apples, 6 of pears, 12 of peaches, 3 of grapes; Paine & Twitchell, 23 varieties grapes; W. B. Stuart, 12 varieties pears; J. H. Niles, oranges; S. Allison, 10 varieties apples, pears, 13 of grapes; N. G. Segerstrand of Pet Hill, a fine representative display of fruit, both green and preserved, pears, apples, figs, etc. Some Orange-cling peaches from the Spenceville region, shown by Messrs. Woehler & Pietszch, were 10½ inches in circumference. They were grown on trees about 20 months old which have never been irrigated.

Aug. Combe of Bear river showed a quantity of French chestnuts from limbs that he grafted into black oak trees four years ago.

Fine displays of jellies and fruits in glass were made by Mrs. Stranahan, Mrs. Bridges and several other ladies.

At Glenbrook park, while the races were but "just passable," there being few horses of great speed or reputation present, the parade of live-stock, particularly thoroughbred cattle, was the best that has ever been made in the county, representing Jerseys, Holsteins, Durhams, Ayrshires and graded stock of the different breeds. The stock was much admired for its general superior appearance. The larger part of the cattle were from the farms of H. B. Nichols and Richard Noell, whose enterprise in importing and raising the best breeds has had a stimulating influence upon farmers and dairymen until now the county can make an excellent showing in this line.

[*Continued on page 363*]



Song.

[Written for the RURAL PRESS by DAGMAR MARIAGER.]

Words cannot tell the beauty found
The humblest flowret's eye within,
Nor of the common cricket's sound
Portray the melody therein.

Nor rhymes can circle all the grace
Within the solemn sea-gull's wings—
Yet words and rhymes must stand in place
To aid the one who sweetly sings.

The words, the rhyme, and song combine
To thrill the nerves with joy's sweet might—
Pervade the soul with a divine
Keen ecstasy of calm delight.

Santa Barbara.

Death.

[Written for the RURAL PRESS by DAGMAR MARIAGER.]

You ask me what 'mong Nature's many gifts
I hold most dear and get most solace from—
What means the silver on the great clouds' rifts,
By which I many sorrows overcome?

I've friends, and other foes, who suffer do
Much self-inflicted, and of needless pain,
Were mankind to the Golden Rule all true;
And so I think the end a precious gain.

'Tis sleep, that wakeless sleep that we call death,
That cruel blessing which my child befell;
Knowing my *all* would ne'er again draw breath,
My anguish yet could not my joy expel.

Santa Barbara.

Fused by Fire.

Ebenezer Parsons, commonly called Eben, had taken advantage of a stormy day in the midst of the haying season to take his horses to be shod, and also some tools to be repaired or sharpened, and was now on his way home. The farm-wagon path, worn into ruts, between which the short young clover grew courageously, ran for some distance alongside of the picturesque vine of bush-hidden rail fence that separated the parson's land from that of the Buckleys until it reached a spring whose almost icy cold water bubbled joyously out from a gravelly hillside, and ran down in a slender, purling stream until it became lost in the Hitchcock swamp. From the spring the farm road turned sharply to the left, and up the hillside between two of Eben's own fields, to the low, broad, sloping-roofed farmhouse, old in days, as we count age in this country, but stronger than many new houses, and far more picturesque beneath its wide-branching elms, and half-hidden in a wreath of lilacs, syringas, snowballs, June roses and leafage of that beautiful utilitarian, the hopvine.

The rain had almost ceased and Eben did not in the least mind the light drizzle which had wetted his red flannel shirt until it clung tightly to his lithe, firmly-knit and graceful figure. Comfortably riding along, guiding with one hand the horse beneath, and with the other leading, or pretending to lead, the second horse, which would have followed his mate as well without a touch, Mr. Parsons was in especially good spirits, for he had had a day of rest, and heard all the neighborhood news, and exchanged opinions on the prospects of the crops and conditions of the herds with his brother farmers, and come to the conclusion that on the whole, his own business was likely to prove as prosperous as that of any of the others, and had perceived with satisfaction, as he rode by it, that Jason Buckley's corn was a trifle less promising than his own, having been planted on a low bit of land, too cool and wet for corn during this cool, wet summer.

"Yes," said Eben to himself, turning in the saddle and resting his sinewy brown hand on the sleek back of the dapple-gray horse he was riding, while he scrutinized the corn-field—"Yes, Jason's corn looks mighty yeller and minchin'. He'd orter ha' put hisn on th' upland as I did mine. Git up Balder, old feller! What ye standin' here fur, nippin' 's if ye hadn't tasted grass in a week?"

So, content with himself and his circumstances, and smiling as he thought of the welcome he would surely get when he reached his own door from his comely wife and glad-hearted children, he went on whistling a stave or singing a catch until he came to a turn in the road by the old spring.

The sight of this spring, so innocent and smiling, like a child's happy face, always brought a frown upon handsome Eben's sun-browned features, for it had been the subject of dispute for sixty years or more between the ancestors of Jason Buckley and his own. The Parsons asserted that in the lifetime of Grandfather Parsons—who was a mild-tempered, meek sort of a man, a deacon in the church and superintendent of the Sunday-school, a man "altogether too good for service," as Eben said—the spring had undoubtedly belonged to the Parsons. But old man Buckley, who held in slight esteem his neighbor's business qualities, and thought the Lord ought not to have trusted him with the care of so much of this world's goods, had set covetous eyes upon the ever-flowing and almost ice-cold spring, so useful a place to stand the churn to make the butter firm in hot weather, and so handy to water the cattle in winter when all the ponds and streams were frozen over, and had so crooked his rail fence around it that it now lay within the Buckley inclosure.

Deacon Parsons, holding literally to the admonition to give the coat where the cloak has been taken, refused to take any steps for the recovery of the spring, until at last old man Buckley held it by right of possession.

The son of Deacon Parsons, who succeeded to the inheritance of his father, had proved to be of different stuff; was by no means a meek sort of man, in fact. Having his father's strong ideas of right and wrong, but none of his humility, and being assured that eternal justice always lay on whatever side of any controversy he had taken his stand, he had not hesitated to "make it warm" on all possible occasions for old man Buckley's son George, who had bought the rights of the other heirs to his father's estates and held himself entitled to the spring, which he had been taught or had taught himself to believe had never belonged to the Parsons.

"Ef old Parsons had a right to the spring, why'n thunder didn't he make his right good when he had a chance?" said George Buckley. And so the controversy had gone on during this second generation, and was now continued in the third, in the persons of the handsome Eben Parsons and the stout-hearted and strong-fisted Jason Buckley.

Arrived at the spring, Eben had stopped and let down a link of the fence to allow his horses to drink there, as he always made a point of doing upon every occasion when his neighbor was not in sight. To have done this in the presence of Jason would have been most unwise, for the latter would have sued his neighbor for trespass, though he could not probably have recovered more than "one cent damages." Eben had a wholesome distrust of the law, and was in no wise minded to give his substance into the hands of lawyers.

Close by the spring, but just within the boundary of the Parsons land, in an elbow of the rail fence, stood a fine elm tree of a truly "remarkable size for its age," as Eben said, with honest pride, for he had planted the tree in his boyhood, and he was not yet forty-five.

Eben had allowed his horses to drink, and had slaked his own thirst at the spring, when he mounted his horses again, leaving the fence down, by way of a mute assertion of his rights before he noticed that around that beautiful elm tree, just above its roots, was a broad white band, where an ax applied by a practiced hand had removed the bark, completely girdling the tree. Hence the wrathful astonished question apparently addressed to the horses, for no other animate thing was in sight, "Who's done this?"

Not much need was there for inquiry. Who could have done so mean a thing but Jason Buckley? And good-hearted Eben, now as angry as any man well could be, astonished his horses by his whip and a style of language they had never heard from him before.

It was not discovered precisely who had done the cowardly deed, but Jason Buckley's oldest son had been seen with an ax in hand very near the spring, which was still shaded by the magnificent elm so beautiful in its full green leafage, but doomed to last but this short summer through, as we sometimes see a fair and stately woman, gracious and lovely in her beauty, who her physicians know has but a few months more to live.

Hard enough had been the feelings between the two families before, but from this July evening could be dated the beginning of lawsuits which, instituted or continued on one pretext or another, fattened the village pettifoggers for several years, and bade fair to endure as long as the two families should be able, by hard and incessant toil, to make money enough to pay for the costly luxury of legal fights.

So trivial was the usual nature of these lawsuits that the announcement that "there's another o' them Parsons-Buckley temper suits 't the town hall t'-day" hardly sufficed to attract the loungers from the group around the store or on the postoffice steps, but the feeling these persistent lawsuits indicated and cultivated had grown to be so bitter that it would hardly have surprised one in the township to have heard of personal encounters and bloodshed.

The lawsuits had continued, and the property of the two families had about equally suffered, while their mutual animosities had seemingly taken the natural lovableness out of their natures, even going far to deface the manly beauty of the once so comely heads of the two families.

Their children—all boys—went to the same school; all attended the same simple village entertainments; they were of the same political party; and even were—to the great sorrow of the more devout brethren—members of the same church. Yet were the two families never known to exchange a greeting or a word of any kind, although it was surmised that Mrs. Buckley and Mrs. Parsons would have been glad to be "neighborly," had they followed their own desires. The men of the two families could not bring themselves to treat courteously those of whom they believed so ill, and though their old-fashioned training had force enough to make them remember the courtesy due their teachers, or hosts, or to the church they attended, hence their long, unbroken silence, full of undying animosity.

Then came the civil war, and Eben Parsons, still handsome and strong, though hair and beard were snowy white, came with his three stalwart sons to join the ranks of the three months' men. Jason Buckley, still sturdy and fine-looking in his grim old age, came with his three broad-shouldered boys. In the same regiment, even in the same company, they went through their three months' duty, and then all enlisted "for the war."

On the march, by the campfire, on lonely picket duty, or in battle shock, nowhere did Parsons exchange with Buckley a single word save those of absolute official necessity.

During those terrible months of ditch digging in the Chickahominy swamps the two old men each saw a son sicken and die. Side by side they silently and sternly watched the last conflict which their boys could ever wage. They nursed alternately, each trusting the other fully with the care of his dearest, but they spoke no word.

Among the awful carnage of Fredericksburg each of the old men again lost a son. Still neither broke the ice of the long silence by speech; but while for years it had been known that neither old man had willingly even glanced at the other, some of their old neighbors began to notice that at times, by bivouac fire or on the weary march, the one stricken father would gaze at the other, when that one wasn't looking, with an expression that might have been deemed one of sympathy. Some thought, too, that the rugged old faces were softening, were becoming more gentle and kindly—that a new and sweeter light sometimes shone through the eyes which so long had sparkled with unholy hate. But that was all.

The two remaining sons had broken through their mutual reserve and became at first civil and then friendly, and at last inseparable friends, and the old men had seemed to take no notice. For all one could see, they knew nothing of the changed relations between the two young men, which yet was not concealed from them in any way. If known to them, the fathers certainly did not seem to resent it, as once they would have done.

After Gettysburg, the old fathers looked into each other's eyes in mutual anguish of foreboding.

"Jason," said Eben, hoarsely—"Jason, where be our boys?"

"Eben," said the other, with trembling tones, "I d'n know, but we must look."

And with lanterns and canteens the two men wandered over that hard-worn field raising the trampled wheat that hid a death-cold form, turning a stiffened corpse that had fallen face downward, giving a lift to some poor fellow who still had life enough to crave for help, and so on through all the dreadful hours, clinging to hope yet fearing the worst.

In the gray morning, down under the guns they had fought so bravely to hold, lay the two silent forms. The head of one was pillowed on the broad breast of the other, whose cold, white hand lay lovingly upon the dew-damped chestnut curls of his friend.

For a moment no word was said, no motion made, but then, as with a common impulse, both fathers knelt and kissed their boys. Each gave a glad inarticulate cry, for each had felt beneath his lips the faint flickering stir of life receding, but not yet quite departed.

A search party, with a surgeon at its head, heard the cry so full of hope and anguish, and with rough tenderness and intelligent, if hasty, care that men who have faced death and wounds learn how to give, the two boys came back to life they had so nearly forsaken. And there on the bloody field of Gettysburg two solemnly glad old men turned toward each other with a holy light beaming from their weather-beaten faces as coming dawn of day beamed upward from behind the wooded hilltops.

"Jason, what's the old spring wuth?"

"Nothin', Eben, jest nothin'! Let's fill it up."

"No," said Eben, "that would be throwin' away the Lord's gift. Let's each on us gin the spring an' a good strip o' land along it to the ole church, to sell for the poor or do anything else it wants to."

"Agreed," said Jason, adding after a moment's pause, "an' neow I want to tell ye, Eben, as I'd orter ha' told ye long ago, that 'twaen't none o' me nor my boys that killed that elm tree. We was too proud to say so when ye all thought so mean of us."

Poor Eben groaned, but put out his hand, and after their long but cordial clasp of mutual appealing and forgiving, all their hearts and mind went to saving of their boys.

After weeks in the hospital the sons went home on leave, and astonished all their townspeople, not more by carrying out the instructions of their fathers of conveying to the church the disputed spring and many a broad acre of fruitful land therewith than by their own inseparable companionship.

Eben and Jason fought side by side, talking little in words, but saying much in the eloquent language of kindly deeds and sympathetic looks, both to each other and to the comrades.

"Yew an' Eben's made up, hain't ye, Jasón?" said a neighbor, now also in the ranks.

"Yes," said Jason; "the Lord had to smite us sore afore we could see that justice an' our wills wasn't al'ays one an' the same."

"But we be brethren neow at last," said Eben, "as becomes them that loves the Lord."

That night occurred one of the nameless skirmishes which cost so many lives, and in the morning the two gray heads were found side by side, and the toil-hardened hands of the two men were clasped as if from the cold dark earth they had wanted to enter heaven together.

"I knowed their time had come last night," said the old neighbor, as he helped to lay them in their grave. "I knowed they'd got to be good at last."

"Not so," said another; "they've gone now where goodness lasts forever."—*Harper's Bazar.*

A Housewife's Reflections.

[Written for the RURAL PRESS by MRS. J. HILTON.]

I had just got home from a week's camping trip and was almost tired out trying to get things in their usual trim Monday afternoon, and was beginning to wish I could get into the wagon and leave all dirt and disorder behind, as we do at the camps, when the RURAL came. I just opened it for one peep, when I saw Lupa's kind invitation; didn't I catch hold of her hand and go with her into that wonderful circle of redwoods instanter? Yes ma'am, I did, and I shut my ears to the varied appeals from babies and husband, who wanted something the moment mamma was seated. I have never, with my own eyes, seen a live redwood tree, but the live-oaks are a never-failing source of delight to me, and I can exclaim, as an old Californian did when he first caught sight of them after crossing the plains: "There, Mrs. Hilton, are the live-oaks. They seem just like a brother to me." I can imagine how those grand, stately redwoods call forth the poetical thoughts of Lupa, and I thank her and you, dear RURAL, for giving us far-away sisters the chance to go hand in hand with her in her rambles.

I thank God often for the gift of the PRESS, the blessed books and papers. Dear, dear, what should we be without them! No matter what disagreeable work I have to do, I can do it easily when I know that I have a nice book or paper to read as soon as I can sit down, and by exchanging with my neighbors I generally have plenty to read. It is comical what a diversity one does get in that way, and I read them all—novels and magazines of all kinds; histories I read, too, but how sick they make me with the inevitable wars and cruelties! I am thankful that I did not live in those old times, though we have been bad enough, goodness knows! Detective stories showing wonderful power some have of finding out things and the ever-interesting autobiographies fill up the spaces that the papers do not reach, and then what fun to get hold of a book or paper in another language. It is like finding a large sack of hard-shell nuts, and when we get the hard word cracked and the meat picked out, just as like as not we cannot digest it. One winter I did not let myself read hardly anything but Spanish, and I got lots of enjoyment from it; but I have not used my knowledge lately, and I find I have forgotten some of it.

I wish some sister who cares enough for it would write to me in Spanish. I would answer to the best of my ability.

I was asked the other day what I thought was the reason why some got no rest from a camping trip. I thought the reason was because they did not leave their cares behind, and they tried to do too much, that is, have things nearly as possible as they do at home. Now I cannot get rest that way, and I think I am very much like my neighbors.

What do you think about it, friends? I know some people who say it makes them so tired to go and spend the day away from home that they wish they had not gone, and I presume they are tired, for they are often thinking and speaking of things they ought to be doing at home, and again they go so seldom that they get unduly excited. If any one who reads this ever feels that way, take my advice and go out more, and don't think of your home or work at all. It is no merit to be always at home and say, as I have heard some say: "Oh, don't wait for me to call; I never go out." That is dreadful selfish, giving your neighbors to understand that you take so little interest in them that you will not leave your own fireside for them. What would the world be to-day if all did that way? And why should it not be your duty to help others outside of your own fireside as well as others do?

Well, dear sisters, I have wandered far from the place I started from, but my mind has caught what my body has been doing lately. So I will leave you all to get back by your own roads, only wishing that as you have wandered with Lupa and me, you may have found as much rest and pleasure as I have.

Chaff.

MANY men fall in love and claim to have lost their hearts, whose experience afterward convinces them that they lost their heads instead. —*Atchison Globe.*

FIRST CITIZEN (at a street row): Is that man lying in the ambulance one of the fighters? Second citizen: No, he was passing at the time and tried to stop the fight. There go the fighters walking off now.—*Boston Herald.*

"WHY do you call that group of middle-aged ladies on the piazza anatomists?" "Because they are always cutting up people."—*Boston Gazette.*

Young Folks' Column.

A Boy's Camping at the Coast.

Many of our young people will read with interest the following account, which one of our young readers gives of his recent experience:

DEAR PAPA:—I am sorry I delayed so long in writing to you, but I have not been very well since I got home.

Now I am going to tell you all about our trip. Charles, Martin and I started two days before mamma and the rest of the party. We camped the first night at a place called Tipp's Creek, about 12 miles from the coast.

The next morning we got started shortly after sunrise and arrived at the coast about 10 or 11 o'clock. As soon as we struck the coast we took off all our clothes except our shirts, waded into the water and dug some clams. We then drove down the beach about three miles to the place where we were to camp. We ate our lunch and went to work, pitched the tent, cut brush and built a house to eat in and made a table. Martin went to the blacksmith shop and got some pieces of wagon-tire and dug a hole in the ground and put them across it for a place to cook on, and by that time it was night.

After breakfast the next day we found that a sailboat was going out to sea, so we rigged a crab's claw and line and I went out in the boat. There were eight of us, Mr. Knight and Mr. Fowler among the number. We ran out about four miles and caught some nice rockcod. I was pretty sick, but not sick enough to "heave Jonah." We got back about noontime, and then we went and got some straw for the beds and caught a couple of crabs at the wharf. About 2 o'clock, mamma, grandma, Mr. Payne and his daughter came.

The next day we took a boat and went three miles up the bay to White's Point, a ledge of rock extending into the bay, where we spent the day fishing. We caught thirteen rock cod, three black perch, two smelt and about two dozen crabs.

Every day we had something to do. When we fell short of amusement we would put on our bathing suits and go up the beach to take a surf bath or catch surf fish. It is needless to say that Martin excelled the whole party at fishing. One day he caught nineteen to my six and Charlie's three.

Behind our camp there was a large sandhill covered with brush that was just full of "chemise" rabbits, a smaller and poorer rabbit than our cotton-tails, while to the left and about half a mile off was a clump of willows with a patch of sagebrush above it. There was most always a flock of quail in the willows, and Martin and I used to take Rowdy, his dog, and chase them out of it into the brush and then shoot them as they "raised." One night we each fired eleven shots and each killed nine birds.

About a mile north of the camp there was a shallow lake which we were told was full of carp; but as we had no seine, we could not get any of them. Martin and I went up there one day, and as we came back we struck the creek where the road crossed it about half a mile from camp; beside the road there was a hole shaded by willows in which Martin said there was likely to be a good trout or two, so he cut a mustard stalk, and as he always carried a hook and line with him, he was soon ready to fish, I having caught some grasshoppers and crickets. Out of that hole he caught three fine trout, and between that and camp he caught twenty-two more.

Next day he and I hitched up his horse in the cart and went seven or eight miles up the creek. He fished back down the creek and caught one hundred and forty-seven trout, and I drove along the road and stopped at a few holes and caught three. We found one hole in which there were about a hundred small salmon, but of course they would not take the hook. I arrived at camp about 3 o'clock, but Martin did not get in till sundown, having spent the whole day in cold water between knee and waist deep.

That night we made some balls of sacking and wire, and soaked them in coal oil; Mr. Botts, the man who keeps the station or store on the beach, rigged a crane for his boat, and he and Mr. Short, from Paso Robles, and Martin and I went to spear flounders, dogfish, shovel-nosed, short-sting rays, or anything we could find.

We rowed all over the bay, but did not find the right mud bank until we were coming home, and our torches were nearly burnt out, when Martin speared a ray that very nearly upset the boat. Martin was kneeling on the bow of the boat, the ray dragged him backward into the middle of the boat. The spear had no rope tied to it, as it should have had, so Martin could not let go of it and it whirled round and round in his hand like a drill until it cut quite a piece of flesh out of his hand. At last the ray stopped fighting and Mr. Botts and Martin got him very nearly to the top of the water, when he made one more effort and tore the spear out of his back and got away. Botts said he was four or five feet broad and must have weighed two hundred pounds, it being the largest he had ever seen. At last our torches burnt out and we rowed home, thoroughly tired out and went to bed.

Martin swam very nearly across the channel, which was a quarter of a mile wide, but Mr. Payne, who rowed across beside him, got scared and thought he was going to be carried out to sea, and hauled him into the boat, but Martin was not satisfied and tried it again another day. I took the boat and kept it about ten feet below him all the way across, so that if he should get a cramp he would not be in any danger. I had a pretty tough row to get back, as the tide was running out like a mill tail and we were half a mile from camp, but I did it, much to mamma's surprise.

A couple of days before we came home we all went out to Moro Rock in a sailboat, and Charles, Miss Payne and I went to the top of the rock (500 feet high), while Martin and Mr. Church, the owner of the boat, fished off the rocks. Charles carved his name on the flagstaff on top of the rocks, while I carved my name and Miss Payne's on a board and nailed it to the top of the staff. When we came down and the fishermen returned, we had a fine sail around the bay. Mr. Church stopped the boat at the head of the bay and he, Martin and I went hunting for about half an hour. We shot eight cotton-tails and a dozen quail. When we came back Charles took a picture of the boat with Martin and I on the little landing, Martin holding the game and I a couple of enormous bullheads which they had caught. When we came to dress the fish we found an abalone, shell and all, in the stomach of one of them. Mamma kept the shell as a curiosity.

Another day, Charles, Martin and I went out to sea in Church's boat. We three caught 24 fish and the four others in the boat only caught four. Martin and I made the catch of the day, he getting seven rockcod, two bluefish and an eel five and a half feet in length, and I caught one bullhead and eight rockcod, one of which weighed nearly eleven pounds. Martin's eel weighed about twelve pounds and had a head like a bulldog and a mouth which was covered, roof and all, with strong teeth. He had to be speared before we could get him into the boat. We had to skin him with a pair of pincers, but he was fine eating just the same.

We caught a lot of surf-fish the day before we started for home to take with us. On the morning of our start for home, we got up early and got the wagon all loaded and started about eight o'clock. As we went along the beach, we dug some clams and I shot some curlews and snipe. We climbed all the mountains the first day, stopping at York's to get some wine and take a picture of the century plant, and that night camped at the foot of the last mountain.

In the morning Charley took some pictures and then we packed up and started—the two wagons in one direction and Martin and I went in another. We stopped at Martin's uncle's house for two nights, and on the third morning we started for San Miguel. We did not have very good luck, having shot only seven dozen quail. I had only been home a couple of days when Martin came after me to go deer hunting with Frank and him. We went and staid three days and Frank shot one deer. After the deer was first shot he ran about three miles, but as we had two deer hounds we followed the track and Frank broke the deer's neck at the next shot. Next morning we cut the deer up and started for San Miguel, shooting four dozen quail on the way. I got the best ham and it was just as much as we could eat before it spoiled.

We found a hanging-nest of bees in the mountains out of which we got about ten pounds of white honey and left an equal amount of black honey still hanging there.

We had camped just above the Botts ranch and were told to help ourselves to as many peaches, grapes and watermelons as we wanted, and between the fruit, venison and honey we lived high, though I have paid for it all since I came home, having had a stomach trouble ever since.

I guess I will stop now, as this letter is quite long enough. Your affectionate son,

PITT FAULKNER.

Bessie's Accident.

It was haying-time at Farmer Stone's every one on the place, from the burly farmer himself to the big dog Gruff, seemed to be imbued with the spirit of enterprise. The women fluttered about with a little more anxiety on their faces than usual, for there were extra men to feed and no extra hands in the kitchen. The children helped in their usual way by running and screaming and tumbling in the haymows and begging permission to climb on the loads of hay. Gruff had his hands, or perhaps I should say paws full, running ahead of the horses and uttering encouraging little barks, as much as to say, "Come on, come on!" Even the kittens and chickens had a lively time of it getting out of the way of the great loads of hay that kept coming into the barn, with the noisy stamp of hoofs and cheery shouts of "Whoa, Bill!" and "Hi, Charley!"

One sunny day, about noon, they brought the last load in from the bog meadow, and somebody left the bars down. (I do not know who it was, but presume it was the same somebody that has been doing improper things from time immemorial, and has never yet been brought to justice.) Now, the cows were feeding in an adjoining pasture; and Bessie, the pet of the herd, thought she would investigate this new territory. She went on and on, meeting no difficulty at first; but after awhile she found a place that would not bear her weight, and when Tom, the hired man, came to bring the cows home, after some searching, he found Bessie half-buried in the mire. She was bellowing piteously, and Tom cut a stout switch and began to beat her and shout excitedly at her, once in awhile giving her a vicious kick. Soon the children, attracted by the noise, appeared.

"Stop, stop, Tom! You must not kick our Bessie," shouted little Walter.

Then he ran to the barn for his father, who soon appeared with spades to dig out the poor beast. Thoughtful little Hester also returned, bringing with her some apples to coax her pet with. Bessie had been the children's pet from the time she was a wee calf and could but just stand on her four shaky legs, and she liked nothing better than to have the children around her, smoothing her shiny coat. She would look at them with an almost human affection in her beautiful eyes, and would try to poke her nose into their pockets in search of apples. Now, as she saw her little playmates, she gave a fresh lunge and an encouraged bellow as much as to say "You will help me, I am sure." Farmer Stone bade Tom throw away his whip and gave him a spade instead. Together they dug the moist earth away from the poor animal. Hester held a bright apple in an inviting way before her, and Walter said: "Come Bessie, pretty Bessie," as he held out a handful of salt to her.

Thus encouraged, she would make every effort to free herself; and after an hour's hard work they had the satisfaction of seeing her step out of her perilous place on to more solid earth, and Bess went home, the center of a triumphal procession.

"Don't you think it was too bad for Tom to whip her so?" said Walter, as he tenderly smoothed down her glossy coat where it had been ruffled by the blows.

"Yes," said his father; "but that is the notion some people have. If an animal does not do their wishes, they do not stop to consider whether there is a reason for it or not, but begin to beat the horse, cow, dog, or cat. I do not mean to say that at heart they are cruel and unfeeling. They are simply thoughtless, and have not been brought up in a way that would cause them to stop and consider that a dumb beast may suffer as well as a human being."—*Emma Howard in Christian Register.*

Domestic Economy

BREAD PUDDING.—Put in your pudding dish a layer of breadcrumbs (stale bread is best), over this sprinkle a little sugar and a few bits of butter, then a layer of canned berries, another layer of crumbs and then berries until the dish is nearly full. Beat one egg with a pint of milk, pour over the pudding and bake slowly three-quarters of an hour. It is often made without the egg, but that is an improvement.

BAKED APPLE ROLLS.—Roll biscuit crust out very thin; on this spread apples cut very thin and fine; roll the dough so that it will form a smooth roll, and place in a narrow, deep tin; add a little water, sugar and butter and bake. Serve in slices and spread with butter and sugar, or make a liquid sauce of creamed butter and sugar, a beaten egg, and a pint of boiling water poured over the egg, sugar and butter; flavor to taste.

CRAB APPLE JAM.—Cut the apples in two or three pieces, and when the kettle is full, cover with water. Cook one hour, or until very soft. Strain off the juice for jelly, and put the pulp through a sifter. To four bowls of pulp add two bowls of sugar, and cook together slowly for three hours. Spices may be added, if desirable. When stiff, place in stone jars and cover with paper. To the juice add about two-thirds as much sugar as juice, for this jelly becomes firm easier than any other, and it is a waste to use more sugar than necessary.

POUND CAKE.—Take one pound of butter, one pound of sugar, one pound of flour, ten eggs, two tablespoonfuls of rose water. Beat the sugar and butter together as light as possible, then add gradually the rose water and about one-fourth of the flour; whisk the eggs until very thick, then stir in the butter and sugar gradually, then the remainder of the flour, a small quantity at a time. Beat all well together. Line your pan with white paper, put in your batter, smooth the top with a knife, and bake in a moderate oven about 2½ hours.

COOKING CHICKEN.—Housekeepers do not always understand that a chicken, after the animal heat leaves the body, is not fit for food in less than 24 hours. During this time the muscles are stiffened by the rigor that succeeds directly after the departure of animal heat in all animals, and are tougher than they are at any time previous. In Virginia and many parts of the South, cooks kill and dress poultry with great rapidity, and plunge the pieces of chicken, while they are still warm with animal heat, into the frying kettle. This secures the tender, succulent dishes of fried chicken which are justly the pride of the old Virginia cook. There is something repulsive to the Northern housewife in serving up a fowl that was perhaps a few moments before strutting about, the pride of the yard. An equally good and tender dish of chicken may be attained by keeping the fowl till the muscles relax and it is in prime condition for food. In fact, only by the rapid process of frying can a chicken be cooked done before the muscles stiffen. This the Southern cook knows, and she never attempts to fricassee or roast a fowl that has not been hung at least 24 hours.—*New York Tribune.*

Good Health

The Health of the State.

The monthly report of the State Board of Health is before us, from which it appears that mortality reports received during the month of September from 85 different localities throughout the State, with an estimated population of 705,309, give the number of decedents as 920, being an annual mortality at the rate of 15 6 per thousand, which is a considerable decrease from the previous month. The mortality from cholera infantum has in a marked measure decreased, as also have diseases of the respiratory organs.

Prevailing Diseases.

Reports of sickness from 98 localities throughout the State continue to indicate a very favorable condition of the public health. It does not appear from any of them that epidemic disease of any description is present anywhere in the State. Bowel disorders are quite prevalent, as might be expected at this season, when fruit is indulged in without regard to quantity, and very often to quality. The cooler weather of the month past has had a beneficial effect in lessening the frequency and fatality of summer diarrhea in children.

In regard to diphtheria and croup, the report says that a serious outbreak occurred in the Protestant Orphan Asylum at Sacramento, in regard to which the report says: "We cannot too earnestly impress upon the authorities that each case of such disease is a public danger, against which the public, as represented by its local sanitary authorities, is entitled to be warned by proper information, and we believe that where an institution like the orphan asylum is the seat of epidemic contagious disease, it is the duty of the local sanitary officer to visit such institution and have it properly disinfected under his personal supervision. Such disinfection should not be intrusted to those ignorant of the precautionary duties required, or left to the chance of a superficial sprinkling of carbolized water about the room as a sufficient remedy to destroy the germs of the disease. We believe that much of the diphtheria that exists is dependent upon insufficient disinfection where a case occurs. The germ we know is most tenacious of life, and except the most skilled disinfection is exercised, will continue to live and propagate its hateful existence for an indefinite period of time. We should therefore require all health officers to see to this matter themselves, and know that through their exertions all ordinary precautions have been taken to insure immunity to the public under their charge."

Typhoid Fever and Milk.

Typhoid fever appears to be increasing in many localities, in regard to which the report says: "Its prevention simply requires perfect cleanliness about persons and premises, and constant watchfulness in regard to the sources of supply for drinking water. All suspected water should be boiled. Numerous instances are recorded when typhoid fever has been spread from the rinsing of milk-cans with water apparently pure but really infected with the germs of typhoid fever capable of infecting the milk. We have no doubt that many of the cases of typhoid fever which have baffled our research for their origin have arisen in this way. Most of our dairies have their water supply from wells sunk in the cow-yard where they receive the drainage from the polluted soil. It is a matter of history that cattle themselves suffer from a disease analogous to typhoid fever if not the identical disease itself. It would, therefore, be an act of prudence on the part of our health officers to visit our dairies and examine the source of their water supply and the means used in keeping the milk from pollution. Milk from an unknown or a suspicious source should be heated to the boiling point before using, as thus is effectually destroyed not only the germs of typhoid fever but likewise the germs of consumption, which are very commonly conveyed through milk taken from tuberculous cows."

THE ART OF BREATHING.—In each respiration an adult inhales one pint of air. A healthy man respires 16 to 20 times a minute, or 20,000 times a day; a child 25 or 35 times a minute. While standing, an adult respiration is 22 times a minute; while lying down, 13. The superficial surface of the lungs, *i. e.*, of their alveolar space, is 200 square yards. The amount of air expired every 24 hours is about 10,000 quarts. The amount of oxygen absorbed in 24 hours is 500 litres (about 744 grams). The amount of carbonic acid expired in the same time is 400 litres (911.5 grams). Two-thirds of the oxygen absorbed in 24 hours is absorbed during the night hours, from 6 P. M. to 9 A. M.; three-fifths of the total is thrown off during the day. The pulmonary surface gives off 150 grams of water daily in the state of vapor. An adult must have at least 360 litres of air in an hour. The heart sends 800 quarts of blood through the lungs every hour, or about 5000 daily. The duration of inspiration is five-twelfths of expiration, seven-twelfths of the whole respiratory act. During sleep, inspiration occupies ten-twelfths of the respiratory period.

THE Interstate Commerce Commission estimates that there are in this country 704,743 employes in the actual operation of the rail ways, or 459 to each 100 miles of road.

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SAN FRANCISCO:

Saturday, October 25, 1890.

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Sarsaparilla—Dr. J. C. Ayer & Co., Lowell, Mass.
Live Stock—Mohr Bros., Mount Eden.
Clydesdale Stallions and Mares—C. L. Taylor.
Political Announcement—E. M. Gibson, Oakland.
Angora Goats—Adolph Benitz, Reno, Nevada.
Farming and Grazing Land—W. H. Abrams, Dallas, Texas.
Strawberry Plants—S. F. Farrington, Phœnix, Arizona.
Land for Sale—A. Drahms, Sonoma.
Agents Wanted—No. 8, 220 Sansome St., S. F.
Driving Bit—Racine Malleable Iron Co., Racine, Wis.

See Advertising Columns.

The Week.

The markets contest interest with politics and will soon be the absorbing topics. We have often alluded of late to the eastward potato movement, and yet the fact that 5,000,000 pounds of spuds went eastward in September is a clearer indication of the disposition of foods to fly from us this year than reports of the frequency of Eastern inquiries. So great a movement so early in the season will give the prophets good data for depicting later operations. It is clear that the whole coast will be taxed to supply the eastward drain, and prices will be proportionally high. The Eastern shipment of fruits for five months shows a gain of about 50 per cent over last year's record for the same time. These are statistics which can hardly be called dry. They furnish solid comfort for our producers.

The season is drawing on. Fortunately there has been a succession of bright, dry days which have favored the ingathering of the late fruits, and the vineyards are, in some regions at least, doing better than was anticipated. We shall soon be ready for a good soaking rain, but with the memory of last year so fresh, people will beseech the weather clerk to draw it rather mild this year.

Corporate and Co-operative Orcharding.

Naturally there is a wide disposition to plant fruit trees this year. This is to be expected from the attention called to this industry by the immense shipments which have been made this year and the very satisfactory returns which have been, as a rule, realized therefrom. There is a continuation of the disposition toward individual enterprises which has been noted for the last decade, though such disposition is perhaps wider and deeper than even in our best previous years. This fact has been frequently mentioned in the RURAL, and the people now running about from one nursery to another to seek trees shows that forecasts have not been greater than the facts as now being developed.

There is also now coming to the surface a wider disposition toward co-operative or corporate orcharding than we have known of before. Co-operative planting, in which experienced fruit-growers have secured large tracts of fine fruit land and planted it either in joint ownership or in individual tracts, which, being adjacent, have been operated under a single system of planting and cultivation, has been in progress several years, and some of the most promising orchard areas of the State have been developed in this way. The advantages of this plan are many and the safety great because the partners in the enterprises are acquainted with the business and have learned by years of experience just how to use their time and money to the best advantage.

There is another style of co-operative enterprise which has been sometimes practiced and oftener projected, in which a number of city people or others unacquainted with the fruit business have purchased and planted, having to trust to hired foremen or superintendents who are supposed to furnish the necessary experience and knowledge to shape and conduct the practical features at least of the enterprise. This is a good way to proceed, providing it is possible to secure the requisite push, wisdom and devotion on the part of the foreman or superintendent. With such help, it is quite possible to develop paying fruit properties, and to realize for the co-operating subscribers the advance in land value which follows wise planting, as well as the profit which will come from the fruit sales if the thing is well conducted. There is, however, a weakness in such a scheme, from the difficulty of securing proper foremen or superintendents. Men are liable to be either lazy, or unwise, or careless, or ignorant, and those who have none of these failings can usually do so well in building up enterprises for themselves that they do not care to enlist for current wages and build up profits for other people. Our advice has always been, to those planning such enterprises, to go very slow unless they have full assurance of the enlistment of a good manager, because without such aid it is a great deal easier to secure a poor orchard than a good one.

The disposition to proceed by the organization of a corporation is the latest phase of our orchard progress. Corporations have been for some years in operation in some large vineyard properties, and if they have not been very profitable it has perhaps been due to the generally unsatisfactory outcome of wine-grape enterprises which has resulted for the last few years, but which, it is hoped, is now happily over. We have heard it hinted that there might be purchases of some of our most profitable orchard properties by corporations possessing foreign capital, and certainly the properties mentioned are apparently well worthy the attention of foreign capital seeking profitable investment. There is also a local disposition to merge old orchard enterprises in corporations having local capital, as for example the announcement that the famous Briggs orchard, near Marysville, may take this course. This property has been vastly improved during the past few years, and is so far as we know a promising field for corporate enterprise. Another enterprise is one proposing to begin upon new ground, and in which such well-known fruit men as A. T. Hatch and Gen. N. P. Chipman are named as projectors. Their plan as described in an exchange is as follows:

To organize an orchard company to plant 1000 acres this winter on the richest river bottom-land of the Sacramento in Tehama county, three miles from Red Bluff and near a railroad station.

The land and climate are peculiarly adapted to fruit and no irrigation is required, as the average rainfall is 28 inches.

Messrs. Hatch and Chipman propose to plant the 1000 acres in peaches, apricots, nectarines, prunes, Bartlett pears and almonds, and the work will be personally supervised by Mr. Hatch, who himself is practically the best authority in the State on those kinds of fruits.

The present market value of the land is $100 an acre, and it is rich, sandy-loam, river-bottom soil. The originators propose a company of 100 shares, of which they will take 54 shares and sell the remaining 46 shares, seven of which have been already taken in this city. Each shareholder is guaranteed the equivalent of ten undivided acres of this tract planted to fruit six years old in full bearing, and land fully paid for at a cost to each shareholder of $200 per acre.

It seems perfectly feasible to accomplish such a thing at the cost mentioned under good management, and certainly $200 as the cost per acre of six-year-old orchard leaves a fine return for the money in the amount which such property may be expected to sell for if one desires to realize at the end of six years, or an excellent permanent investment if one desires to retain his interest.

We make these hurried notes thinking they may interest all who are thinking of developing the value of the vast area of good lands still unplanted in this State, for there is no reason why wise enlistment of capital in co-operation or in corporation in orchard planting should not prove of great value in the progress of the State and in the prosperity of individuals.

Orange Imports.

It is announced that the new tariff law will cut off the imports of Tahiti oranges, usually made at this port. A *Chronicle* reporter who interviewed recent arrivals from the islands, writes that one of the most important industries of Tahiti is the exportation of oranges to this city and to New Zealand. These two markets have heretofore received all the orange cargoes from the islands. The passage of the McKinley bill has raised the tariff on oranges 75 cents a thousand, and the allowance previously made for decayed fruit has been abolished. The result is that no more shipments of Tahiti oranges will come to this port. The increased tariff will not seriously affect the natives, however, because their shipments to New Zealand will be doubled. The officers of the City of Papeete said that the tariff would not affect the cocoanut shipments, but that henceforth Tahiti oranges would be scarce in this city.

The New York *Fruit Trade Journal* makes the interesting statement that under the new tariff a duty of 30 per cent ad valorem will be charged on the wholesale market value of the foreign orange box itself, made of foreign wood, while boxes of American wood will be admitted free. This addition was put in order to encourage the export of fruit-boxes from this country. Italy already draws considerable of her supplies from Bangor, Me., and Petersburg, Va. The duty on foreign wood will induce Italy to import still more of our fruit-box shooks. This clause will affect the Valencia packing more than the Sicily, as it is doubtful if Spain will import American shooks. Valencia oranges, in consequence, will have to pay, besides the 50 cents per case duty, an additional 10 to 15 cents per case, against the past duty of about 25 cents per case, or an increase of about 150 per cent.

AMERICAN HORSE SHOW.—The Second Annual American Horse Show will be held in the Exposition building at Chicago, Ill., from Nov. 1st to 8th inclusive. The secretary, Mr. Edw. C. Lewis, informs us that there is every indication of its being the best horse show ever held in the United States. Entries have already been made from most of the leading importing establishments.

LOCOMOTIVES AT JERUSALEM.—It seems queer to read that three American locomotives, made in Philadelphia and intended for the new railway from Jerusalem to Jaffa, have arrived at the City of David.

A CHICO PUMPKIN.—The State Board of Trade has received from Rancho Chico a pumpkin over nine feet in circumference and weighing 211 pounds, which attracts great attention from passers-by.

QUERIES AND REPLIES.

Yield of Sorghum Syrup Per Acre.

EDITORS PRESS:—A friend handed me a copy of your valuable journal, in which I see a Mr. Swayze claims to have one acre of cane that will yield 800 gallons per acre. If there is no typographical error, the statement is wrong and misleading, as 300 gallons is among the biggest yields known, and 200 gallons per acre is the largest the writer has any personal knowledge of, while 150 gallons per acre is a good yield and will pay the rancher better than anything he can raise. Sorghum syrup well made is healthy and will always command a fair price and find a ready sale. While the writer was editor of the St. Peter *Herald* (Minn.), he took pains to encourage cane-raising and also to find out about the average yield, and the best record was five acres of good ground produced 1008 gallons. One-half acre in this State will give a rancher sufficient syrup for family use and pay his taxes, and he will have a little spending money left, that is, if he makes a good article. I have raised sorghum here for three seasons and this year will have about 225 gallons of very fine syrup. I planted on May 28th. Had I planted on the first of April I would now have 500 gallons instead of 225.—J. BLACKISTON, *Placerville.*

Experience With Rice and Sugar Cane.

EDITORS PRESS:—I notice in your issue of Oct. 18 h, "Rice-Growing Suggested," by Horace D. Dun. I am familiar with rice and sugar cane growing in the Southern States, and I tried both here, and also cotton, and I find, after a limited experiment with all, that the dry climate does not suit rice and tropical sugar cane; but cotton does well, and I believe, on certain kinds of land well adapted to it, it would be a profitable crop. Tropical sugar cane and rice need a humid atmosphere and warm nights. They seem to spend all their energies tillering here, though rice matures. I could not give rice the Carolina culture, *i. e.*, flooding.—J. H. BOWDIN, *Colusa.*

Sorghum Cane for Milch Cows.

EDITORS PRESS:—Can you or any of your readers give us any information about feeding sorghum to milch cows? Will they eat it, and if so, is it good for them?—SULPHURET, *Riverside.*

The improved varieties of sorghum are excellent feed for milch cows and are largely used in this State and elsewhere for that purpose. We should like to have accounts from readers as to the growth and use of sorghum for this purpose.

Compressed Hay.

EDITORS PRESS:—Please inform me through the RURAL what the article is which is called "compressed hay" in the weekly price-list of domestic produce.—W. M., *Aptos.*

By compressed hay is meant hay which is pressed more firmly than the ordinary baled hay, and it is given this form for shipment long distances by rail, as less space is required by a given weight.

DEADLY CATERPILLARS.—The Philadelphia *Press* gives an account of a man, 32 years of age, who recently died of blood poison caused by the bite of a common green caterpillar. He was bitten upon the neck as he lay on the grass. The same paper tells of a young lady, 21 years of age, living in Philadelphia, who was at the time in a dangerous condition from the bite of a green caterpillar, which she received while sitting under a grapevine. Severe illness, and even death, is sometimes caused from the bite of a fly. In all such cases, death, or severe illness, is caused by blood poison superinduced by the bite; and it is supposed that insects, usually harmless, whose bites are thus dangerous, have recently come from feasting upon some decayed and poisonous meat or other substance whence the poison virus is taken.

THE San Francisco Bridge Company has been awarded contracts for the building of three bridges on the Canadian branch of the Great Northern over the Skagit, Stillaguamish and Snohomish rivers. The contracts are conditioned for the completion of the bridges by December 1st. They are to be truss structures, and the total cost will be nearly $150,000. The Snohomish bridge will be 1700 feet, the Stillaguamish 400 feet and the Skagit 600 feet.

STAMBOUL, driven by Goldsmith, trotted against time at Napa, Oct. 18th, and beat his record of 2:12¼ in splendid style, coming under the wire in 2:11½. This famous stallion, son of Sultan, was bred by L. J. Rose of Los Angeles, who sold him to Mr. Hobart for $40,000. At Cambridge City, Indiana, on the 21st, the stallion Nelson again lowered his record, making the mile in 2:10¾.

ASHLAND, Oregon, has a new system of waterworks, just completed at a cost of about $50,000, and owned by the town, which has issued bonds to the above amount.

The Beet-Sugar Industry.

SECOND PAPER.

Varieties of Sugar Beets.

EDITORS PRESS:—The beet root is a hardy biennial plant indigenous to the south of Europe, long under cultivation in France, Germany, Belgium, Holland, Scandinavia, Russia and England, and more recently introduced into Canada, the United States and New Zealand. A great many varieties are known to cultivators, but the most important to the sugar-maker is the White Silesian, sometimes regarded as a distinct species and exhibiting several forms. Grown to perfection, the Silesian beet is pear-shaped, shows very little above ground and penetrates about 12 inches into the soil. The two chief varieties are distinguished by one having a rose-colored skin and purple-ribbed leaves; the other a white skin and green leaves. Both are frequently seen growing together in the same field and do not exhibit any marked difference in their sugar-producing qualities.

The selection of the seed deserves the greatest attention on the part of the beet-grower. Experience has shown that roots rich in sugar transmit their richness to the next generation, while seed from light, ill-shaped roots poor in sugar produce inferior roots.

In France great care has been taken by Vilmorin, the celebrated seedsman of Paris, in the selection and crossing of beet, and Vilmorin's improved beet, which by some is regarded as a special variety of the Silesian, is justly esteemed for its sugar-yielding qualities.

Good sugar beets are pear-shaped in form, should weigh from 1½ to 3 pounds each, and should have a smooth skin. They should be white and firm, flesh delicate and uniform in structure and with a clean, sugary flavor. Good beet roots are considerably denser than water, and should sink rapidly.

In the accompanying cuts, reproduced from a recent report of the Department of Agriculture, can be seen the five improved varieties of beets and the White Silesian, which is shown at Fig. 1.

Fig. 2 represents the Imperial, a good variety analyzing 12 to 14 per cent sugar and returning from 39,600 pounds to 44,000 pounds of roots, and 5720 pounds of sugar per acre.

Fig. 3 is the "Green-neck," is more gross, better formed and smoother than the preceding. It will give 52,800 pounds of roots and from 6000 pounds to 8000 pounds of sugar per acre. It titrates 11 to 14 per cent. This is less cultivated at present, preference being given to the following:

Fig. 4 is the Red-neck, a vigorous beet and a heavy cropper. It yields from 60,000 pounds to 66,000 pounds of roots per acre, is of regular form and titrates from 11 to 13 per cent of sugar, equal to 7000 pounds to 8000 pounds per acre. The foliage is vigorous and abundant. The neck is small and it stores well. It is most highly esteemed among French growers.

Fig. 5 is Vilmorin improved white, educated directly from the Silesian white, and is the richest of all in sugar producing—containing from 15 to 18 per cent in Europe and from 18 to 20 per cent in California. The juice is extremely pure. The returns to the acre are small, ranging from 30,000 to 40,000 pounds.

Fig. 6 is the Grey-neck. It is the most productive root, yielding as high as 72,000 pounds per acre; but is the least producer of sugar, therefore is not esteemed by the sugar-maker.

The Vilmorin beet is more highly esteemed in Germany because the beet-root is there taxed by the Government. In France the Red-neck is highly esteemed, as it is more reliable and gives large crops of roots and produces a good sugar crop. This variety should do well in California, as it has a vigorous growth of leaves, thus affording protection for the soil during the driest season of the year.

Composition of the Roots.

Internally, the beet root is built up of a number of concentric rings, formed of a much larger number of small cells, each of which is filled with a juice consisting of a watery solution of many bodies besides sugar. These include several crystalloid salts, such as the phosphates, oxalates, malates, and calcium; the salts of potash being by far the most important. Beet juice contains also several colloid bodies (albuminous [nitrogenous] and pectinous compounds) as well as a substance which rapidly blackens on exposure to the air.

The sugar present in fairly ripe beets is crystallizable, and when perfectly pure is identical in its properties with crystallizable cane sugar.

Beet roots do not contain any uncrystallizable sugar, and the molasses produced in beet-sugar factories is the result of changes which cannot be entirely avoided in extracting the crystallizable sugar from the roots.

Climate.

The mean temperature of the European beet-growing districts, where beets may be successfully cultivated, ranges from 62° to 65° F. The formation of sugar is favorably influenced not so much by heat as by dry weather and unclouded sky during the months of August and September. Hence the root succeeds far better in the north of France and Germany than in Central France or Southern Germany, where the summers are longer and warmer. Observation shows that a bright dry August favors an increased secretion of sugar in roots to a far greater extent than a hot summer, and nothing is so conducive to heavy crops as an abundance of rain during the first two months' growth of the plant.

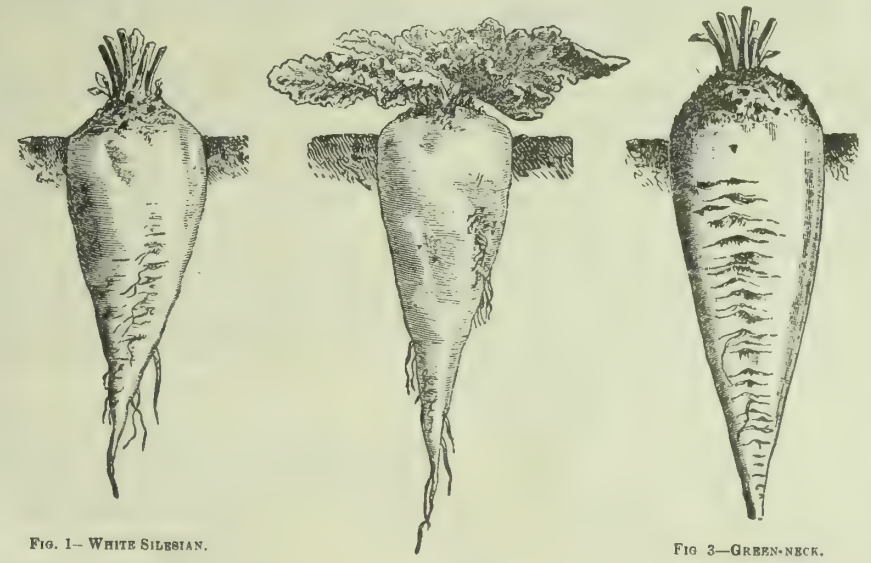


FIG. 1—WHITE SILESIAN.

FIG. 2—IMPERIAL.

FIG 3—GREEN-NECK.

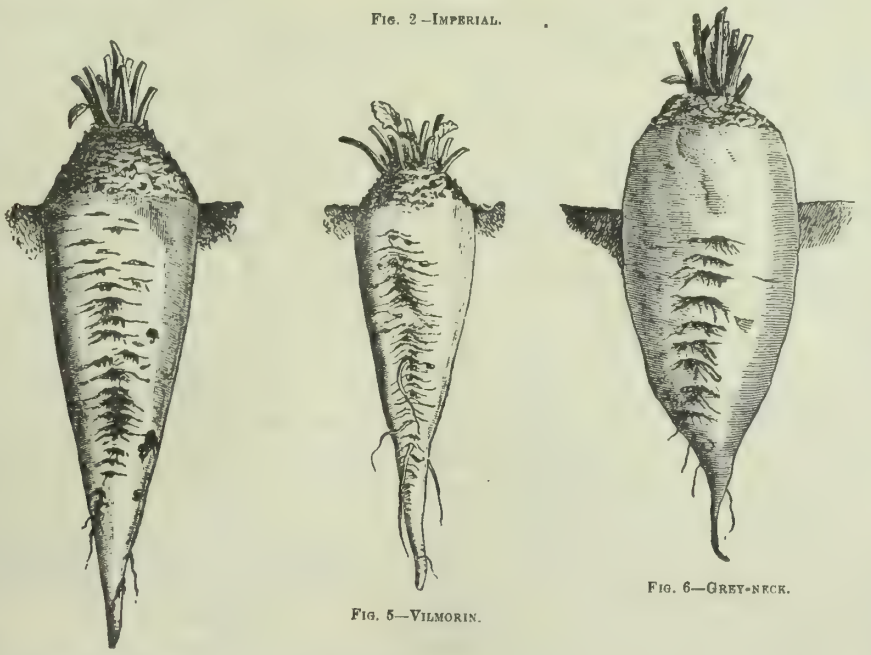


FIG. 4—RED-NECK.

FIG. 5—VILMORIN.

FIG. 6—GREY-NECK.

STANDARD VARIETIES OF THE SUGAR BEET.

Harvesting.

The Pacific Coast above all other countries is the most favored in this branch of the industry. In all of the old beet-root countries, the planter must watch his crop and as soon as ripe the beets must be taken from the soil and delivered to the factory, where they must be stored away and protected from the frost until such time as they can be worked up. This entails an expense of 66⅔ cents per ton. In California the beet-roots can remain in the soil until wanted by the factory, providing they are not allowed to receive enough rain to cause the second growth. Unripe beets cut across with a knife rapidly change color on the surface laid bare by the knife, turning first red, then brownish, and finally quite dark. If the newly-cut slices of beet turn color on exposure to the air, the ripening process is not completed. If, however, the newly-cut slices remain some time unchanged, or if they turn only slightly reddish, it may be assumed that the beets are ripe enough to be taken up.

B. B. CHANDLER, Mechanical Engineer.
Alameda, Cal.

EXPLORING PARTIES.—A bill introduced in the House of Representatives provides that the Secretary of War be authorized to send an expedition to the interior of Alaska for the purpose of making a thorough exploration and survey of that Territory, with a view of ascertaining its resources and capabilities. It is proposed that the party sent out should locate near the center of the Territory, and from that point as a base, push expeditions into all parts of the interior. The party is to remain not less than three years. In this way a thorough knowledge of the topography and other features of the country may be gained. An appropriation of $100,000 is asked. Another exploring party, under charge of Prof. Lumholtz, a Norwegian explorer, famous among geographers by reason of his expeditions in Australia, is about to explore Lower New Mexico and Arizona under the direction of the American Geographical Society of New York. About a dozen scientists, archæologists, botanists and zoologists will accompany him. The special object of the expedition is to examine the remains of ancient civilization, antedating, it is said, that of the Aztecs, and existing principally in the Gila valley, in the northwest part of Arizona. The peculiar habits of the Zuni and Navajo Indians will also be investigated.

CANNED CORN COMING.—A dispatch from Hoopeston, Ill., heralds a trainload of 20 cars of canned corn, leaving that point Oct. 21st for San Francisco by the Santa Fe route. The sides of each car are covered with banners advertising one of Illinois' great industries. The train will move in the daytime only. The Western Packers' Association says Hoopeston cans more corn than any other one town in the world.

THE LOTTERY BOYCOTTED.—The United States Express Co. has issued peremptory orders to all agents not to receive money, tickets or lists of drawings from the Louisiana Lottery Co., nor in any way assist in the transaction of lottery business.

FLORIST AND GARDENER.

Fall Show of the State Floral Society.

The fall exhibition of the California State Floral Society will be held on Nov. 6th, 7th and 8th, in the new Academy of Sciences building, south side Market street, near Fourth, San Francisco, Cal. The following is the official announcement of regulations and premiums:

Rules and Regulations.

1. All articles for exhibition must be properly entered, and be ready for examination by 5 o'clock P. M. on the day of opening of the exhibition.
2. All flowers and plants entered for premiums must be properly labeled, so far as practicable.
3. The Flower Exhibition will be open for three days.
4. Only members of the society in good standing can compete for schedule premiums.
5. Plants offered for competition must have been the property of the exhibitor for at least three months prior to the date of opening of the exhibition.
6. Flowers offered for competition must have been grown by the exhibitor, excepting Class C.
7. No cards of a business nature will be allowed in the exhibition until after the premiums shall have been awarded.
8. The Committee of Judges is authorized to award suitable prizes for any meritorious exhibit not named in the premium list.
9. No prizes shall be awarded for any articles on exhibition unless they possess points of superiority.
10. In no case can any article placed on exhibition be removed until after the close of the exhibition.
11. Any plant or flower placed in a collection competing for a certain premium must not be duplicated in a collection competing for any other premium.
12. Exhibitors of plants and cut flowers will be classified as follows: I. Amateurs who do not employ skilled labor. II. Amateurs who do employ skilled labor. III. Professionals.

Premium List.

Class A—Cut Flowers.

1. Open to Amateurs Who do not Employ Skilled Labor.—Chrysanthemums, best and largest general collection, gold medal. Chrysanthemums, best 12 blooms, general collection, silver medal. Roses, best and largest general collection, bronze medal. Dahlias, best collection, $2.

2. Open to Amateurs Who do Employ Skilled Labor.—Chrysanthemums, best and largest general collection, silver medal. Roses, best and largest general collection, certificate of merit.

3. Open to Professionals.—Chrysanthemums, best and largest general collection, silver cup. Chrysanthemums, best 24 blooms, general collection, silver medal. Chrysanthemums, best 12 blooms, general collection, $5. Dahlias, best and largest general collection, bronze medal. Roses, best and largest general collection, $5. Best and largest general collection of cut flowers, $5.

Class B—Plants.

1. Open to Amateurs Who do not Employ Skilled Labor.—Chrysanthemums, best six pot-plants in bloom, $10. Ferns, best six plants, $3. Assorted, best six pot-plants, certificate of merit.

2. Open to Amateurs Who do Employ Skilled Labor.—Chrysanthemums in bloom, best 24 pot-plants, general collection, silver cup. Chrysanthemums, flowering plants in bloom, best 12 pot-plants, silver medal. Chrysanthemums, best six pot-plants, general collection, certificate of merit. Best 12 pot-plants, general collection, bronze medal. Specimen plants, best two, $3.

3. Open to Professionals.—Best and largest collection in bloom, gold medal. Chrysanthemums, best 24 plants in bloom, general collection, silver medal. Chrysanthemums, best 12 plants, general collection, $10. Chrysanthemums, best six plants, general collection, $5.

Class C.

Open to All Members of the Society.—Flowering plants, best 24, silver medal. Foliage plants, best 24, $10. Ferns, best collection, $5. Best group of palms and decorative plants, $25. Specimen plants, best six, $5.

Committee of Arrangements, Timothy Hopkins, W. B. Ewer, Mrs. M. S. Sperry, Mrs. T. L. Walker, Mrs. E. M. Crane, Mrs. W. E. Loy.

For particulars address Mrs. T. L. Walker, Secretary, Postoffice Box 145, Oakland, Cal.

SILK OUTPUT FOR 1889.—The London *Times* gives the estimated production of silk throughout the world last year at 11,706 tons, as against 11,548 tons in 1888, 11,888 tons in 1887, 10,594 tons in 1886 and 9002 tons in 1885. The average of the four years from 1885 to 1888 was 10,748 tons. The 1889 crop was rather above it, although scarcely any silk was produced in Syria and other parts of the Levant.

LARGE PECAN ORCHARD.—F. A. Swinden of Brownwood, Texas, has an orchard of 11,000 pecan trees—the largest orchard of the kind in the world. The average yield of a full-grown tree is about 14 bushels a year, which sell for from $2 to $4 a bushel.

Agricultural Notes

CALIFORNIA.

Alameda.

Fast Horse.—Livermore *Herald*, Oct. 16: A. T. Hatch has purchased of Louis Schaffer of this place, the latter's two-year-old Sidney colt, "Sidney Roy," for $4000. The colt has been under training by Sutherland, at Pleasanton, and recently pulled a road-cart a half-mile in 1:13½.

Butte.

Cats Killing Gophers.—Oroville *Register*: On Butte creek, a few miles this side of Chico, a farmer has some trained cats that catch gophers. These cats live almost exclusively in the fields and make their living catching the gophers. The latter are very destructive to the roots of the alfalfa, so that each cat that is a good gopher-catcher is estimated to be worth $20 to the farmer. They are proving so valuable to him that he has recently purchased a number of additional cats in Chico, and says this is the cheapest and most effective way of ridding his fields of this pest.

Sorghum Syrup.—Oroville *Register*, Oct. 16: We were presented this week with a can of syrup made from sorghum grown at Moore Station. This sorghum was raised by Witherow & Henderson, who had about 30 acres planted this season. The land averaged about 135 gallons of syrup per acre and will bring the enterprising growers a little over $100 an acre. Sorghum requires a soil that is warm in summer, one where the temperature does not fall below 60 or 75 degrees during June, July and August. Heat makes it mature rapidly and it does not suffer from drouth. It will produce three crops of forage in one summer and the seed will amount to some 20 bushels. The bottom lands along the Feather, Butte creek and Honcut are well adapted to this plant, and it is a profitable one to grow. The cost of a mill for crushing sorghum is not great and the making of syrup is neither difficult nor tedious.

Colusa.

Summer-Fallowing. — Willows *Journal*, Oct. 18: Since the last rains the farmers have been busy sowing their summer-fallowed lands. There will be a large amount of summer-fallow this year from the fact that the rains held on so late last spring that the farmers were compelled to leave a large acreage in this condition.

Fresno.

Grape Syrup.—Fresno *Expositor*, Oct. 15: A new enterprise is about to be started in this city which will add considerably to its material welfare. This is the establishment of a grape syrup factory. The grape syrup is used for building up light wines, and, to some extent, for medical purposes. Thus, a claret bringing in the market 9 or 10 cents a gallon, can be converted into port or sherry by aid of the syrup and be sold for 35 or 40 cents. There is a good demand for the syrup. The price of the syrup ranges from 50 to 70 cents a gallon, and the demand for it is very steady. After awhile they expect to manufacture a table syrup which will compare favorably with other syrups now in use for that purpose.

Bean Yield.—Selma *Irrigator*, Oct. 15: H. B. Cole has about 15 acres of pink beans on the Hodges place, six miles north of town. He says they will yield about 2500 pounds per acre and are worth four cents per pound.

Humboldt.

Large Fruit Drier.—Eureka *Standard*, Oct. 16: G. C. Barber of Grizzly Bluff has erected a large fruit-drying house on modern principles. It has a capacity of curing 50 boxes of apples per day. He intends to dry nearly all his own fruit and will also buy large quantities from his neighbors for drying.

Lassen.

Sample Products.—Susanville *Advocate*, Oct. 9: In passing through the pavilion we took occasion to make a few measurements of some of the prominent articles: Potatoes—Blue Centennials, 18 by 14 inches in circumference. White Perfection, 20 by 12 inches. Peerless, 18 by 15 inches. Dakota R ds 19 by 11 inches. Burbank Seedlings, 18 by 10 inches. Cabbage—Marblehead, 4 feet 5 inches in circumference. Flat Dutch, 18 inches in diameter. (One Marblehead weighs 60 pounds, solid as a rock, white to the heart.) Cauliflower—Late Paris, 39 inches in circumference. Watermelons—Iron Clad, weight 50 pounds. Muskmelons 18 inches in diameter. Onions—White Naples, 19 inches in circumference. Red Wethersfield, 18 inches in circumference. Beets—Blood Turnip, 26 inches in circumference. Sugar, weight 30 pounds. Squash—Hubbard, 60 pounds. Mammoth, 90 pounds. Egg Plant—Purple, 22 by 17 inches in circumference. Eggs—Langshan, 7 by 9 inches. Turnips—Red top, 3 feet 5 inches in circumference. Tomatoes, 18 inches in circumference. Apples—30-ounce Pippin, 18 inches in circumference. Bell Flower, 15. English Queen, 14. King of Tompkins Co., 19. Gloria Mundi, 19. Newtown Pippin, 14 Grimes Pippin, 14. Alexander Red, 15. New York Pippin, one pound.

Los Angeles.

Plucking Ostrich Plumage.—Santa Monica *Outlook*, Oct. 15: During the past two weeks the birds at the ostrich farm have been relieved of their beautiful plumage. The work required to pluck these birds is no child's play. It takes two brave, expert men to catch one of these vigorous "kickers." The men carefully approach the bird, taking pains to keep from before it, which is the direction it strikes, and then throw a sack over its head. As soon as this is done, the ostrich at once gives up, and it is forced into a box and relieved of its feathers

Vegetables for Texas.—Los Angeles *Express* Oct. 16: A source of surprise is the fact that the railroads are carrying green vegetables from Los Angeles to Texas. Sixteen carloads of potatoes and other vegetables went to Texas points on Thursday over the Southern Pacific.

Planting Lemons. -- Pomona, Oct. 18: Several of the fruit growers at Duarte, who have learned how to properly cure their fruit and have kept a good share of the crop until August, have had very handsome returns for the time and investment. They had also the same returns last year. Two of the Duarte lemon-growers inform us that by saving their fruit until July, they have made as high as $21 a tree. One man has realized in clean cash since May 1st over $750 from 48 trees, planted on half an acre of land. This year he planted about 700 more lemon trees.

Orange Crop Prospects.—Pomona *Progress*, Oct. 16: The average seedling orange groves in this valley are bearing the largest quantity of oranges ever known in them. There are very few seedling orchards that will not produce a full crop. We have visited many orchards during the past week, and have been astonished at the great weight of green fruit hundreds of the trees are bearing. The older orchards in Pomona are well worth a visit by any one interested in the bearing quality of an orange tree. The report comes from Riverside that seedling trees there are going to bear most abundantly. The Navel orange crop was injured by the heated spell of two days last May, but it is amazing how thousands of young Navel trees in this valley are bearing a heavy weight of fruit now. Very many orchardists, who were sure they would have no Navel orange crop at all this year, wonder how they could ever have been so deceived. A large number of fruit-growers have told us that their young Navel trees are now as well filled as they should be with oranges.

Toads and Young Orange Trees.—Alhambra *Review*, Oct. 17: Mr. Osborne, who has a thriving seed-bed, observed that his little orange trees seemed to be dying out in patches. Failing to find any other cause, he caught one of the numerous toads that had taken possession of the inclosure, and upon dissecting it found several young orange leaves in its stomach. Other toads were tried and convicted upon the same evidence.

Apple Is King.—Downey *Champion*, Oct. 18: The Downey depot is full of the old standby. The apple crop in this section is heavy and the quality of the finest. Prof. Baker has 22 men picking and packing, and the station is the busiest place in town. A number of carloads have gone forward and a number of cars on the side track are now being loaded. Most of the fruit will go into cold storage in Los Angeles for the present.

Monterey.

Stamping Out Glanders.—Salinas *Democrat*, Oct. 18: Dr. A. E. Buzard, the veterinary surgeon employed by the Board of Supervisors to assist in stamping out glanders in this county, returned Wednesday from a nine-days' tour of inspection. He examined the horses in Pine valley, found one afflicted with glanders, and had it destroyed. Several in this region had been dispatched by their owners before he got there. In Peach Tree valley, two were discovered, condemned and destroyed. At Hardscrabble, near Lowe's Station, another case of a virulent type was found and destroyed, together with its halter, bridle, etc. In the San Antonio, or Jolon, region, which was then visited by the doctor and a thorough and careful examination made, no cases of glanders were found, and it is Dr. Buzard's opinion that the disease has never found a lodgment there.

Sacramento.

Fruit Going East.—Sacramento *Bee*, Oct. 17: A great deal of fruit is going East from Sacramento at this time, in spite of the lateness of the season, coupled with the unusual rains that followed so closely on the heels of summer. The principal shipments now consist of grapes and pears. The amount of the former still in the State is large, and should the rains hold off and frost not appear, shipments of grapes will continue up to Christmas.

Santa Barbara.

Fruit Notes.—Lompoc *Record*, Oct. 11: The choicest Baldwin apples we have ever seen came from the Mitchell farm in Santa Rita, where the apple comes to rare perfection. Mr. Mitchell will put out 4000 winter apple trees the coming winter, 1000 of which will be Baldwins. Let every man in Santa Rita find out what kind of fruit his land is best suited for and then plant it in unstinted quantities. We will soon have facilities for shipping our fruit East equal to the most favored parts of the State. It takes six or eight years to bring an orchard to profitable bearing.

San Diego.

Large Wheat Farm.—S. D. *Union*, Oct. 16: Mrs. Ramona Place Wolf of Little Temecula rancho, accompanied by her daughter, Minnette, leaves for home this morning. The recent acquisition of the great Temecular grant adjoining her property by the company of San Francisco capitalists, she says, is a great thing for that section. They have sent down men and teams to begin the work of improvement, intending to plant 4000 acres to grain this winter, and steam plows are to be used. Barns and other farm structures are being put up, and a large two-story house is being erected. The lumber and other supplies were all purchased in this city. The Indians of Pitchango, which is near the grant, have all been employed in clearing the grant, a heavy growth of live-oak, elder and willows having to be removed.

Irrigation on the North.—San Diego, Oct. 16: The region from San Jacinto to Winchester will be put under the irrigation system of the Lake Hemet Water Company. J. D. Schuyler, consulting and constructing engineer for the company, has returned from Hemet valley, which lies 20 miles above San Jacinto in the mountains. He says that work is being started on the dam. At Perris, Chief Engineer Brown of the Bear Valley system, who is its principal stockholder, told him that they had sold $400,000 worth of the Alessandro tract, San Jacinto valley, and were now about putting in pipe to connect it with the Bear valley system in San Bernardino county. They had just closed a contract with the Perris irrigation district to sell it all the surplus water from Bear valley.

Raisin Damage.—San Diego, Oct. 16: An El Cajon raisin-grower said that the raisins that had been stacked were not damaged five per cent, and had been delivered to the buyers without any reduction being demanded. Of those not stacked, about 35 per cent would be lost. With a bright sun now, he thought a good many might be saved, as the grapes that had not begun to shrink when the cloudy weather began had not yet suffered. Some of the vineyardists have practiced turning their raisins after a shower, but only as soon as they had had the benefit of two or three hours' sun, and when very wet have given them a second turning in six or eight hours. All such raisins are now in good condition, with no suggestion of rot.

San Luis Obispo.

Bean Harvesting.—Arroyo Grande, Oct. 11: Quick work is being made in the bean harvest, and the work is more than half done. The yield ranges from 30 to 60 sacks per acre. The good crop, added to the high price of beans, will make this about double ordinary seasons.

Shasta.

Fruit Orchards.—Anderson *Enterprise*, Oct. 9: C. A. Richmond is so greatly pleased with the growth his trees made this season that he will plant ten acres adjoining his present orchard to French prunes during the coming planting season. Henry Abbott has purchased 30 acres in the Bellevue tract. He will erect a neat picket and rabbit tight fence around the whole and plant it to peaches of three varieties—the Seller Cling, Susquehanna and Muir. Henry Alexander will commence the clearing of the balance of his 50 acres of land just below town, on which he has now a beautiful 30-acre orchard, and will plant for the coming season from 13 to 15 acres more.

Proposed Irrigation District.—Anderson, Oct. 9: A representative gathering of 40 men, nearly all of whom are residents of the proposed Happy Valley Irrigation District, met at the Cloverdale schoolhouse last Saturday afternoon and showed that their intention of forming a district under the Wright law now meant business. There is little question but a two-thirds' vote can easily be secured for its organization after once it is submitted to the electors.

Sonoma.

Apple Yield.—Santa Rosa *Republican*, Oct. 16: D. & S. Woodworth of Stony Point have harvested 4000 boxes of apples of the Spitzenberg variety from a small orchard of young trees. From three acres they gathered 2200 boxes.

Sutter.

Preparing for Outdoor Work.—Y. C. *Farmer*, Oct. 17: Farmers are buying and repairing their farming machinery for the winter, and notwithstanding the talk of dull times, we notice a large amount of the latest improved implements and machinery being taken from the stores to supply the demand on the farms.

Levee Work in No. 70.—Y. C. *Independent*, Oct. 10: The work of repairing the broken levees of No. 70 is progressing satisfactorily. The plucky land-owners of that district have a big job on their hands, but they are determined to do the work in a substantial manner. The directors now have their force of men at work in the two upper breaks, called the Mathews and the Ramsdell breaks. These two breaks are of about equal extent, each being about 450 feet long. The base of the new levee at the Ramsdell break will be 186 feet, and its hight 26 feet. At Mathews' the base will be 158 feet and the hight 26 feet. Lon Summy is superintending the work with 50 men at Mathews', and J. W. Howlett at Ramsdell's with 45 men. Sixty-five Stockton four-horse scrapers and 25 Climax wheel scrapers are being used. It is estimated that, with the present force, it will take about six weeks to complete the work at Ramsdell's. In about three weeks a part of the force now at Mathews will be put on the back levee, which was badly washed, and it will take about three weeks to put this in good repair. On the river levee there is a large break between the farms of J. K. Wood and David Wheeler, and the road was badly damaged at that point. Eb Jones has the contract for repairing the road and is pushing the work. The farmers all along the river are repairing their private levees. The land-owners of No. 70 and along the river are entitled to a great deal of credit for the courage they have manifested in this matter and their determination to preserve their homes at whatever cost.

Tulare.

Wheat Crop.—Visalia *Times*, Oct. 16: Grain-dealers have been figuring on the wheat product of this county, and some of the estimates have been very wild. The *Times* has made its own estimate, from the best information at hand, and places the yield of the entire county at 130,000 tons. This exceeds the big crop yield of 1884 by 40,000 tons, and will still leave this county the banner wheat-raising county of the State. Ten per cent of the crop will be retained in the county for seed, while the remainder will be shipped to tide-water.

Vacant Land.—Visalia, Oct. 16: There are 35,000 acres of land tributary to this city that are peculiarly adapted to the cultivation of potatoes, onions and cabbage, yet these products are imported to this place year after year. These lands are also susceptible to the cultivation of peaches and prunes, but there are not 1000 acres of the land that is planted to trees. At least two-thirds of this land is yet in a wild state, never having been turned by a plow.

The Champion Prune Tree.—Hanford *Sentinel*, Oct. 16: Some weeks since an item concerning a prune tree in the Briggs orchard, near Visalia, that yielded 1102 pounds of fruit, went the rounds of the press. It was certainly a large yield, but it left a Lucerne valley tree to beat it. C. M. Blowers, near Grangeville, has a prune orchard in which there are all told 40 trees. This orchard bore him this year 28,200 pounds of fruit, an average of 705 pounds to the tree. There was one tree among the number from which was picked the enormous yield of 1140 pounds. Mr. Blowers' orchard is seven years old.

Ventura.

Bean Yield.—Ventura, Oct. 17: Frank Lambardo raised 500 sacks of Lima beans, averaging 72 pounds to the sack, on 18 acres of land on the Olivas tract, a few miles east of town.

Apple Profit.—Ventura *Free Press*, Oct. 17: Mr. Smith has sold his apple crop to the W. R. Strong Co. of Sacramento, and has already shipped 400 boxes of various varieties out of an estimated total of 1000 boxes. Mr. Smith has 28 trees of the Bellefleurs variety. From these the parties who purchased the crop gathered 264 boxes, netting him an average of $7 to the tree for the fruit as it hung unplucked. Thirteen of the 28 averaged over $9 per tree. As apple trees are planted about 70 to the acre, the 28 Bellefleurs have realized to Mr. Smith the neat sum of $196 for two-fifths of an acre.

Yolo.

Contagious Disease Among Horses.—Woodland *Democrat*, Oct. 18: There is a disease which resembles epizootic or distemper which has attacked a number of horses, and in some instances has proven fatal. D. R. Clanton has about 150 head of horses and colts in his pasture, and the most of them have the disease. One or two, we are informed, have died. They are badly swollen about the head, eyes and neck. In some instances the swelling is only in the throat, then again it will be found on one side of the head, and in other instances their eyes will be so badly swollen that they can hardly see. R. H. Newton has a colt that has contracted the disease and is in a bad condition. There has been no remedy yet advanced, but the usual methods resorted to in cases of epizootic or distemper should bring relief in these cases. Farmers and stablemen should be especially careful about their own stock and all transient stock, so that the disease does not spread any more than possible.

Scarcity of Cars.—Woodland, Oct. 18: Fruitmen are just at present experiencing quite an inconvenience through the inability of the railroad company to furnish the number of cars required to ship their fruit East. The car famine is prevalent throughout the fruit counties, and is caused by the unusual number of large shipments of fruit East this season. The fruitmen are not alone in their troubles, but stockmen and other shippers are also in the lurch. Some are hauling their hay to Sacramento, rather than wait for cars.

Yuba.

Alfalfa Killed.—Marysville *Appeal*, Oct. 17: On the south side of Simpson's lane, about half a mile east of the city levee, Mr. Klockenbaum cleared a patch of an acre or more, several years ago, and sowed it to alfalfa. Last year four or five crops were cut from the patch, but the high water of last winter killed nearly all the plants and buried most of them under sand. The alfalfa on a cleared tract of eight or ten acres or more, south and east of the Buckeye mill, was likewise winter-killed. Alfalfa could be profitably grown on the Yuba bottoms if they could be protected from floods, as the roots of the plant soon reach down to the original soil. On the bottom-lands of the Feather above Marysville there were thousands of acres of alfalfa killed by the high water of last winter.

Fruit Notes.—Marysville, Oct. 18: It is surprising to many people visiting the canneries to learn of the quantity of canned goods that is put up here every year in a country where the orchard and vineyard industries are comparatively in their infancy. There are a few old orchards, but fruit-growing has but lately begun to assume some magnitude. From appearances, and the talk among land-owners in this vicinity, however, it is plain to be seen that fruit-raising is the coming industry of Sutter and Yuba counties.

PAPER BARRELS.—Much study and experiments have been given to the production of a thoroughly practical paper barrel. It is thought that this result has been most successfully reached by an English company whose barrels are now largely used for the carriage of gunpowder, mining fuses, fruit, flowers, molasses, paint, cement, matches, chemicals, dyes, asbestos, sugar, size and extract of meat. The materials used in making the barrels are waste paper, cardboard and (for the better quality) old sacks. When cardboard is used it is soaked or boiled for six hours and afterward treated in the same manner as the other raw material. This is carefully sorted and put into a rag engine or beater, where it is beaten and torn to pieces by a series of knives for about an hour and a half. It is afterward mixed with water until a pulp of uniform consistency is gained. This is rolled, joined, shaped and dried, and the barrel is finally covered with hoops. Before the tops and bottoms are put in, the barrels are painted with a waterproof composition, made of linseed oil and rosin for ordinary-purpose barrels, and with a special varnish where they are used for food products. The standard size made is 16½ inches in diameter by 28 inches long. The price at which these barrels can be produced enables them to compete favorably with wooden barrels; a barrel costing 34 cents in wood can, when made of paper, be sold for 28 cents. One great feature is that there is no waste with the process, all "wasters" being beaten up into pulp again.

TREES SIX HUNDRED AND FIFTY FEET HIGH. "What do you think of trees 650 feet high?" said Prof. F. O. Plummer to the editor of the Olympia *Tribune*. "They are to be found," continued the professor, "that high in the unsurveyed townships near the foot of Mt. Tacoma; and what is more, I have seen them and made an instrumental measurement of a number with that result. There are lots of trees near the base of Mt Tacoma whose foliage is so far above the ground that it is impossible to tell to what family they belong, except by the bark. Very few people know or dream of the immensity of our forest growth. I wish that some of our large trees could be sent to the World's Fair at Chicago. We could send a flag-pole, for instance, from 300 to 400 feet long."

HOW TO SWEEP A WOODEN FLOOR.—We don't use a leaky old sprinkling-pot to sop the floor all over in puddles when we sweep. No, sir! We have wet sawdust, and I put a row of it across one end of the store and sweep that right along to the other end, just like a regiment marching across a ten acre lot. It catches all the dirt and carries it along. If it gets a little dry, I add some more. Some folks scatter sawdust all over the floor, but Mr. Vanders says that's no good; that the reason for using sawdust is to avoid wetting the floor all over and to have something that will absorb the dust.—*Cin Enquirer*

THE CONSTRUCTION OF RAILWAYS in the United States thus far this year, is summed up by the *Railway Age* as being 3782 miles, distributed among 212 lines. Nine Southern States lead in this report with 1443 miles on 65 lines. The total increase of track-laying over that for the same period of last year is 470 miles. The entire new mileage for 1890 is placed at 6100 miles.

The great Dr. Boerhaave left three directions for preserving the health—keep the feet warm, the head cool, and the bowels open Had he practiced in our day, he might have added: and purify the blood with Ayer's Sarsaparilla; for he certainly would consider it the best.

IN THE MANUFACTURE OF SHOVEL-HANDLES, it is said that a large proportion, usually about 75 per cent, are split or broken in the process of bending, which loss has led to the invention of a handle-bending machine. The saving effected may be estimated from the fact that in a trial lot of 25 dozen put through the machine only one handle was spoiled.

HOW TO KEEP FLIES FROM PICTURE-FRAMES. Boil three or four onions in a pint of water; then with a gilding-brush go over the frames of your picture and chimney glasses, and rest assured that the flies will not alight on the articles washed with the solution. It will do no injury to the frames.

AN English visitor to the St. Louis market recently was so struck with the superiority of American-made horseshoes that he ordered an entire carload for shipment to London. This is the first direct shipment of horseshoes from St. Louis to England.

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"Augusta Dane, 'or the Influence of Circumstances," and "Mary Morton, or the Result of a Fashionable Education." By J. Vinton Webster, Past Master California State Grange. These two stories attracted considerable attention during their publication in the *California Patron* in 1881 and 1882. Published in book form. Being unusually interesting, they have been favorably received, and a limited number only are for sale. Printed in large, clear-faced type, and bound in cloth. Price, $1, postpaid; to subscribers of this journal, 60 cents. Address the publishers of this paper.

LINCOLN'S MELANCHOLY.

His Sympathetic Nature and His Early Misfortunes.

Those who saw much of Abraham Lincoln during the later years of his life, were greatly impressed with the expression of profound melancholy his face always wore in repose.

Mr. Lincoln was of a peculiarly sympathetic and kindly nature. These strong characteristics influenced, very happily, as it proved, his entire political career. They would not seem, at first glance, to be efficient aids to political success; but in the peculiar emergency which Lincoln, in the providence of God, was called to meet, no vessel of common clay could possibly have become the "chosen of the Lord."

Those acquainted with him from boyhood knew that early griefs tinged his whole life with sadness. His partner in the grocery business at Salem was "Uncle" Billy Green of Tallula, Ill., who used at night, when the customers were few, to hold the grammar while Lincoln recited his lessons.

It was to his sympathetic ear Lincoln told the story of his love for sweet Ann Rutlidge; and he, in return, offered what comfort he could when poor Ann died, and Lincoln's great heart nearly broke.

"After Ann died," says "Uncle" Billy, "on stormy nights, when the wind blew the rain against the roof, Abe would set thar in the grocery, his elbows on his knees, his face in his hands, and the tears runnin' through his fingers. I hated to see him feel bad, an' I'd say, 'Abe, don't cry;' an' he'd look up an' say 'I can't help it, Bill, the rain's a fallin' on her.'"

There are many who can sympathize with this overpowering grief, as they think of a lost loved one, when "the rain's a fallin' on her." What adds poignancy to the grief sometimes is the thought that the lost one might have been saved.

Fortunate, indeed, is William Johnson of Corona, L. I., a builder, who writes June 28, 1890: "Last February, on returning from church one night, my daughter complained of having a pain in her ankle. The pain gradually extended until her entire limb was swollen and very painful to the touch. We called a physician, who, after careful examination, pronounced it disease of the kidneys of long standing. All we could do, did not seem to benefit her until we tried Warner's Safe Cure; from the first she commenced to improve. When she commenced taking it she could not turn over in bed, and could just move her hands a little, but to-day she is as well as she ever was. I believe I owe the recovery of my daughter to its use."

Our Agents.

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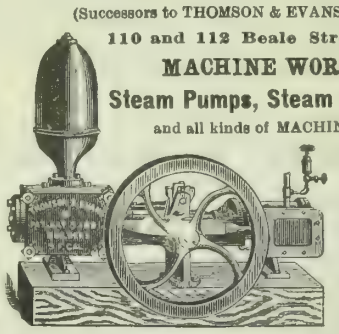


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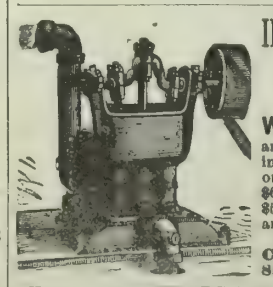


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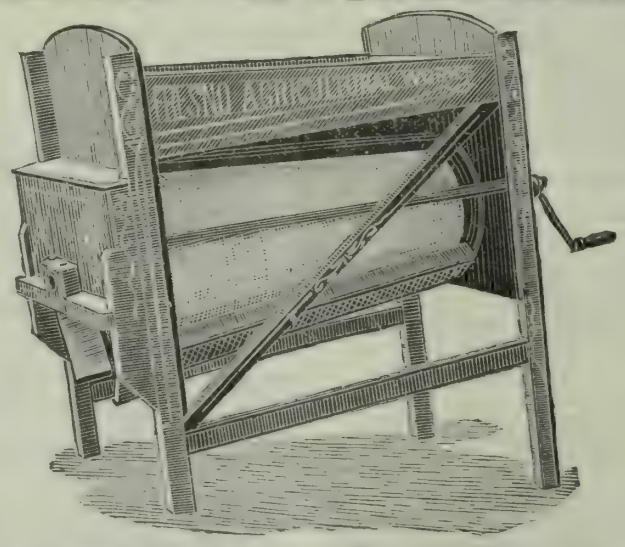
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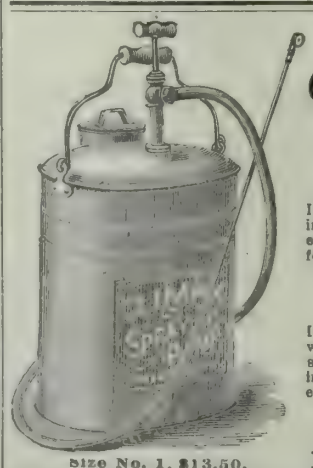
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Capital paid up and Reserve Fund	800,000
Dividends paid to Stockholders	627,500

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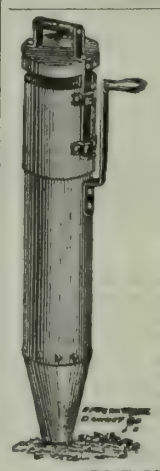
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Glimpses of the Fairs.

(*Concluded from page 355*)

Geo. Seville exhibited both Berkshire and Essex swine, and there was a considerable display of poultry.

A large morning crowd witnessed the ladies' tournament, in which there were seven participants. Rev. D. D. Bowman delivered the annual address—an able effort—which was very favorably commented upon by those who had the pleasure of listening to it.

Salinas—Seventh District.

The fourteenth annual fair of the Monterey Agricultural Association, District No. 7, which opened at Salinas City, Sept. 30th, is rated by the *Democrat* as "a grand success," reflecting credit upon the management.

On entering the pavilion the first object to meet the eye was a collection of farm products, huge pumpkins, monster potatoes and mammoth beets—the largest of the pumpkins tipping the beam at 200 pounds or more. Then came a grain display from half-a-dozen farms—wheat, barley and oats of excellent quality; sugar beets from the Spreckels ranch at Castroville; stalks of corn from Natividad, towering to within two feet of the ceiling and loaded with good roasting ears.

The display of fruits was accounted the finest ever made since the forming of the association. San Miguel canyon filled two tables with apples, pears, peaches, plums, prunes, grapes, quinces, almonds and many varieties of dried fruits. Corral de Tierra showed some 18 varieties of apples, 5 of pears, large bunches of grapes, several plates of plums, prunes, quinces and displays of nuts, watermelons, tomatoes, corn, and cabbage.

From the Fair View district R. N. and W. Windsor brought 17 varieties of apples, all remarkably large, beautiful and tempting, 5 varieties of pears, 3 of plums, 4 of prunes, and several pods of Chinese beans, each pod measuring 18 inches in length. Mrs. H. Blinn contributed almonds, dried prunes, apples, peaches and plums in boxes and a magnificent assortment of preserved fruits and jellies hermetically sealed in glass and tin. Geo. Boekenoogen's part of the Fair View exhibit comprised 14 varieties of grapes, as fine as can be seen in the State; almonds, chestnuts, plums, prunes, apples, quinces, pears, peaches, persimmons, figs, oranges, tomatoes, peppers and a monster watermelon.

S. Black of Blanco showed vegetables, fruits and grains. His display of spuds embraced Jersey Blues, Minnesota Reds, Ohio Premiums, Peerless, Minnesota, Burbanks, English Flushes, Early Ohios, Oregon Blues and Early Roses.

Several Salinas orchards furnished exhibits of apples, and there was a superb output of canned fruits and jellies.

The display of foliage plants and flowers in bloom by Mrs. S. F. Dixon surpassed all its predecessors, and the cut flowers furnished by her and Mrs. J. B. Hickman enlivened the hall with their bright and varied colors and perfumed it with their fragrance.

The annual address, by Rev. Joseph Emery, is spoken of as an able effort.

At the park, premiums were awarded to numerous thoroughbreds, roadsters, all-purpose and draft horses, one carriage team, a single saddle animal, a goodly number of M. Lynn's Durhams, and a solitary boar.

Shropshires at State Fair.

The following letter has been received the present week:

EDITORS PRESS:—In your issue of Oct. 18th was a statement giving your old friend, Andrew Smith, credit of taking all the premiums on the Shropshire sheep at the late State Fair. This is not true. I saw Mr. Edwin F. Smith (Sec'y State Board of Agriculture) this morning, and he showed me a copy of the statement sent, which is quite different from what you published, and he says he never sent such a statement. I took the sweepstakes on the best Shropshire ram and five of his lambs, defeating Mr. Smith's sheep of Redwood City. Yours truly,

Sacramento, Oct. 20, 1890. J. H. GLIDE.

The paragraph to which Mr. Glide and Secretary Smith take exceptions was intended to convey the idea that Andrew Smith was awarded all the *first* premiums (not "all premiums") for Shropshire sheep exhibited at the late State Fair, which the writer then understood to be the purport of the certificate from the Secretary, specifying the five first prizes taken by the Redwood City exhibitor. We desire to make such statements in strict accordance with the facts, and are always ready to make needed corrections.

SUPERIOR FENCING.—The Judson Manufacturing Co., office 14 & 16 Fremont street, have engaged extensively in the manufacture of wire and picket stock and rabbit-proof fencing, for farms, orchards and vineyard. They have new machines which make a fence that will not sag. They put in five strands of steel wire, so that it will turn Durham cattle. It is painted red, to preserve the wood, and their prices are much lower than such fence without these improvements has ever been offered at before. See their advertisement and prices on page 367.

"WORTH MORE THAN $100."—M. G., of San Ardo, in renewing his subscription Oct. 17, 1890, writes: "I would not be without the RURAL PRESS for twice its price. It has been worth more than $100 to me this last year."

The Building of Cities.

A very interesting indication of the relative progress of different cities throughout the country is furnished by the totals of the building statistics. The totals of structures erected in 1889, with their cost in 15 of the leading cities, with some allowance for local conditions, are a very good measure for the growth and enterprise of the different communities.

In this showing Philadelphia maintains the lead, having put up 11,965 houses, while New York comes next with 6722. But in considering the cost of the buildings, New York is far ahead, having put $75,912,816 into new buildings, while Philadelphia's total of cost is but $26,000,000, and is exceeded by Boston as well as New York. These are the two cities whose new structures exceeded 5000. Following these are six cities where between 4000 and 5000 houses were built, and six more whose totals are between 2000 and 4000, in the following order:

	No. Houses.	Cost.	Average.
Chicago	4,931	$25,065,500	$5,083
Brooklyn	4,500	25,679,405	5,706
Boston	4,431	32,400,000	7,312
Minneapolis	4,355	8,737,281	2,006
Washington	4,048	6,165,715	1,523
Cleveland	4,007	4,401,854	1,098
St. Paul	3,756	7,939,493	2,113
St. Louis	3,544	9,765,700	2,755
Pittsburg	3,241	8,000,000	2,468
Denver	2,741	10,807,377	3,942
Omaha	2,498	4,663,735	1,803
Cincinnati	2,104	4,143,214	1,969

In giving this comparison its proper value, it should be remembered that there are other things shown in it than the number of new buildings built. The total of cost shows the aggregate investment more clearly than the number of buildings, while the average cost of each building gives a better idea of the standard of architecture in each city than either of the other two. New York, while second in the number, is far ahead both in the total investment and in the average cost of buildings, which was $11,293. Philadelphia, while first in number and second in total cost, has an average for each building of but $2172, which gives it the eighth place on the list in that respect. Pittsburg has to take the eleventh place for number of houses, rises to the ninth for total investment, and its average cost of $2468 gives it the eighth place. While Cleveland is credited with 4007 houses against Pittsburg's 3241, her low average cost of $1098 brings the total investment down to $4,401 854, or a little more than half of Pittsburg's.—*Pittsburg Dispatch.*

PAPER FLOWER POTS.—Westcott & Co., seed merchants of 507 Clay St., agents for the Pacific Coast, send us specimens of paper flower-pots manufactured by F. W. Bird & Son of Walpole, Mass. They are cut, folded and interlocked in such a way that they are safely handled and when plunged in the soil will decay so as not to interfere with the root growth of the plant into the soil. The arrangement is ingenious, and if the pots can be furnished cheaply enough they will no doubt serve a good purpose in plant-growing.

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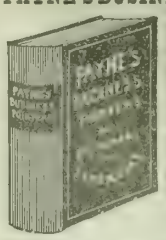
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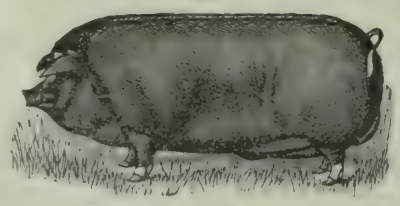
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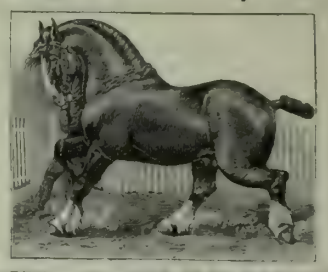
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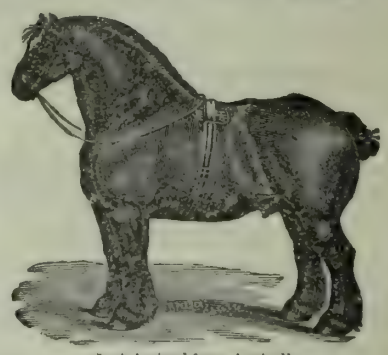
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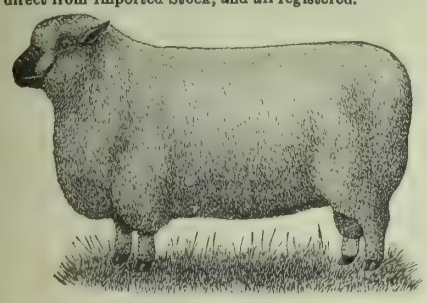
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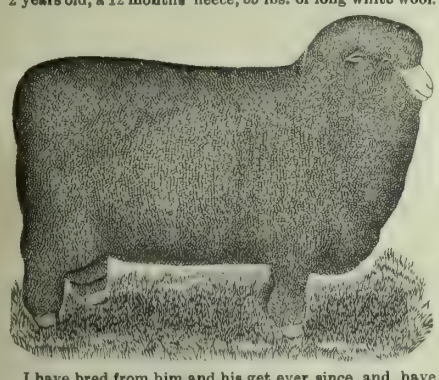


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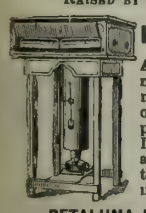
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As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing a second-grade, inferior to Judson.

BANDMANN, NIELSEN & CO. General Agents, San Francisco.

The Whole Country Needs Fertilization

ADMONITION TO FARMERS!

GUAYMAS, MEXICO, September 9, 1890.

R. B. CUNNINGHAM, ESQ., Agent Mexican Phosphate and Sulphur Company—DEAR SIR: In answer to your inquiries as to the value of phosphates for worn-out lands, I will state that it is my opinion the lands of the older settled portions of California afford a good field for the use of phosphates. These lands have been cropped for years without any restoration of the chemical constituents necessary for an abundant crop. They therefore show plainly that they need assistance artificially to produce crops good in quantity and quality, let the crop be whatever it may.

Take, for instance, San Joaquin and Santa Clara valleys, and what do you see? Many crops that are so imperfect in quantity and quality that the eye at once detects the defect. The only relief that can be resorted to must be infused into the soil to replace the chemical properties that have been extracted by previous crops, and the writer is of the opinion that a liberal supply of phosphates will accomplish this.

The attention of the cultivators of the soil is sharply turned to rotation of crops, hoping thereby to get wealth out of their lands without fertilization. Some have turned their attention to beet cultivation in soil worn out by other crops. Beet or other seeds will not grow successfully unless the soil will nourish them.

This summer I saw several crops of beets on excessively cropped lands, the majority of which showed that there was something wanting to complete the plants to ample size and in quantity that should be expected of sugar beets under favorable circumstances. If a good crop is not obtained, there is deficiency in profit. It costs as much to cultivate soil deficient in chemical properties as it does if ample nutrition was in the soil. Under the former condition a deficient crop is certain, while under the latter condition he may reasonably expect an ample crop with profit.

Fields often are allowed to go to weeds, supposing thereby to enrich the soil. This is an uncertain method and not profitable. Your weeds have grown up and seeded; the dead stems can only add a limited addition to fertilize the soil, while the seeds of the same will cause much expense to exterminate them from the future crops. Besides, while thus only weeds as a crop, no profit was realized, while if a supply of phosphates had been applied to the soil, a profitable crop of beets or corn would be had. Besides, the weeds would have been exterminated during the cultivation of the said crop. I am, Sir, your obedient servant,

EDWARD PALMER, M. D.

THE MEXICAN PHOSPHATE AND SULPHUR CO.

Manufacture three grades of this Superior Fertilizer of the following analyses:

GUARANTEED ANALYSIS.	Brand [A] for Sugar Cane, Sugar Beets, Etc.	Brand [B] for Grain, Gardens, Lawns, etc.	Brand [C] for Fruits, Vineyards, Etc.
Phosphoric Acid	10 to 11 per cent.	15 per cent.	12 per cent.
Potash	9 to 10 "	2 "	5 to 6 "
Ammonia	3 to 4 "	2 "	3 to 4 "

And will sell in lots to suit.

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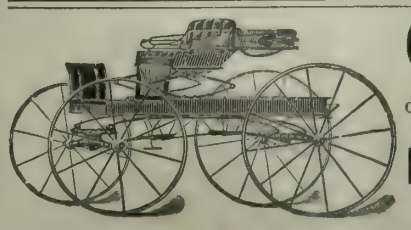
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"Greenbank" 98 degrees **POWDERED CAUSTIC SODA** (tests 99 3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by

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Will be Sold Very Reasonable,

TWO PERCHERON STALLIONS,

One black and the other gray. Both seven years old last spring. Can show their colts. Weigh 1750 and 1840 pounds.

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No. 370 Eleventh Street, OAKLAND, CAL.

BADEN FARM HERD.

Short Horn Cattle and Draft Horses.

Catalogues and Prices on application to

ROBERT ASHBURNER,

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ANGORAS.

1200 FIRST-CLASS ANGORA GOATS; JOHN S. Harris' stock, of which the Mohair brings the highest price. Address ADOLPH BENITZ, Box 32, Reno, Nevada.

APIARIAN SUPPLIES.

Italian Queens, $2.50 each; Black Queens, $1 each. Swarms from $2.50 each; Smoker, $1. Comb Foundation, $1.25 per pound; V-groove Sections, $4 per 1000 Comb Honey wholesale and retail; Hives, etc. W. STYAN & SON, The Homestead Apiary, San Mateo, Cal.

S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Oct. 22, 1890.

In farm products, the past week did not present any features calling for particular mention. Continued dry weather is having a marked influence on feedstuff and two or three other articles.

The wheat market at the East and also abroad has exhibited more strength, with an advance established in prices. The following is to-day's cablegram:

LIVERPOOL, Oct. 22.—Wheat—Slow. California spot lots, 7s 4½d to 7s 7d; cargoes off coast, 38s; just shipped, 37s 9d; nearly due, 37s 9d; cargoes off coast, strong; on passage, very firm; Mark Lane wheat, firm; French country markets, firm; wheat in Paris, steady; flour, firm; weather in England, fine.

Foreign Grain Review.

LONDON, Oct. 20.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: There is a small inquiry for English wheats and prices have declined 6d. Foreign wheats are tending toward firmer prices; fine Whites are 6d better. Barley is weak under large arrivals and prices are 6d lower. Oats and corn are steady. At to-day's market English wheats were firmer; there was a recovery of 6d for best sorts. Foreign wheats were also stronger at 6d advance. Californian and Indian flour were very firm, especially good American.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Thursday	7s6d	7s6¾d	7s7½d	7s7d	7s7d	7s7d
Friday	7s6d	7s7½d	7s8¼d	7s8d	7s8d	7s7¾d
Saturday	7s7d	7s7½d	7s8d	7s7½d	7s7d	7s7d
Monday	7s6d	7s7d	7s7½d	7s7½d	7s6¼d	7s6¾d
Tuesday	7s6½d	7s6½d	7s7½d	7s7¼	7s6½d	7s6¾d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	37s3d	37s3d	37s3d	Steady.
Friday	37s6d	37s6d	37s6d	Firm.
Saturday	37s6d	37s6d	37s6d	Strong.
Monday	37s9d	37s6d	37s6d	Quiet.
Tuesday	37s9d	37s9d	37s9d	Higher.

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per bushel:

Day.	Oct.	Nov.	Dec.	Jan.	May.	June.
Thursday	106½	107	108	108⅞	111	...
Friday	107½	107⅞	108⅝	109⅜	112⅛	...
Saturday	107½	107⅝	108⅝	109⅜	111⅞	...
Monday	108¼	108⅝	109⅜	...	112⅝	...
Tuesday	108⅜	109⅛	110	111½	113	...

The closing prices for wheat have been as follows at Chicago for the past week, per bushel:

Day.	Oct	Dec.	May.	June.
Thursday	100⅞	103⅝	107½	....
Friday	102	105	109	....
Saturday	101⅞	103⅞	108	....
Monday	102⅛	105	109¾	....
Tuesday	103¼	105⅞	109⅝	....

NEW YORK, Oct. 22.—Wheat—$1.10⅛ for cash; $1.10 for December and $1.13 for May.

CHICAGO, Oct. 22.—Wheat—$1.02¾ for October, $1.05 for December and $1.09 for May.

Eastern Wool Markets.

BOSTON, Oct. 17.—Wool is steady. Sales of all kinds for the week, 4,716,000 lbs. Territory wool is in good demand and sells on a scoured basis at 60@62c ₱ lb for fine; fine medium, 58@60c; medium, 55@57c. California is more active; spring, 17@24c; fall, 13@18c; Oregon, quiet.

NEW YORK, Oct. 17.—*Bradstreet's* will say tomorrow: Wool is still moving freely; the market is in sellers' favor, and dealers show great eagerness to advance prices still higher. Manufacturers are said to be well supplied with stock. It seems hardly possible for sales to reach the figures of two weeks ago for some time to come, nevertheless, at the rate manufacturers of worsted and dress goods are turning out cloth, there is a light possibility of great weakening in the demand for wool. It is expected in most quarters that prices will hold firm for several months. At Boston there is a better demand for California wools, as large quantities have changed hands during the past week. Fine Territorial wools are still selling with a slight advance in prices. Ohio and Michigan are very firm, with dealers' stocks much reduced. Australian wools are selling well and are rapidly gaining favor. The condition of the foreign markets affects them more than any domestic supplies.

All classes of wool received liberal attention here and eastward. Manufacturers are confident of the coming support of woolen goods and are still drawing supplies from interior points. Manufacturers secured over 4000 bales at the late London sale. The deal causes no comment, owing to the present condition of stock.

The Russian Grain Trade.

ODESSA, Oct. 17.—The marked and steady decrease in the export trade in Russian grain is attracting the serious attention of the Government. The total shipments from all Russian ports for the first six months of the year only reached 257,000,000 poods (one pood is equal to 40 pounds, or 36 pounds English, and 63 poods are equal to one ton) against 310,000,000 poods in 1889. Russian economists are awakening to the fact that American, Indian and Egyptian grain is driving the Russian product out of the market.

The Corn Crop.

CHICAGO, Oct. 21.—The *Farmers' Review* will say this week that careful examination of estimates furnished by correspondents reveals the fact that the corn crop is turning out somewhat better than was expected. The crop in Michigan and Wisconsin is larger than last year, in Minnesota and Dakota almost as large. The other States, especially Kansas and Nebraska, show a considerable shortage. In several counties in Kansas and Nebraska corn is nearly a total failure. The *Review* gives estimates on the production of Illinois, Indiana, Ohio, Kentucky, Missouri, Kansas, Wisconsin, Michigan, Iowa, Nebraska, Minnesota and the Dakotas, and says that after deducting from the gross product a large percentage of unmerchantable corn, the estimate of the total amount marketable in the States named is 825,925,253 bushels. The condition of the crop in the remaining States not covered by the report is estimated at about 85 per cent of the average.

Hops.

NEW YORK, Oct. 20.—Transactions in choice Oregon hops are announced here at 40@41c. Cable advices say remarkably good offers are made in London for Pacific hops. The prices made in this State for last week's sales for State hops were 40@41c. Big growers hold firmly still.

NEW YORK, Oct, 19.—In local hops the business was light. About 2400 bales went abroad from here and Baltimore, largely Pacific. State, new, were quoted at 40@47c; last season's 25@32c; previous growths, 8@20c; Pacific, new, 36@40; last season's, 30@33c; previous season's, 8@25c.

Local Markets.

BARLEY.

	Buyer Season. H.	Buyer Season. L.	Seller 1891. H.	Seller 1891. L.	Buyer 1890. H.	Buyer 1890. L.
Thursday	149½	149½	...	...	...	....
Friday	149⅝	149⅝	...	...	....	....
Saturday	149½	149	...	...	143	142⅝
Monday	149½	149⅜	...	....	....	....
Tuesday	150⅛	149⅝	106½	106½	144½	143¾

WHEAT.

	S. S.	Nov.	B. '90.	B. S.	S. '90.
Thursday	h.	....	136⅜	145⅝	....
	l.	....	136⅛	144½	....
Friday	h.	....	138	146	....
	l.	....	137½	146	....
Saturday	h.	....	136½	146½	....
	l.	....	136½	145½	....
Monday	h.	....	136⅝	145⅞	....
	l.	....	136½	145⅞	....
Tuesday	h.	....	137	146	....
	l.	....	136⅜	145½	....

BAGS—The market is reported unchanged.

BARLEY—Receipts continue free, and so does the demand. In futures, trading has been active at better prices. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—200 tons, $1.45; 100, $1.45⅛; 100, $1.45½; 100, $1.45⅜; 200, $1.44⅞; 100, $1.45¼. Buyer season—100 tons, $1.50⅜; 100, $1.50¾; 100, $1.51; 100, $1.51¼; 200, $1.51½; 100, $1.51; 100, $1.50¾. May—100 tons, $1.42; 100, $1.42½ ₱ ctl. Afternoon Session: Buyer 1890—100 tons, $1.44¼. Buyer season—100 tons, $1.51¼; 100, $1.51½. May—100 tons, $1.42½ ₱ ctl.

BUTTER—The market is stift, with dealers able, at times, to get an advance over top quotations for gilt edged. Pickled and firkin or keg butter are going out more freely.

CHEESE—The market is strong for the more choice mild grades.

EGGS—The market has made another up move, but at the close is weaker, owing to more Eastern coming to hand.

FLOUR—The market is firm at full prices.

WHEAT—The sample market has been quiet, but toward the close there appears to be more doing. The market has a strong tone, In futures, trading has been quite free. The fluctuations were only slight. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—800 tons, $1.36⅝; 600, $1.36¾. Buyer season—300 tons, $1.45¼; 200, $1.45⅜ ₱ ctl. Afternoon Session: No sales.

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Oct. 21st, were as follows:

Flour, qr. sks	192,745	Middlings, sks	3,208
Wheat, ctls	250,567	Alfalfa, "	....
Barley, "	38,297	Chicory, bbls	63
Rye, "	1,168	Broomcorn, bdls	899
Oats, "	7,293	Hops, bls	508
Corn, "	4,645	Wool, "	2,914
*Butter, "	531	Hay, tons	1,998
do bxs	248	Straw, "	68
do bbls	....	Wine, gals	203,360
do kegs	28	Brandy, "	4,740
do ½ do	....	Raisins, bxs	8,293
†Cheese, ctls	524	Honey, cs	393
do bxs	60	Walnuts, sks	198
Eggs, doz	22,410	Flaxseed, sks	3,947
do " Eastern.	27,660	Mustard, sks	1,084
Beans, ctls	30,776	Almonds, sks	907
Potatoes, sks	32,191	Peanuts, sks	1,219
Onions, "	1,831	Popcorn, sks	124
Bran, sks	8,327	Beet sugar, bbls	60
Buckwheat, sks	119	do do sks	....

*Overland....ctls. †Overland....ctls.

Cereals.

The local wheat market has ruled very strong throughout the past week, and this too in the face of strong bear talk and movements from buyers. The latter hold to the opinion that lower prices will obtain just before tax-paying day. We have seen buyers mistaken before, and it may be that they will be in this instance. It will not take much more of an advance at the East to give a profit in shipping hence to Chicago and New York. The quotations there are in bushels, while ours are in centals, or 100 pounds. It now looks as if the coal-miners' strike in Australia will be settled at an early day, when vessels from there will begin to put to sea. The engaged tonnage in port has a carrying capacity of 116,000 tons, which, when dispatched, will make the shipments of wheat (flour reduced to wheat) aggregate over 400,000 tons, and not half of the season passed. Oregon foreign shipments are quite free.

Continued dry weather causes a very strong tone to prevail in the barley market, which is supplemented by a good demand and light supplies. Many of our exchanges report the supply nearly exhausted in their immediate section, against liberal stocks held at this time in 1889. The high prices are against any decided export movement, yet there is some going out. Some barley is coming to hand from Washington.

Oats are very strong at full prices. Receipts are not large, while the demand is active. The higher prices ruling for barley and ground feed are in favor of oats. The supply up North is reported below the average at this season of the year.

Corn is easy, but not quotable lower. To press sales, lower prices would have to be accepted. The crop is said to be large, but even in this case, we do not see any reason for prices to go lower in the face of higher markets for ground feed, barley and oats.

Rye is barely steady. The demand is only fair.

Feedstuff.

In ground feed the market shows more strength at a slight advance in bran, middlings and barley. Continued dry weather is in favor of the selling interest.

Hay continues to be in good demand from feeders. The supply in the country is said to be light, particularly of the better grades. Dealers pay $19 under protest. If the rains hold off much longer the market will be apt to show still further strength.

Live-stock.

Bullocks are steady with a firm tone. Supplies are being drawn chiefly from Nevada and Arizona. Mutton sheep are lower. Hogs are firmer. Packers are taking more freely. Horses and milch cows are unchanged.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4½@4½c ₱ lb. dressed, 7@8c ₱ lb.; heavy, 4@4½c ₱ lb.; dressed, 6½@7½c ₱ lb. Stock hogs, 3¼@3½c ₱ lb.

BEEF—Stall fed, 6½@—c ₱ lb.; grass fed, extra, 6@—c ₱ lb.; first quality, 5¼@5¾c ₱ lb.; second quality 4¼@5c ₱ lb.; third quality, 4c@— ₱ lb.; bulls and thin cows, 2@3c ₱ lb.

VEAL—Small, 6@8c ₱ lb.; large, 4@6c.

MUTTON—Wethers, 7c ₱ lb.; ewes, 6¼c ₱ lb.; lamb, spring, 8@9c.

Fruits.

Strawberries continue to come in sparingly, but owing to the lateness of the season do not fetch any better prices.

Pears are slow, as are quinces. There continue heavy receipts of apples, and unfortunately for the market a large proportion are wormy or otherwise defective. Choice, perfect, good-keeping apples are freely taken for shipment to Australia, China and Japan.

Grapes have been coming in quite freely, necessitating slightly lower prices to close out pressing consignments. The situation makes correct quotations hard to give. Wine grapes are slightly firmer.

The dried-fruit market is easy for peaches and apples. Apricots are well cleaned up. Pitted plums are scarce and higher. Prunes are barely steady. Some dealers are under the impression that after the turn of next year the market is likely to improve, but in the meantime it will be slow.

Dried grapes are doing better.

Raisins are moving off quite freely. The market is strong, but no higher. It now looks as if the crop will go into consumption at good prices.

Vegetables.

The market is about bare of corn, summer squash and cucumbers.

Onions are strong under light receipts and a good demand. The light supply in Oregon is in favor of the selling.

Potatoes continue in good demand for both shipping and home. The free shipments overland are an important factor in keeping values up. Choice, good keepers are wanted to fill distant orders, and for such a slight advance on outside quotations is obtainable.

Miscellaneous.

Poultry has held to steady prices under fairly free receipts from the Central States.

The receipts of beans have increased, causing some shading in prices.

Peanuts are coming in freely, causing lower prices to obtain. Brazil and other nuts are unchanged.

Hops show more strength. Sales are reported as high as 40c a pound.

Wool is steady at full prices. The demand appears to run chiefly on luster goods wools.

Overland shipments in last month aggregate as follows, in pounds: Beans, 2,237,740; brandy, gals, 225,600; canned goods, 18.723,990; potatoes, 4.804,880; fruits, dried, 10,710,360, green, 17,559,840; raisins, 3,478,780; honey, 625,370; hops, 1,643,600; mustard seed, 255,520; onions, 105,440; vegetables, 945,020; wine, gals, 5,010,300; wool, grease, 605,050, pulled, 125,420, scoured, 564,210; nuts, 15,000.

Exports by sea the past week aggregate as follows: Flour, bbls, 325. Wheat, ctls, Hull, 57,396; Liverpool, 64,979; Cork, 125,648; Rio de Janeiro, 63,825. Barley, ctls, Honolulu, 1052. Rolled barley, ctls, Honolulu, 755. Beans, lbs, Victoria, 4770; Sydney, 2550; Honolulu, 4218. Dried fruits, lbs, Victoria, 4022; Sydney, 958; Auckland, 3750; Brisbane, 2875; Townsville, 625; Dunedin, 2750; Honolulu, 400. Bran, sks, Honolulu, 887. Hops lbs, Sydney, 1770; Dunedin, 5104; Suva, 3010. Onions, sks, Sydney, 174. Hay, bls, Honolulu, 664. Wine, gals, Honolulu, 400. Apples, bxs, Sydney, 3318; Auckland, 995. Corn, ctls, Sydney, 3045. Canned fruits, cs, Auckland, 295. Raisins, bxs, Sydney, 616; Auckland, 550; Melbourne, 400; Wellington, 150; Brisbane, 950; Nelson, 125.

From the *Commercial News* of Oct. 22d the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	249,525	207,411
On the way to neighboring ports	20,880	9,565
In port, disengaged	12,410	36,465
In port, engaged for wheat	72,890	76,580
Totals	355,705	330,021

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Oct. 15, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	2,860,484	3,349,935
Flour, bbls	317,118	309,222
Barley	122,070	488,085

Rope.

Baling, Duplex, lb	11
" Manilla, lb	14
Twine, for hops, balls, tarred, lb, Manilla	15
" " grape vine, balls, lb "	15½
" " " coils, lb "	15½
" spring, lb "	1
" binder (650 ft. to lb), lb	15

Duplex twine 3c per lb less.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Oct. 22, 1890.

BEANS AND PEAS.			
Bayo, ctl	3 50	@	3 90
Butter	2 00	@	2 30
Pea	2 50	@	2 90
Red	2 50	@	2 70
Pink	2 20	@	2 35
Large White	—	@	—
Small White	2 60	@	2 90
Lima	—	@	—
Fld Peas, Blkeye	1 50	@	1 70
do green	2 00	@	2 25
do NLes	1 35	@	1 55
Split	5	@	—
BROOM CORN.			
Choice to Extra	60 00	@	75 00
Fair to Good	45 00	@	55 00
Poor	30 00	@	—
CHICORY.			
California	5½	@	6
German	6	@	6½
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair, lb	15	@	22½
do good to choice	25	@	32½
do Giltedged	35	@	—
do pickled	20	@	22½
do in kegs	17	@	20
do Creamery in rolls	36	@	—
Eastern do	—	@	—
do do, in tubs	17	@	25
CHEESE.			
Cal. choice mild	10	@	11
do fair to good	7	@	9
do gilt edged	—	@	12½
Young America	11	@	12½
N. York Cream.	10	@	12½
Western	9	@	10½
EGGS.			
Cal. ranch, doz.	42½	@	45
do do sel'cted	47½	@	—
do. store	37½	@	40
Est'rn, cld st'rage	—	@	—
do fresh	25	@	30
do selected	32½	@	—
do to arrive	—	@	—
FEED.			
Bran, ton	18 50	@	21 00
Feedmeal	28 00	@	29 00
Gr'd Barley	30 00	@	31 00
Middlings	23 50	@	25 50
Oil Cake Meal	25 00	@	27 00
Manhattan Food Per 100 lbs	7 50	@	—
HAY.			
Compressed	14 00	@	15 00
Wheat, per ton	12 00	@	17 00
do choice	18 00	@	19 00
Wheat and Oats	12 00	@	16 00
Wild Oats	12 00	@	15 00
Tame do	12 00	@	15 00
Barley	9 00	@	13 00
Barley and Oats	10 00	@	14 00
Alfalfa	12 00	@	13 00
Straw bale	70	@	80
FLOUR.			
Extra, City Mills	4 25	@	4 50
do Co'try Mills	4 20	@	4 50
Superfine	3 25	@	4 00
GRAIN, ETC.			
Barley, feed, ctl	1 35	@	1 40
do Choice	1 42½	@	—
do Brewing	1 42½	@	—
do do Choice	1 45	@	1 47½
do do giltedg'd	1 50	@	—
Chevalier once	1 50	@	1 55
do com to good	1 35	@	1 47½
Buckwheat	1 75	@	2 00
Corn, White	1 25	@	1 30
Yellow, large	1 25	@	1 27½
do, small	1 25	@	1 30
Oats, milling	1 70	@	1 75
Surprise	1 75	@	1 80
Choice feed, ch'c	1 70	@	—
do good	1 65	@	—
do fair	1 65	@	—
do Gray	1 50	@	1 60
do Black	1 65	@	1 80
do do for seed	2 00	@	2 05
Rye	1 20	@	1 30
Wheat, milling, Gilt edged	1 43½	@	—
do Choice	1 41½	@	—
do fair to good	1 38½	@	—
Shipping, choice	1 37½	@	—
do good	1 35	@	—
do fair	1 31½	@	—
Sonora	1 30	@	1 35
HIDES.			
Dry light to h'vy	10	@	11
Salted	5	@	8½
HOPS.			
Oregon, 1890	32½	@	37½
Cal 1890 Choice	35	@	37½
do Fair to G'd	32½	@	—
ONIONS.			
Silver Skin	2 50	@	3 00

NUTS—JOBBING.			
Walnuts, Cal. lb	9	@	10
do Ch'ice	10	@	12
Almonds, hd shl	5	@	6½
Softshell	14	@	15
Paper shell	16	@	17½
Brazil	15	@	18
Pecans	9	@	11
Peanuts	4½	@	5½
Filberts	10	@	13
Hickory	6	@	8
Chestnuts	15	@	—
Pine nuts	7	@	8
POTATOES.			
Early Rose, sks	70	@	90
Chile	95	@	1 10
Peerless	80	@	1 05
River Reds	90	@	1 05
Humboldt	—	@	—
Petaluma	—	@	—
Burbanks	80	@	1 30
Sweet	75	@	90
POULTRY AND GAME.			
Hens, doz	5 00	@	7 00
Roosters, old	5 00	@	6 00
do young	4 50	@	6 50
Broilers, small	2 50	@	3 50
do large	4 00	@	—
Fryers	4 50	@	—
Ducks, tame	4 00	@	5 00
do large	5 50	@	7 00
Geese, pair	1 25	@	1 75
Turkeys, Gobl'r.	18	@	21
Turkeys, Hens	16	@	18
Pigeons	1 75	@	2 50
Rabbits, doz	1 00	@	1 25
Hare	1 25	@	1 75
Venison	6	@	8
Dove	50	@	75
Quail	50	@	1 00
Snipe, English	1 00	@	1 75
do Jack	50	@	60
Ducks, Mallard	4 00	@	5 00
do Sprigs	1 75	@	2 00
do Teal	1 50	@	1 75
do Widgeon	1 25	@	1 50
do Small	1 00	@	25
Geese, Gray	2 25	@	3 00
do white	1 50	@	—
Brant	1 00	@	2 00
EGG FOOD.			
Manhattan, ₱ lb	12	@	—
PROVISIONS.			
Cal. Bacon. Heavy, lb	10½	@	11
Medium	12	@	—
Light	13	@	13½
Lard	9	@	11
Cal. Sm'k'd Beef	11	@	12
Hams, Cal	13	@	14
do Eastern	14	@	15
SEEDS.			
Alfalfa	8	@	8½
Canary	3	@	4
Clover, Red	1	@	11½
White	17	@	20
Cotton	20	@	—
Flaxseed	2	@	3
Hemp	4	@	5
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German	5	@	7
do Common	5	@	—
Mustard, yellow	1 90	@	2 25
do Brown	3	@	—
Rape	1	@	1
Ky. Blue Grass	14	@	16
2d quality	13	@	14
Sweet V. Grass	75	@	—
Orchard	12	@	14
Hungarian	7	@	8
Lawn	27½	@	40
Mesquit	6	@	7
Timothy	6	@	7
TALLOW.			
Crude, lb	3	@	5
Refined	6	@	—
WOOL, ETC.			
SPRING—1890.			
Humboldt and Mendocino	19	@	24
Sac'to valley	15	@	22
Free Mountain	18	@	24
S Joaquin valley	12½	@	17
do mountain	17	@	22
Cala'v & F'th'll	15	@	24
Oregon Eastern	13	@	22
do valley	20	@	25
So'n Coast, def	10	@	14
So'n Coast, free	12½	@	19
FALL—1890.			
North'n, choice	15	@	17
do defective	12	@	14
Mountain Free	11½	@	14
San Jo quin defective	8	@	11
Southern do	8	@	11

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Oct. 22, 1890.

Bananas, bunch	1 25	@	2 50
Cranberries	9 00	@	10 50
Limes, Mex	4 00	@	5 50
Lemons, Cal., bx	2 00	@	4 00
do Sicily, bx	7 00	@	8 50
do Malaga	7 00	@	8 50
Pineapples, doz	3 00	@	5 00
Strawberries chests	5 00	@	10 00
Pears, bx	35	@	80
Apples com box	55	@	60
do choice	90	@	1 25
Grapes, box	10	@	40
do Muscats	30	@	55
do Rose of Peru	25	@	45
do Tokay	35	@	60
do Blk Hamb'rg	25	@	40
do Isabella	40	@	50
do Queen	75	@	1 00
do Malvoise	25	@	40
do Cornichon	40	@	70
do wine Zinfandel	12 00	@	16 00
do other wine black kinds	10 00	@	15 00
Watermel'ns	100	@	8 00
Cantaloupes crt	50	@	75
Nutmeg melons	25	@	40
Crabapples, box	75	@	1 00
Quinces, box	50	@	65
VEGETABLES.			
Okra, dry, lb	6	@	10
do green bx	1 00	@	1 25
Parsnips, ctl	1 25	@	—
Peppers, dry, lb	12	@	—
do green, bx	25	@	40
do Bell	40	@	50
Turnips, ctl	75	@	—
Beets, sk	—	@	1 00
Cabbage, 100 lbs	50	@	60
Carrots, sk	50	@	65
Tomatoes, bx	30	@	60
String Beans	—	@	—
Lima do	3	@	3½
Marrowfat, ton	8 00	@	10 00
Hubbard	15 00	@	20 00
Garlic, lb	12½	@	15
Egg Plant, bx	35	@	50
Cauliflower doz	50	@	70

Dried Fruits, Etc.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations.

Prices named, unless otherwise specified, are for fruit in sacks. Add for 50-lb. boxes ½c per lb., and for 25-lb boxes ½c to 1c per lb.

Apples, sun-dried, quarters, common	7	@	—
" " " prime	8	@	—
" " " choice	9	@	—
" " sliced, common	9	@	—
" " " prime	9½	@	—
" " " choice	10	@	—
" Evap. bleached, ring 50-lb. boxes	12	@	—
Apricots, sun-dried, unbleached, common	10½	@	—
" " " prime	12½	@	—
" " " choice	13½	@	—
" " bleached, prime	15	@	—
" " " choice	17	@	—
" " " fancy	18	@	—
" Evap. choice, in boxes	18	@	—
" " fancy, "	19	@	—
Figs, sun-dried, black	2	@	3
" " white	—	@	—
" " " washed	—	@	—
" " " fancy	8	@	10
" " " pressed	5	@	6
" " " unpressed	2	@	3
" Smyrna boxes	12	@	14
" do sacks	10	@	12
Grapes, sun-dried, stemless	3½	@	4½
" " unstemmed	2	@	3½

Nectarines, Red, sun-dried	10 @	13
" evaporated, in boxes	13½@	14½
" white, sun-dried	12 @	15
" evaporated	16 @	17½
Peaches, sun-dried, unpeeled, common, bleached	10 @	—
" " " prime, "	13 @	—
" " " choice, "	15 @	—
" " " fancy	17 @	—
" evaporated " choice	18 @	—
" " " fancy	19 @	—
" sun-dried, peeled, prime, bleached	16 @	—
" " " choice	19 @	—
" " " fancy	21 @	—
" evaporated, " in boxes, choice	20 @	—
" " " fancy	22½@	—
Pears, sun-dried, quarters	8½@	9½
" " sliced	9½@	10½
" evaporated, " in boxes	10½@	10¾
" " ring "	— @	—
Plums, pitted, sun-dried	9½@	11
" " evap. in boxes, choice	11 @	12
" " " fancy	13 @	14
" unpitted,	5 @	8
Prunes, Cal. French, ungraded sizes	8½@	9½
" " " graded " 90 to 100	8½@	—
" " " " " 80 to 90	9 @	—
" " " " " 70 to 80	9½@	—
" " " " " 60 to 70	10 @	—
" " " " " 50 to 60	10½@	—
" " " " " 40 to 50	11½@	—

Fancy sell for more money.

RAISINS.

Halves, quarters and eighths, 25, 50 and 75 cents higher respectively than whole box prices.

London Layers, choice ₱ bx	$1 80 @	2 10
" fancy, "	2 25 @	2 50
Layers, ₱ bx	1 50 @	2 00
Loose Muscatels, common, ₱ bx	1 15 @	1 35
" choice, "	1 50 @	1 75
" fancy, "	1 80 @	1 90
Unstemmed " in sacks, ₱ lb	4 @	6
Stemmed " " "	4 @	7
Seedless " " "	6 @	7
" ₱ 20-lb bx	1 15 @	1 25
" Sultanas, unbleached, in bxs	1 15 @	1 25
" " bleached "	1 25 @	1 30

CALIFORNIA HONEY.

Comb, dark, 2-lb. frames, 60-lb. cases, ₱ lb	4 @	5
" amber, " " cs. new "	4½@	5½
" white " " " " "	9 @	12
Extracted, dark, 5-gal. cans, 2 cans to case, ₱ lb.	4 @	4¼
" amber, " " "	4½@	5¼
" white, " "	5½@	6
Comb, 2-tins, 2 doz. to case, ₱ doz	— @	—
Extracted, "	— @	—
" 4-lb. tins, 1 doz. "	— @	—
Beeswax, per pound	21 @	24

California Fruits East.

CHICAGO, Oct. 16.—The Montgomery Auction Co. sold to-day for account of the Earl Fruit Company six cars of California fruit as follows: Full crates Muscat grapes brought $1.50; hf-crates, Muscat grapes, $1.75; full crates of Emperor grapes, $1.85; crates, Cornichon grapes, $1.90; Salway peaches, $1.55; Easter Beurre pears, $2.30; Lawrence pears, $2.20; quinces, $1.75. The weather is bad. It is raining hard. Grapes are in bad order and there are heavy receipts.

CHICAGO, Oct. 17. — The Porter Bros. Co. sold six carloads of California fruit to-day at auction at the following prices: Quinces, $1.75@1.80; pears, Winter Nelis, $2.10@2.15; d'Alencon, $2.40 @2.45; Diel, $3; peaches, 80c@$2.85; Tokay grapes, full crates, $3.25; Muscats, very poor order, $1.05@1.20; Cornichon, $2; hf-crates, 90c@$1.

CHICAGO, Oct. 17.—The Montgomery Auction Co. sold to-day for account of the Earl Fruit Co., grapes, Muscats, hf-crates, $1.90@1.95. The grapes were very moldy.

NEW YORK, Oct. 17.—A trade paper reports California canned fruits more closely sold up than ever before at this season of the year. Some brands of peaches and apricots are entirely out of first hands. Some entire lines are also reported closed out.

CHICAGO, Oct. 18. — The Montgomery Auction Co. sold to-day for account of the Earl Fruit Co., Tokay grapes, hf-crates at $1.90; Beurre Clairgeau pears, $3.05@3.30; Glout Morceau, $2.95; Easter Beurre, $2.20@2.45; Vicar, $2@2.20; Beurre Diel, $2.45@3; Lawrence, $2.25; Cornichon, $1.80. The weather is bad; raining hard.

Porter Bros. Co. sold four cars California fruit: Tokay grapes, full crates, $2.60@2.80; hf-crates, $1.15 @1.65; Muscats full crates, $1.25@2.15; hf-crates, 75c@$1.20; Black Morocco, full crates, $1.45@ 1.65; full crates Cornichon, $2.65; Emperor, full crates, $2.30; all in poor order.

WASHINGTON, Oct. 18.—The following is an editorial paragraph in this evening's *Star*, which explains itself: "What is the poison of the Eastern States seems to be in 1890 the meat of California. Her 10,000 carloads of fruits of various kinds on a liberal valuation of $10,000,000 make almost half the value of her last year's crop. With the failure of the fruit crop in the East, this snug item fits in well, and to the peculiar satisfaction of the fruit-raisers of the Pacific Slope and their friends. California fruit is fast coming permanently to the front, not simply to make good Eastern losses, but also to supply a constantly increasing demand."

NEW YORK, Oct. 18.—The *Commercial Advertiser* says it is interesting to note that as cherries are shipped from California in April, the Golden State furnishes us with fresh fruit during each month of the year.

Almeria grapes are now coming into market in large quantities. A recent letter from Almeria says the quality has never been finer and the bunches have averaged large. So far, about 50,000 barrels have been disposed of at very good prices. Last year 140,000 barrels were sent to New York. It is probable that about 150,000 will come this season.

NEW YORK, Oct. 19.—Fresh fruit holds a good demand and the supply of grapes is very attractive. Pacific pears were the valuable feature, and the market was active, as buyers seemed to be used to high prices.

Thirty-four cars sold at auction. Easter Beurre pears at $1.60@2.90; halves, $1.30@2.50; Winter Nelis, $1.35@1.90; wholes, $1.80@3.85; others, $1.90@4.70, including Commerce at $3.25 and Duchess at $3.30. Quinces sold at $2.60@2.80; peaches, hf-boxes, 20@90c; boxes, 85c@$1.60; Tokay grapes, single, 75c@$2.75; double, $1.30@5.05; Cornichon, $4.80; single, $1.40@2.95; Rose of Peru, 65@95c; Muscat, $1.30; double, $2.45@2.75; Morocco, $1.40@3.15; others, 80c@$1.70.

Nine cars sold at auction: Peaches, $1.20 per box; quinces, $2.12; Commerce pears, $1.60@3.55; Glout Morceau, $3.12@3.65; Winter Nelis, $1.90@ 2.75; halves, $2.10@2.15; others, $1,70@3.75. A carload of Natoma grapes brought $3.45@4 25; other double, $3.50@3.62; single, $1.60@2.15; others, $1.60@3.55.

NEW YORK, Oct. 20.—Sgobel & Day, agents for the California Fruit Union, auctioned to-day six carloads of fruit. Grapes, double crates, Tokays, $3@ 3.50; Morocco, $3.25; Emperor, $3.25; Terra, $2.55; single crates, Muscats, $2.50@1.15; Tokay, $2.40@ 1.45; Cornichon, $2.20@2.05; Morocco, $1.80@1.35. Pears, Barry, $3.35; Glout Morceau, $3.87½. Coe's late Red plums, $2.05. Boxes quinces, $2.85.

CHICAGO, Oct. 20.—The Montgomery Auction Co. sold to-day for account of the Earl Fruit Co., W. R. Strong Co. and others: Tokay grapes, full crates, $3.05 to $3,50; hf-crates, $1.25 to $1.50; Cornichon, full crates, $2.70; hf-crates, $1.45; Black Morocco, full crates, $3.35; Muscats, full crates, $1.75; Glout Morceau pears, $2.50 to $2.75; Easter Beurre, $2.25 to $2.30; Winter Nelis, $2.30; Beurre Diel, $2.75; Duchess, $2.75; late Red plums, $2.05. Some fruit in poor condition sold for less.

NEW YORK, Oct. 20.—It is reported that the California canned fruit sales in England to Americans, who reimported them to the United States, have reached such proportions that the English markets are practically bare. Those who reimported made good profits.

The position of Valencia raisins here is said to be disappointing, as the cost of the goods now on the way under the new tariff will exceed the quotation now made here for these goods in a variety of instances. California prunes are still held at higher figures than the French article, and are in light supply. Following are the comparative figures for the four sizes: French, 10¼c; California, 12¼@12½c.

NEW YORK, Oct. 20.—Fruit is more abundant now than during the summer. The market is, in fact, glutted. New York State is supplying a large quantity of Concord grapes, and the crop promises an enormous yield. Prices are low in consequence, about 4 cents per pound among the jobbers. Apples, too, are plentiful. The fruit is coming from Nova Scotia on the east to Missouri on the west, and from the Hudson river sections. California continues to supply the East with almost every variety of her delicious products. Peaches are cheap. On Saturday one auctioneer sold 11 carloads of fruit, including 5000 boxes of peaches.

CHICAGO, Oct. 22.—The California dried fruit market is quiet but steady; changes from last prices are very slight. California green fruits continue in good supply and the feeling was weak. Considerable stock, both of pears and grapes, is common and has to be sold low. Prices range as below: Peaches, $1.25@2, as to quality; pears, Winter Nelis, $1.25 @2.50; Vicar and Easter Beurre, $1.75@2.25; Muscat grapes, hf cases, 75c@$1; Tokay, $1@1.25; Cornichons, $1.25@1.50.

Hops.

NEW YORK, Oct. 22.—A carload of California hops has been sold at 38c, and 100 bales choice California at 42c. Buying is fairly active in the interior of this State for export account at 45@50c.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, *or beyond the time he intends to pay for it*, let him not fail to write us *direct* to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

PLEASANTON STOCK FARM CO., }
PLEASANTON, ALAMEDA CO., CAL., April 29, 1890. }

This is to certify that during the fall, winter and spring of 1889 and 1890, I had fed to the horses under my charge a ton and a half of Manhattan Food, and I consider it the best article of the kind I have ever met with or used. I consider it so valuable an adjunct to feeding that I shall always keep it on hand, and heartily recommend it to all owners, breeders and trainers of valuable stock. ANDY MCDOWELL, Trainer.

Housewives, Attention!

Two *new* first-class Sewing Machines for sale cheap. Will be sent direct from warerooms if desired. Address, H. F. D., Box 2517, San Francisco, Cal.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE, Oct. 15-21.	Olympia. Rain	Temp.	Wind	Weather.	Portland. Rain	Temp.	Wind	Weather.	Eureka. Rain	Temp.	Wind	Weather.	Red Bluff. Rain	Temp.	Wind	Weather.	Sacramento. Rain	Temp.	Wind	Weather.	S. Francisco. Rain	Temp.	Wind	Weather.	Fresno. Rain	Temp.	Wind	Weather.	Keeler. Rain	Temp.	Wind	Weather.	Los Angeles. Rain	Temp.	Wind	Weather.	San Diego. Rain	Temp.	Wind	Weather.
W.	.14	48	S	Ry.	.00	56	SW	Cy.	.00	52	W	Fr.	.00	74	S	Fr.	.00	72	S	Cl.	.00	56	W	Cl.	.00	76	0	Cl.	.00	66	N	Cl.	.00	66	W	Cl.	.00	66	SW	Cy.
T...	.16	48	S	Fr.	1.04	48	Nw	Fr.	.00	52	Nw	Cl.	.00	74	Nw	Cl.	.00	72	S	Fr.	.00	58	W	Fr.	.00	70	Nw	Cl.	.00	66	0	Cl	.00	66	W	Cl.	.00	66	W	Cl.
F...	.00	48	N	Cy.	.04	54	E	Cl.	.00	54	SW	Cl.	.00	74	S	Cl.	.00	72	S	Cl.	.00	60	W	Cl.	.00	78	0	Cl.	.00	70	W	Cl.	.00	66	W	Cl	.00	66	W	Cl.
S..	.20	50	S	Ry.	.20	52	S	Ry.	.16	58	S	Ry.	.00	72	S E	Cy.	.00	66	SW	Fr.	.00	54	W	Fr.	.00	84	Nw	Cl.	.00	72	0	Cl.	.00	64	W	Cl.	.00	68	W	Cl.
S...	.10	54	S	Cy.	.06	60	S	Fr.	.24	52	Nw	Cl.	.00	70	N	Cl.	.00	68	Nw	Fr.	.00	54	W	Cl.	.00	74	Nw	Cl.	.00	66	SW	Cl	.00	70	W	Cl.	.00	68	W	Cl.
M..	.22	52	S	Ry.	.00	58	W	Fr.	.00	54	Nw	Cl.	.00	84	Nw	Cl.	.00	74	SE	Cl.	.00	64	W	Cl.	.00	78	SW	Cl.	.00	72	N E	Cl.	.00	78	W	Cl.	.00	80	N	Cl.
T..	.00	60	SW	Cy.	.00	60	SW	Fr.	.00	54	Nw	Cl.	.00	86	S	Cl.	.00	70	Nw	Cl.	.00	78	W	Cl.	.00	82	0	Cl.	.00	66	S	Cl.	.00	82	Nw	Cl.	.00	84	N	Cl.
	.82				1.34				.40				.00				.00				.00				.00				.00				.00				.00			

EXPLANATION. Cl. for clear; Cy., cloudy; Fr., fair; Cm., calm; — indicates too small to measure. Temperature wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING OCT. 14, 1890.

438,223.—WASHING MACHINE—M. K. Biser, Los Angeles, Cal.

438,593.—INSECTICIDE—Giles & Brown, National City, Cal.

438,251.—WIND ENGINE—John Harder, S. F.

438,417.—STICKY FLY PAPER—E. Krull, S. F.

438,482.—CHURN—E. D. Middlekauff, Stockton, Cal.

438,273.—TRICYCLE — A. E. Miller, Sprague, Wash.

438,355.—VERGE WIRE FOR CLOCKS—J. M. Miller, Vacaville, Cal.

438,360.—HARNESS—J. R. Phelps, Sacramento, Cal.

438,177.—PIPE TONGS—J. M. Pray, Los Angeles, Cal.

438,178 — SKIRT-MEASURING APPLIANCE—J. F, Prizgint, Los Angeles, Cal.

438,362.—TIRE TIGHTENER—G. C. Richards, Sissons, Cal.

438,243. — WRENCH — H. Scheatzka, Bothell, Wash.

438,259.—CABLE RAILWAY—J. C. Shelley, Stockton, Cal.

438,449.—THROW OFF FOR CABLE-GRIP—T. W. C. Spencer, S. F.

438,455.—LAMP-SHADE SUPPORT—O. F. Wegener, Seattle, Wash.

The following brief list by telegraph, for Oct. 21, will appear more complete on receipt of mail advices:

California—John W. Gentry, assignor of one-half to J. Jacob, Oakland, railway-cable grip; John Hatch, San Francisco, safety device for elevators; Enoch Lawson, assignor of one-half to P. Leprohon, San Francisco, pipe coupling; William J. Herson, Stockton, assignor of one-half to C. D. Harson, churn; David D Jones, assignor to W. C. Anderson, San Jose, fruit-dipping apparatus; John Kueffer, San Francisco, assignor by mesne assignments to American Indicator and Improvement Company of California, automatic mechanism for station indicator in railway cars; Morris Lachman, San Francisco, sewing-machine; Ernest E. Lommatzsch, San Francisco, toy target; Abraham Morris, San Francisco, child's bed-lounge; Albert S. Morton, Suisun, wine-cooler; Chester W. M. Smith, San Francisco, metallic railway-car; Gottlieb Spicess, San Francisco, razor-strop; John C. H. Stutt, San Francisco, assignor to American Bell Telephone Company, Boston, Mass., telephone.

Oregon—John I. Hansen, Portland, stippling and stenciling brush; Mathias Jensen, assignor to Jensen Can-Filling Machine Company, Astoria, soldering machine.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

An Advertiser Testifies.

OFFICE PACIFIC GAS ENGINE CO., }
S. F., Oct. 21, 1890. }

To the S.F. Agent of the Pacific Rural Press, care Dewey & Co., Publishers—DEAR SIR: We are glad that you persuaded us to advertise in the RURAL PRESS, as it resulted in a large number of inquiries—no less than seven in one mail. We can trace at least three sales to this source, and have several more in prospect.

We have had inquiries from Florida, Cuba, Central America, New Mexico and Mexico.

We consider the advertisement a very good investment. Yours very truly,

PACIFIC GAS ENGINE CO.,
A. L. SERGEANT. J. F. DALY, Sec'y.

[This is only one of many evidences we have of the superiority of our paper as an advertising medium.—PUBS]

BERKSHIRE SALES.—Phil M. Springer, Secretary American Berkshire Association, Springfield, Ill., sends the following transfers of recorded Berkshires: Menlo Regent 24595, by J. S. Conner, Santa Clara, Cal., to F. H. Burke, S. F., Cal.; McGlauflin 24617 and Miss Bruce 24618, by Alex. A. Arnold, Galesville, Wis., to Geo. McGlauflin, Spokane Falls, Wash.; Nick 24797, by R. C. Halley, Salem, Or., to N. Baeson, Corvallis, Or.; Mollie Dun 24798, by R. C. Halley to H. Dan, Corvallis, Or.

Couldn't Spare It.

W. N., inclosing a remittance from Los Angeles, says: "Myself and family have been constant readers of the RURAL PRESS for more than 17 years, and we would be at a loss now without it. Every improvement makes it better."

Political Announcements.

[Notices admitted in this department are not necessarily endorsed by the editors or publishers of this paper.]

ATTENTION is called to the announcement of the American Party ticket and comment on the last page of this paper. Let every voter read, investigate and hold fast to that which is good and patriotic. Stand by your principles and hew to the line, every lover of this glorious country. Show your true colors at the ballot-box every time.

J. R. HEBBRON of Salinas is the Republican nominee for member of State Board of Equalization of the Fourth District. He has been a farmer in this State for 35 years and a member of Salinas Grange since 1874, and should receive favorable consideration from the fair-minded voters of his district.

ATTENTION is called to the announcement of Judge E. M. Gibson as candidate for Judge of the Superior Court of Alameda county. He is an old soldier, member of Temescal Grange, P. of H., and has been a popular Superior Judge for years.

— FOR —

JUDGE OF THE SUPERIOR COURT,

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Late Chief Executive Horticultural Officer of California. Illustrated with over 750 wood-cuts and 25 pages of classified illustrations. This book is designed for the use of orchardists, vineyardists, farmers and others interested in the subjects treated. It is designed to convey practical information concerning some of the species of insects injurious to the industries of cultivators of the soil, and those interested in earth produce generally. Price $4, postpaid. For sale by DEWEY & CO., publishers, 220 Market St., San Francisco.

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Niles's new manual and reference book on subjects connected with successful Poultry and Stock Raising on the Pacific Coast A New Edition, over 100 pages, profusely illustrated with handsome, life-like illustrations of the different varieties of Poultry and Live-Stock. Price, postpaid 50 cts. Address PACIFIC RURAL PRESS Office, San Francisco, Cal.

WANTED—A Cheap Second-Hand Washington PRINTING PRESS
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Five Steel Wire Cables, Oregon Pine Pickets, Boiled in Red Chemical Paint to Preserve the Wood and Color the Fence. Four Feet High, 2½ Inches between Pickets. Rabbit Proof, 70 Cents. This is the COMING FENCE. Address JUDSON MANUFACTURING CO., 14 and 16 Fremont St., San Francisco.

Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

GANG-PLOW FRAME.—Alfred F. McMillan, Benicia, assignor to the Benicia Agricultural Works. No. 435,367. Dated Sept. 2, 1890. In the construction of gang-plows it is customary to unite the beams together by means of intermediate strips, braces, or plates of iron, which are bolted through the sides of the adjacent beams by bolts or nuts; but with the strains which ordinarily are brought upon the plow frame through the plows, which are supported from each beam, these braces become loosened and the frame loses its rigidity. This improved frame is especially applicable to that class of plows having two or more parallel iron beams to each of which a plow is connected. The patent consists in the combination with the beams of a gang-plow, of diagonal plates extending across the beams in pairs, one above and one below, with spurs or projections fixed in the beams and extending into corresponding cavities in the bars, with bolts and nuts whereby said nuts are clamped to the beam.

CHECK-BIT.—Harris G. Cox, San Jose, Cal. No. 437,576. Dated Sept. 30, 1890. The object of this invention is to provide an improvement in that class of supplemental bits known as "overdraw-checks." The especial feature is the two connected bars of the bit, extending transversely across the horse's mouth, with swivel attachments for the rear bar and nose strap connection, which attachments allow the front portion of the bit to drop down and relieve the mouth of the animal from pressure as long as the head is held in the proper position.

FLOWER-POT.—Amanda J. Byrne, Tuscarora, Nevada. No. 437,565. Dated Sept. 30, 1890. The object of this invention is to construct a pot which shall be light, durable, tight and capable of being opened so as to remove the contents at will. It consists of two metallic sections, each forming one-half the pot, hinged together on a vertical line at one side and having means for securing the meeting edges on the opposite side and a circular bottom, one edge of which is fixed to one of the halves and the other adapted to fit in a groove or channel in the opposite half so as to make a tight joint when the parts are closed together.

HOSE-COUPLING.—Andrew T. Gilbert, Salem, Oregon. No. 437,890. Dated Oct. 7, 1890. The object of this device is to provide a simple and effective coupling which will admit of its ready connection to join two pieces of hose, or to connect the hose with the hydrant. It consists of two opposing pipes having heads, one of which fits into the other, engaging lugs on one side of the heads, and a swinging link and hook with which it engages on the other side of the heads, said link being carried by and tightened by an eccentric headed lever pivoted to one of the pipe heads.

HARNESS TOOL.—Henry Egbers, S. F. No. 437,888. Dated Oct. 7, 1890. This tool belongs to the general class of combination tools, but is especially adapted for use in connection with the handling of leather and articles and apparatus made therefrom. It will be found useful in repairing harness, belting, and in riveting and lace-cutting. The instrument combines a series of different sized punches, which are carried in the back of one of the jaws, and each can be readily taken out and placed in position to operate; a rivet-cutter between the two jaws, a strip cutter with guard and gauge on the body of the tool, an awl formed by the sharpened end of one handle, an anvil carried in the end of the other handle, and a hammer formed on the back of one of the jaws.

NEWSPAPER AGENTS WANTED.

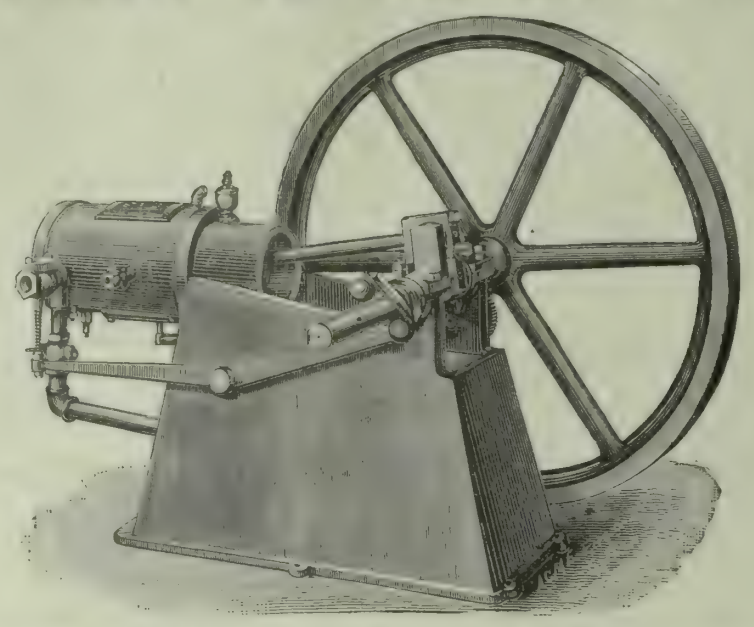
Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to soliciting subscriptions and advertisements for this journal and other first-class popular newspapers. Apply soon, or address this office, giving address, age, experience and reference. Special inducements to old agents.

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OUR STATIONARY ENGINES are especially adapted for PUMPING and IRRIGATING.

OVER 150 IN USE.

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REGAN VAPOR ENGINE CO.—Gentlemen: The 4 H. P. Vapor Engine I bought of you last May has been in constant use ever since, and has given me entire satisfaction. I have found the engine to be all that you claimed for it, and more too. You can use my name for reference if you so desire. I am, yours truly, H. TALBOT.

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THOS. KANE & CO., 137-139 Wabash Avenue. Chicago, Ill.

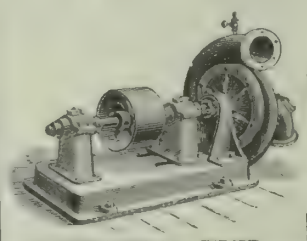
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For Governor,
EDWARD B. POND of San Francisco.

For Lieutenant-Governor,
R. F. DEL VALLE of Los Angeles.

For Chief Justice,
JOHN A. STANLEY of Alameda.

For Associate Justices,
JACKSON HATCH of Santa Clara (Short Term).
JAMES V. COFFEY of San Francisco.
GEORGE H. SMITH of Los Angeles.

For Secretary of State,
W. C. HENDRICKS of Butte.

For Controller,
JOHN P. DUNN of San Francisco.

For Treasurer,
ADAM HEROLD of Placer.

For Attorney-General,
WALKER C. GRAVES of San Francisco.

For Surveyor-General,
STANLEY C. BOOM of Humboldt.

For Superintendent of Public Instruction,
H. C. HALL of San Mateo.

For Clerk of Supreme Court,
J. D. SPENCER of Stanislaus.

Congressmen,
First District—THOMAS J. GEARY of Sonoma.
Second District—A. CAMINETTI of Amador.
Third District—JOHN P. IRISH of Alameda.
Fourth District—.....
Fifth District—THOMAS J. CLUNIE of San Francisco
Sixth District—W. J. CURTIS of San Bernardino.

Board of Equalization,
First District—.....
Second District—JAMES BRADY of Alameda.
Third District—RICHARD H. BEAMER of Yolo.
Fourth District—JOHN T. GAFFEY of Los Angeles.

Railroad Commission,
First District—ARCHIBALD YELL of Mendocino.
Second District—C. H. HASWELL, Jr., of San Francisco.
Third District—LAWRENCE ARCHER of Santa Clara.

NOTICE.—"The polls must be opened at sunrise of the morning of the day of election, and must be kept open until five o'clock on the afternoon of the same day, when the polls shall be closed."—(Section 1160 Political Code, Statutes 1889, page 209.)

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SONG MANUAL. Complete Course in Music Reading. Books 1 30c. 2 40c. 3 50c. Per doz. $3 $4 20 $4.80

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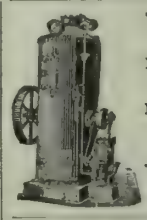
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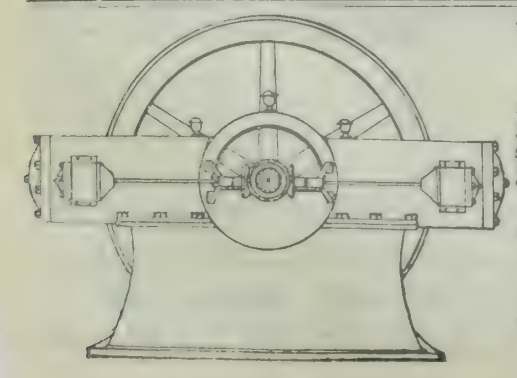
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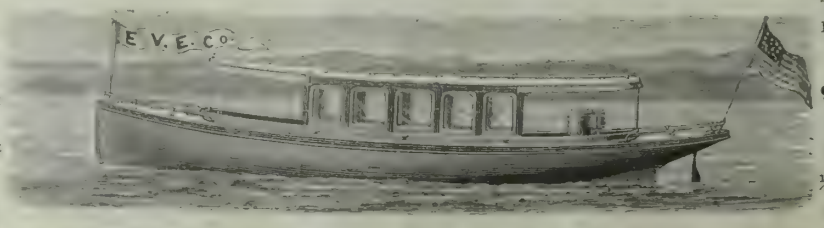
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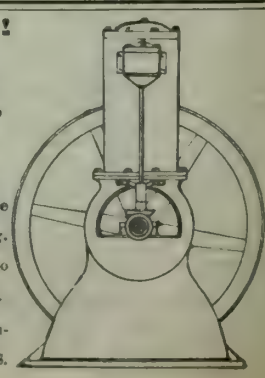
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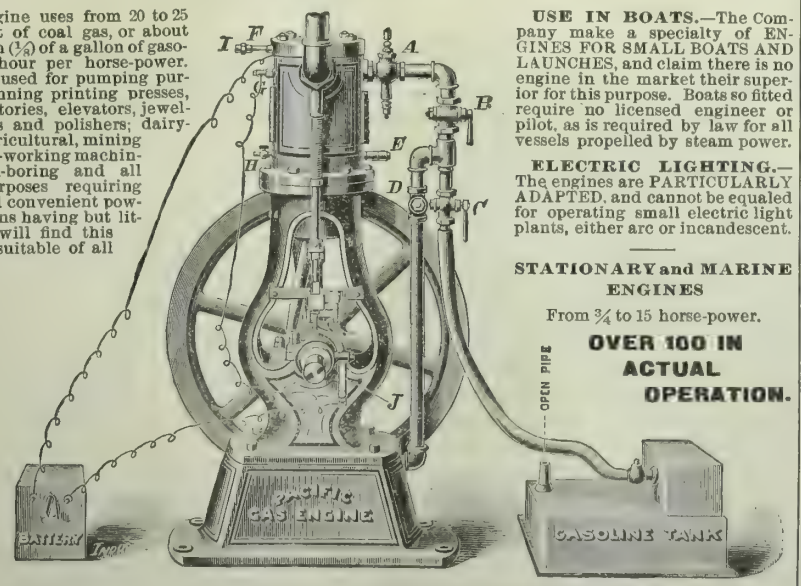
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The engine uses from 20 to 25 cubic feet of coal gas, or about one-eighth (⅛) of a gallon of gasoline per hour per horse-power. It can be used for pumping purposes, running printing presses, small factories, elevators, jewelers' lathes and polishers; dairymen's, agricultural, mining and wood-working machinery; well-boring and all other purposes requiring cheap and convenient power. Persons having but little space will find this the most suitable of all motors.



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From ¾ to 15 horse-power.

OVER 100 IN ACTUAL OPERATION.

READ THESE TESTIMONIALS.

ALAMEDA, April 3, 1890.

PACIFIC GAS ENGINE CO.—GENTLEMEN: Permit me to add my testimonial to the many you have received indorsing your engine. As you are aware, mine was a Regan engine which gave me considerable trouble. I had to remove the head and raise the tappet valve every time I wanted to start the engine. I sent you the engine; you removed all the Regan appliance except the cylinder and stand. You put in your appliances, head, sparking device, inlet valve, and, in fact, changed it to the Pacific Gas Engine, which now works splendidly. I have not had to remove the head for any cause since you made the change (over two months). It gives me no trouble; my boy, 14 years old, attends to it.

The change from the Regan to the Pacific is a decided improvement. I can also get a third more power since the change, and I cheerfully recommend your engine as being simple, effective, and cheap. Respectfully yours,

B. S. HILL, S. W. Cor. Encinal Ave. and Morton St.

MAYFIELD, March 26, 1890.

PACIFIC GAS ENGINE CO.—We have given your little 1-H. P. engine a splendid advertisement. A fire broke out at 2:30 o'clock this morning, in a tenement house on my premises. I started the engine, connected the hose, and by its use saved at least $3000 worth of my property. I saved my blacksmith shop, lying 12 feet from the burning building, my barn and my dwelling. Three times the fire started in these buildings, and I extinguished it every time. The engine never faltered, and threw water between 50 and 60 feet high. The whole town was astonished, and they acknowledged that I saved at least $20,000 worth of property.

A fire department is being organized here, and I think they will have one of the engines on a truck for fire purposes. *They cannot be beaten.*

Hoping that all of your customers will be as well pleased with the engine as I am, I remain, Yours truly,

JOS. P. PONCE.

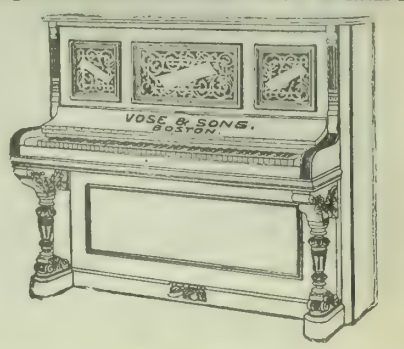
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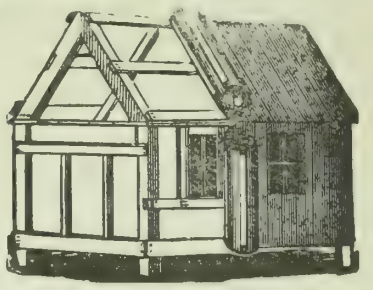
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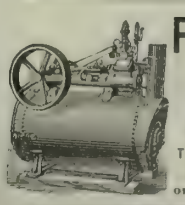
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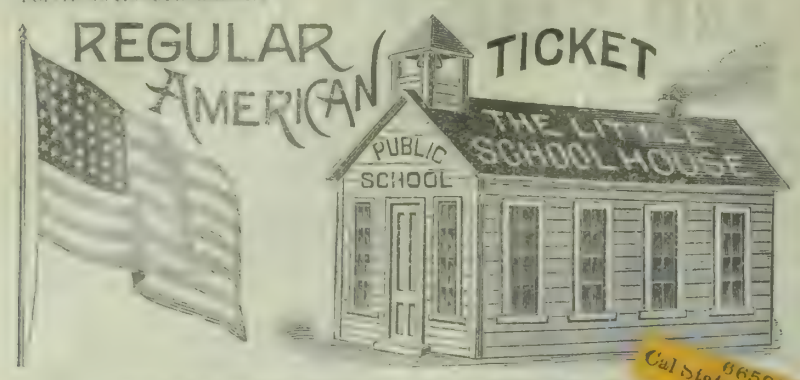




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2 LIEUTENANT-GOVERNOR, BEN MORGAN.
3 SECRETARY OF STATE, WM. S. LYON.
4 CONTROLLER, M. C. WINCHESTER.
5 TREASURER, GUY E. GROSSE.
6 ATTORNEY-GENERAL, CHAUNCEY H. DUNN.
7 SURVEYOR GENERAL, WM. L. DIXON.
8 CLERK OF SUPREME COURT, J. D. SPENCER.
9 SUPERINTENDENT OF PUBLIC INSTRUCTION, D. LAMBERT.
10 CHIEF JUSTICE OF SUPREME COURT, WILLIAM H. BEATTY.
11 ASSOCIATE JUSTICE OF SUPREME COURT, CHAS H. GAROUTTE.
12 ASSOCIATE JUSTICE OF SUPREME COURT, RALPH C. HARRISON.
13 ASSOCIATE JUSTICE OF SUPREME COURT, UNEXPIRED TERM, JOHN J. DeHAVEN.

JUDGE CHARLES H. GAROUTTE

Stands before the people without reproach. If letters of commendation and approval may be accepted as evidence of popular approval, the Americans and Republicans builded better than they knew when they named Judge Garoutte for a seat on the Supreme bench. The Judge and his many friends must notice with no small degree of pleasure that though charges are made, complaints uttered and fault found with nearly every other candidate, no one has been able to find a flaw in his social or official record. He is a Native Son whom all respect and of whom the State is proud. His strongest commendation is found in the fact that he is most warmly esteemed where he is best known. His friends are many, and all are earnest and sincere. For the past six years he has been Superior Judge of Yolo county.

GENERAL JOHN BIDWELL,

The American candidate for Governor, is an old and tried Californian. He has lived here for nearly 50 years. There is no shadow or stain upon his social, political or business record. While other candidates go about explaining this or that act of their lives, Gen. Bidwell has nothing to explain; nothing to answer; nothing to excuse or palliate. His life has been so unblamable, so upright and so morally correct that fault-finders can find nothing at which to carp. Yet since 1849 he has been prominently before the public. He has held many official places, many responsible offices, and from each he has come with credit to the people and honor to himself.

EVERY COUNTY COMMITTEE should take care to have a place on the tally-sheets for the AMERICAN record, so that our votes may not be counted as scattering.

COUNTY COMMITTEES will be furnished the names of the nominees for Supreme Judges on application to the State Secretary.

IF you cannot get an American ballot, make one of an old party ticket. Scratch POND or MARKHAM and DEL VALLE or REDDICK, and write on the margin the names of BIDWELL and MORGAN. You need only change nine names thus to give yourself a full American ticket.

IF you feel that you ought to vote the American ticket and cannot find an American ballot, scratch an old party ticket and write in the names of the American candidates. It will take but a minute's time, and you will feel all the better for voting your principles.

SEE that your tickets are the right width, length and color, and the names of the candidates printed in regular order.

THE man who is afraid to vote for what he believes to be right is helping those who would take from him the privilege of voting at all.

HON. BEN MORGAN,

American candidate for Lieutenant-Governor, is rapidly growing in popularity. He is able, honest, manly and American. The Humboldt Co. *American Flag* publishes the statement of a well-informed and very conservative gentleman to the effect that Mr. Morgan's vote will exceed 30,000. It is certain that thousands of Democrats will not vote for Del Valle, and as they will not support the Republican candidate, it is fair to presume they will vote for Mr. Morgan. Mr. Ruddick, the Republican nominee, is a man of small caliber and least popular where he is best known. It is stated that in many localities he will run a long way behind his ticket. Dunn, Democratic nominee for Controller, an ardent Roman Catholic, is using his influence for Del Valle, and as he is now Controller, he is enabled to throw quite a number of Republican votes in Sacramento against Mr. Ruddick. Mr. Morgan is by far the most fitting candidate for Lieutenant-Governor, and if the voters of the State are wise, he will be Lieutenant-Governor.

WILLIAM S. LYON,

American candidate for Secretary of State, is one of the most thorough of Americans. He is active, energetic and earnest. He is an American because he believes we must maintain our American institutions if we would maintain our national existence. He has carefully studied our history and marked the tendency of the two old parties to yield political control to the foreign-born element, if it will only sustain a few of the leaders in office. He realizes that when the American people will no longer assert themselves as a people, the liberties that are the rewards of a government by the people are menaced, and will ultimately be lost. Mr. Lyon is Head Forester of the State Board of Forestry, and as such he has proven himself an efficient and faithful public servant. He is well and favorably known throughout the State. He is a resident of Los Angeles, where all are his friends.

STAND by the public school. Do not vote for a man who is not for free education. Vote for D. Lambert, American nominee for State Superintendent of Public Instruction.

DON'T forget that if you scratch one candidate's name and don't write the name of another opposite, or the words "no vote," the scratched name will be counted.

A VOTE for principles is never lost. The first Free-soil or Republican candidate for President received less than 7000 votes in the whole United States, but those he did receive were cast by men who voted for principle. If you believe in the principles of the American party, prove that you do by voting for American candidates.

Platform of the American Party of California.

ADOPTED AUGUST 4, 1890.

WHEREAS, Believing that the time has arrived when a due regard for the present and future prosperity of our country makes it imperative that the people of the United States of America should take full and entire control of their Government to the exclusion of the revolutionary and incendiary horde of foreigners now seeking our shores from every quarter of the world; and recognizing that the first and most important duty of an American citizen is to maintain this Government in all attainable purity and strength, we make the following declaration of principles:

Resolved, That all law-abiding citizens of the United States of America, whether native or foreign-born, are political equals (except as [illegible]ded by the Constitution), and all are entitled to and should receive the full protection of the laws.

WHEREAS, There are at least 17 States in this Union wherein persons are allowed to vote at all elections, without being citizens of the United States; and whereas such a system tends to place the management of the Government in the hands of those who owe no allegiance to our political institutions; therefore be it

Resolved, That the Federal Constitution should be so amended that the Federal and State Governments shall be forbidden and prevented from conferring upon any person the right to vote, unless such person be a citizen of the United States.

Resolved, That the naturalization laws of the United States should be unconditionally repealed.

Resolved, That the soil of America should belong to Americans; that no alien non-resident should hereafter be permitted to acquire real estate in the United States; and

WHEREAS, Tracts of millions of acres of land have heretofore been acquired and are now owned by subjects of foreign Governments, which, under existing laws, may be transmitted, intact, from generation to generation, thus enabling foreigners to build up and maintain immense landed estates in this country; therefore

Resolved, That we favor an amendment to the Constitution of the United States prohibiting non-resident aliens from transmitting real property by will; and render forever incompetent all persons whomsoever from taking real property from non-resident aliens by devise or descent; and

WHEREAS, By reason of the lax condition of the State and National land laws, in reference to the disposition of the public land, aliens, resident and non-resident, have been enabled to acquire, and have acquired, vast tracts of the public lands, and have thereby deprived American citizens of their birthright; now, therefore, in order to prevent the continuance of this great evil, be it

Resolved, That we demand that the National and State land laws be so amended that no persons except native-born citizens shall be permitted to enter or purchase any public land from the State or National Government.

Resolved, That the ownership of land by resident aliens should be limited in area and value.

Resolved, That we favor educating the boys and girls of American citizens as mechanics and artisans, thus fitting them to fill the places now filled by foreigners, who supply the greater part of our skilled labor and thereby almost entirely control all the great industries of our country, save, perhaps, that of agriculture alone; and in order to accomplish the object here stated, we demand that the State establish free technical schools, wherein American boys and girls may be taught trades and thereby become skilled artisans and mechanics.

Resolved, That we believe in equal and just taxation, and to accomplish this necessary reform we favor a uniform reduction of taxes on the real estate of the cultivator of the soil, and the imposing of advanced rates on property coming under the head of luxuries;

Resolved, That we are in favor of fostering and encouraging American industries of every class and kind, and to that end would protect our home productions and manufactures and inaugurate and maintain a system that will not only exclude the competitive cheap labor productions of other countries, but will also exclude the cheap laborers of other countries and prevent them coming here to compete with American workingmen; but we denounce the so-called issue of protection vs. free trade, as used by the Democratic and Republican parties, as a fraud and a snare, and we charge that the consideration which these parties manifest for the rights of American labor is a sham and a pretense. The best "protection" is that which protects the labor and life-blood of the Republic from the degrading competition with, and contamination by, imported foreigners; and the most dangerous "free trade" is that in paupers, criminals, communists and anarchists, in which the balance has always been against the United States.

WHEREAS, One of the greatest evils of unrestricted foreign immigration is the reduction of the wages of the American working man and woman to the level of the underfed and underpaid labor of foreign countries; therefore, we demand that Congress pass an immigration law whereby a per capita tax shall be levied upon and collected from all immigrants coming to the United States; and that such tax be made large enough to restrain further immigration from all foreign countries; and that all persons not in sympathy with our government should be prohibited from immigrating to these United States.

The Public School.

We regard the American common-school system as one of the chief factors in the formation, and one of the principal powers for the perpetuation of our republican form of government. In a government "of the people, by the people and for the people," intelligence is one of the principal elements of safety, and a common-school education should be made compulsory by law. Education is a sacred debt which the present generation owes to the future. The common schools must continue to be the nurseries of citizenship where our youth shall be taught the common branches, the history, the principles and the spirit of American institutions, and where the highest standard of excellence as regards moral, mental and industrial education shall be maintained; and from which shall be rigidly excluded all sectarian and denominational teaching, in order that children of all nationalities molded by them shall become Americans.

The common schools must be protected from all assaults, native or foreign, sectarian or ecclesiastical; and all private schools must be under State inspection, and teach the English language as a preparation for intelligent citizenship. The American flag ought to float over every school building in the land as an object-lesson in patriotism for childhood, and as a symbol to the world that we consider these buildings the arsenals of our strength.

As an important step in defense of the common-school system of education, and the perpetuation of the separation of Church and State, we join with other citizens in seeking to incorporate in the Constitution of the United States a sixteenth amendment embodying the following prohibitions:

"No State shall pass any law respecting an establishment of religion, or prohibiting the free exercise thereof, or use its property or credit, or any money raised by taxation, or authorize either to be used for the purpose of maintaining or aiding by appropriation, payment for services, expenses or otherwise, any church, religious denomination or religious society, or any institution, society, or undertaking, which is wholly or in part under sectarian or ecclesiastical control."

Resolved, That after the year 1898, no person shall be allowed to exercise the right of suffrage unless he can speak, read and write the English language intelligently.

Resolved, That the American party recognizes in the *saloon* the great agency by which corruption in politics is fostered and the power of *the bosses* maintained; and hereby pledges itself to work honestly and earnestly for the restriction of the evil to the narrowest possible limit.

Resolved, That the American party believes in and will do its utmost toward maintaining a pure ballot-box, and to that end we are in favor of an election law which embodies the features and principles of the Australian ballot system.

Resolved, That the American party believes in a free and full expression of the people upon all questions of public interest, and for the better attainment of this end, we favor the enactment of a law by which any question of general import, upon the petition to the Governor of three per cent of the total vote cast at the last previous election, shall be submitted to the electors at the next general election for their approval or rejection.

Believing that the industries of America demand an increase of circulating medium, therefore be it

Resolved, That the American party hereby declares itself in favor of the free coinage of silver.

Resolved, That we are heartily in favor of the bill introduced in the Senate of the United States by the Hon. Leland Stanford, providing for loaning the money of the Government to agriculturists at low rates of interest, taking as security therefor the land of the borrower, and we earnestly urge upon Congress the passage of this bill.

A list of States in the American Union in which persons are allowed to vote at all elections without being citizens of the United States, to wit:

Alabama,	Iowa,	Nebraska,
Arkansas,	Kansas,	North Carolina,
Colorado,	Louisiana,	Oregon,
Florida,	Michigan,	Texas,
Georgia,	Minnesota,	Wisconsin,
Indiana,	Missouri,	*North Dakota*,
		South Dakota.

[North Dakota and South Dakota have been admitted to the Union with Constitutions that permit aliens to vote at all elections, thus increasing the number to nineteen.]

REFERENCE NOTE.—The above list is compiled from "Hill's Manual for 1882," and is published in the *North American Review* for March, 1887, and will be found in the *North American Review*, bound vol. 144, p. 306.

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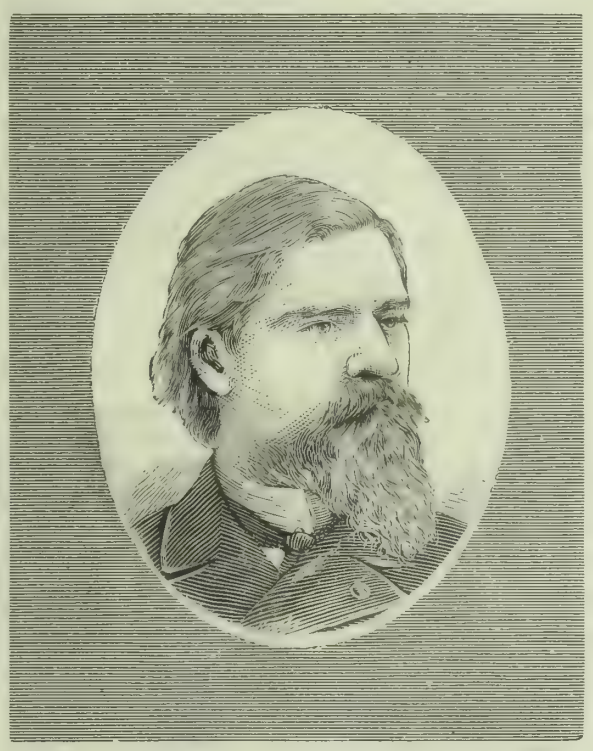
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A Family Group.

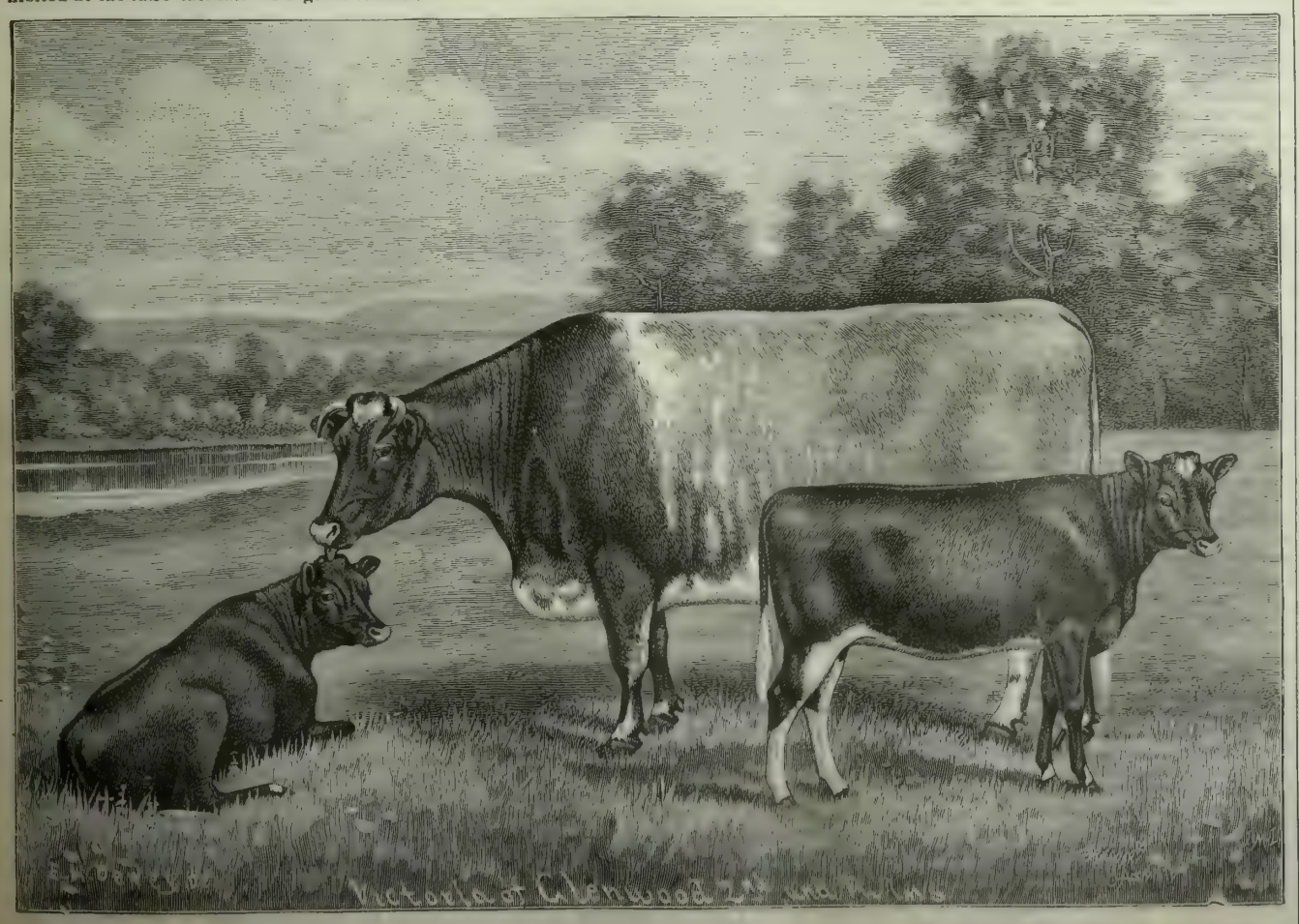
The affection of the lower animals for their young furnishes some of the most interesting observations to those who enjoy studies of animal life. The artist does well to suggest it in his sketch of a regal Shorthorn dam and her twin calves, which appears upon this page.

The animals are Victoria of Glenwood 2d and her twin offspring, and they are members of the Hickory Park herd of Shorthorns owned by C. M. Sanger & Son, Waukesha, Wisconsin. There is, however, a local California interest in the herd, for Mr. C. M. Sanger is identified with California industries, and when in this State usually makes his home at San Leandro, so that he has a wide acquaintance in this State.

The cow Victoria Glenwood 2d, a five-year-old roan, bears her twin calves to imported Giltspur. The *Breeders' Gazette* says that this cow was one of the seven head of Sittyton (Cruickshank) Victorias sold at the Cummings sale of June 10, 1886, for a total of $4180, an average of nearly $600 each, and is a daughter of that fine old matron Imp. Victoria 51st, one of the rare, deep-fleshed, heavy-milking cows that first gave the Sittyton cattle their wide reputation in the West. Her sire, Royal Duke of Pleasant Ridge 36889, was also fashioned in that same low and heavy mold, and Mr. Dewey's drawing indicates that the cow in question is possessed of much of the substance of her sturdy Scotch ancestry. She is an own sister to the dam of that excellent bull Prince Victoria of Hickory Park 94481, and standing at the head of the herd the Messrs. Sanger exhibited at the fairs this fall with great success.



COLONEL GEORGE R. DAVIS, DIRECTOR-GENERAL OF THE WORLD'S FAIR.



A GROUP FROM THE HICKORY PARK HERD OF C. M. SANGER & SON.

Few, if any, families in the Shorthorn Herd-Book can claim a lineage richer in the blood of first-class cattle than is shown by these Victorias. From "the Beautiful Lady Maynard" down to Champion of England and subsequent Sittyton sires, the pedigree displays the names of animals distinguished alike for good breeding and high character as individuals. Of this tribe was the great Linwood sire Imp. Baron Victor, one of the most successful herd bulls ever used in the West; but no branch of the family can justly be ranked above those descending, as do the Victorias in the Hickory Park herd, from the famous importation made some 15 years ago by Mr. Robert Milne of Lockport, Ill.

The Director of the World's Fair.

We recently stated that the World's Fair enterprise, having been properly officered, may now be considered as well upon its course. By the courtesy of the *Morning Call* we are enabled to present on this page a portrait of the chosen Director-General upon whose efforts much of the success of the undertaking will depend.

Colonel Geo. R. Davis, Director-General of the World's Fair, was born at Three Rivers, Palmer, Mass., Jan. 3, 1840, and educated in the public schools, and at Williston Seminary, where he graduated in 1860. Entering upon the study of law, he was admitted in due course, but in 1860 forsook his chosen profession to join the Union army. He enlisted in the Eighth Massachusetts Volunteer Infantry, and soon became a captain. At the close of the contest he became a resident of Chicago, still retaining his interest in military matters. He took a leading part in the organization of the local militia, and was made commander of the First Regiment of Infantry, Illinois National Guard, and senior colonel in the State service. In 1876 he was nominated for Congress by the Republicans of his district and defeated, though running largely ahead of the Presidential ticket. Two years later he was more successful and was elected. He was re-elected in 1880, and again in 1882. At present Colonel Davis holds the position of Treasurer of Cook county, of which Chicago is the seat.

BEET SUGAR ON THE MISSOURI.—A meeting was held at Sioux City, Iowa, Oct. 23d, for the purpose of securing pledges from the farmers of sugar beets. H. T. Oxnard, the Grand Island, Nebraska, sugar manufacturer, made a proposition to put in a plant at South Sioux City, to cost $500,000, for a bonus of $150,000, in cash and real estate, and a guarantee that 2000 acres of beets would be raised in the vicinity next year. There was no trouble in getting pledges for the required number of acres, and the very next day a committee started for Grand Island prepared to put up a guarantee bond for the bonus.

CARING FOR CATTLE.—At the recent meeting of the American Humane Association at Nashville, the subject of cattle transportation was taken up. During the past year a special agent was appointed to travel over the different roads to see that animals are properly treated and watered in transit. The chairman stated that there were 3000 improved cattle cars in use west of Chicago, but none east of that city.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

Alessandro.

EDITORS PRESS:—To-day, Oct. 15, 1890, ought to be marked in the history of San Bernardino county as Alessandro Day. For several months past it has been known that a company of Eastern capitalists were preparing to put the Alessandro tract on the market in small parcels suitable for fruit farms, but the work was done so quietly that few had any idea of its extent. Having first secured an option on the Alessandro tract, they proceeded to secure an option on the Make tract of 10,000 acres, running across the valley from east to west, and lying to the north of the Alessandro tract. These, with some railroad lands which they have bought, make the amount up to about 21,000 acres of as fine fruit land as can be found in Southern California. They then made a contract with the Bear Valley Co. for water for their lands and were then ready to begin selling, which they seem to have found no trouble in doing, as they have sold to date options on 6180 acres, and the parties met to-day at the company's headquarters in the valley, about 11 miles northeast of Alessandro, to select their lots. It was estimated that 450 people partook of the free lunch furnished by the company, and about 50 others who had provided for themselves were present. The Redlands Brass Band discoursed sweet music while the gentle voice of the clerk was heard calling the numbers of the options, and the lucky holders were calling the numbers of the lots desired. This sounds something like the boom times of '86-7, when the brass band, free lunch and auctioneer were heard all over the land, but with this difference: Then they were buying city lots for a speculation; now they are buying 10 and 20 acre tracts for actual cultivation. A contract is let for laying a two-foot pipe to bring water on to the land by March 1, 1891, and the tunnel is now being dug to bring it through the San Timoteo hills between Redlands and the valley. A large canal will follow. Business men are taking hold of these lands, as it has been demonstrated that there is no surer investment in this country than in good fruit lands *with water*.

The lands are being sold so cheap that it is claimed they will soon double in price, and everybody seems to have the utmost confidence in the future of the valley. The Perris people have also formed a district under the Wright law and are to get water from Bear valley. Many have lived on hard-tack and hope, waiting for these times, and it is to be hoped that their desires may be realized and they can get up out of the drudgery and small pay of grain farming.

A town site has been laid off on the eastern end of the tract in sight of San Jacinto lake and city, as well as Alessandro and a large portion of the western end of the valley. It is called New Haven, after the early home of F. E. Brown, the engineer of the company.

L. S. LYMAN.

Alessandro, Cal., Oct. 15, 1890.

Ventura Notes.

EDITORS PRESS:—At present writing the weather is warm and dry—fine for threshing beans. The valleys in the eastern part of Ventura county are now enjoying (?) an east wind. Beans have been going into the warehouses pretty lively the past few days. If favorable weather holds until the middle of November, the farmers will secure their crops and be ready to cultivate the land for the coming season's products. The weeds show green even now as you look across the mellow fields.

In a five-mile drive yesterday we took an inventory of some of the things going into Ventura market. First a load of "golden pumpkins," which are really squashes, but they are "golden" in one sense, as they bring coin this season. Next come loads of beans, sacked and marked with the owners' names, and then a wagon piled high with bales of hay. How complacent that driver looks! and well he may, for that wagon-load of sacked walnuts will weigh quite heavy in silver dollars. A cloud of dust ahead of us caused some curiosity—a veritable "pillar of cloud," for it was darkness to us on the hither side. On nearing, it proved a drove of very prosaic cattle, being driven from the hills to the slaughter-pen. There are plenty of cattle in Ventura county, and much fine stock, too; but no one as yet has taken hold of the dairy—that is, to make butter and cheese. There are two farms near Ventura where cows are kept and milk is supplied to customers twice a day from milk-wagons sent into the town. One of the gentlemen, Mr. L. M. Lloyd, keeps about 250 head on the range back of his delightful valley home. The cows are brought from the hills, milked a short time, and then allowed to run at large again. Probably some 40 or 50 cows are milked during the year. Mr. Lloyd does not attend to this business himself, but with true Southern generosity allows his children to reap the benefit of the business. The stock is graded through introduction of Holstein blood. The owner likes the Holsteins for their milking qualities, although his first object in keeping stock is not for dairy produce but for beef. This enterprise of carrying on a dairy is a new one to Mr. Lloyd, but he calls it reasonably profitable. The cows graze during the entire year and are never fed at all. Mr. Lloyd also raises draft horses, which he finds profitable.

We are indebted to Mr. and Mrs. Lloyd for many courtesies. They have a model home in every sense, furnished with every convenience. Mrs. Lloyd finds her mission in her family, and her children are a true crown to a royal womanhood. It seems truly a delight to meet a refined, cultivated lady who finds the home field broad and rich enough, without the modern frenzy to plow and harrow in the world's vineyard.

When that drove of cattle passed by leaving us choking and blinded with dust, we continued on our way with true California stoicism where dust is concerned, and soon saw two wagons containing vegetables of many sorts, while perched on the seat of each vehicle was the usual "heathen Chinee," without whom a California landscape would seem unfamiliar. Dried fruits by the ton passing to various shipping points is a not infrequent sight. What country on the globe furnishes more variety in a given area than Ventura county? pray tell me. We have given barely a glance at a few.

M. E. DUDLEY.

THE APIARY.

Where to Keep Honey.

EDITORS PRESS:—Too much cannot be said of the importance of proper caring for honey after it is taken from the hives. I am afraid that a great many producers do not give their surplus honey the attention that it requires by proper ripening and the grading and selection of packages for both comb and extracted honey.

Remember that one of the greatest secrets in the honey business is to have it thoroughly ripened before placing it on the market. It does not pay to use second-hand pails and cans for packing and shipping extracted honey. The man who has his honey put up in new cans, with a bright, attractive label, will make five sales to where the man who has used old cans will make one.

All extracted honey should be graded. In our part of the State we have three different grades—the white, amber and dark—ranging in price from 1 to 5 cents per pound. Comb honey should also be graded into two or three different grades. After grading and scraping the propolis from the sections, it should be put in section or shipping cases and kept in a warm honey house.

Never under any consideration keep honey in a cellar or even in a room where the temperature changes so much as to cause dampness to settle on the surface of anything. If you do, the aroma and exquisite taste of the honey is destroyed and it is spoiled.

A great many of the ranchers who keep bees in California, and who know very little about the business, after taking off their surplus honey carry it to the cellar, under the impression that there is the proper place to keep it.

After the flavor is destroyed and the honey acquires a disagreeable taste, it is no wonder that a great many people say they do not like honey.

A great many bee-keepers have quite a time disposing of their honey, and I think that it is mainly because it has not been properly ripened or has been kept in a damp place.

Of course after a bee-keeper sells one crop of this unripened honey, the chances are that he will have a hard time in disposing of his next season's crop, no matter if it is thoroughly ripened.

I remember once in my early apiarian career that I took a lot of honey from the hives as soon as the cells were ready to cap. The honey, as I afterward learned, was gathered from the hollies, and honey from that source usually requires a month or six weeks to ripen in.

The honey when first gathered was not fit to eat, and I put it all back. After that I allowed all honey to ripen in the hives, or in tanks, after it had been extracted, before we attempted to use it.

An old man once asked me why the honey obtained from bee trees in the winter-time was always superior to any honey he ever bought or had taken from hives. I told him the reason probably was that the honey he bought in the stores and that he had taken from the hives was not as well ripened as that taken from the bee trees.

The most essential requisites for ripening honey are warmth and dryness; and this is especially necessary from the time the honey is stored in the hive until it is fully ripened. In Southern California they ripen their extracted honey in large tanks, holding from one to several thousand gallons, and in most cases the honey is ripened out in the open air. A screen of some kind is fastened on the top to keep out bees and insects, and if I am correctly informed, they leave the honey in those tanks from two weeks to two months. To an apiarist of small means, who has only a few colonies and wishes to ripen his extracted honey, I would advise him to buy a few stone crocks or jars, for they answer the purpose well. In storing comb-honey in a honey-house, be sure to keep it several inches above the floor, because in rainy and cold weather the honey seems to draw moisture, and the honey becomes thin and watery and sometimes acquires a sour taste.

When you have finished canning all your extracted honey, have it so placed that the sun may shine on it as much as possible.

Grizzly Flat, Cal. S. L. WATKINS.

Bee Diseases.

EDITORS PRESS:—I am glad to see in your issue of Oct. 11th that the president of the California Academy of Sciences has corroborated my opinion (given in the RURAL PRESS of July 6, 1889) that the ergot or black smut, commonly known as the ergot of rye, is undoubtedly the cause of the hitherto unnamed bee disease in California, which I first made known as above, as "Claviceps Apium."

I shall be glad to hear from any apiarist who has this or any other disease among his bees this season, and I will gladly give my opinion and remedies for the various diseases through the columns of the RURAL PRESS.

While on the subject of diseases, I may mention that I have lately read an article, which is at present going the rounds of the bee papers, taken from the Ontario Government Bulletin, stating that foul brood is caused by the rotting of uncared-for brood or chilled brood, which has died in the cells. As this statement is likely to cause an erroneous impression, I wish to say that chilled brood and foul brood are totally different, and although chilled brood is very often mistaken for foul brood, yet the former can never produce the latter disease unless the foul-brood germs are present.

Foul brood is the production of a very infectious disease germ, which (like smallpox or scarlet fever in human beings) can only be reproduced from a like disease. I am surprised that in this enlightened age such false "information" should be published by so high a source, and more surprised still that some of our leading bee journals have not contradicted the above statement ere it has been so widely diffused.

WM. STYAN.

San Mateo, Oct. 14 1890.

Honey in Monterey County.

Mr. C. S. Swenson is the leading apiarist of Monterey county. At the recent district fair held at Salinas City, he exhibited sections of honey in the comb and extracted honey that was pronounced by experts the clearest and finest in flavor of any they had ever seen.

He informed a RURAL reporter that this sample was selected from 260 stands, and while the larger part of it was equal to sample shown, he expressed his opinion that the crop this year was the best that he had ever made. He took the first premium and several parties made arrangements to secure some of the honey in comb and extracted.

THE FIELD.

The Beet-Sugar Industry.

THIRD PAPER.

Harvesting (Continued).

EDITORS PRESS:—Like any other crop, the farmer should plan well the harvesting of his beet crop. The method adopted in this country is to provide a plow-beam with two subsoil plows, one on each side of beam and directly opposite. The upright frame or standard of each plow should incline outward and the points inward, the object being to give good space for the tops of beets to pass freely between the two plows under the plow-beam and still have the points close under the beets. By this means the soil, together with the beets, is raised about two or three inches and dropped back into place; the beets are thereby loosened and can be easily picked up and topped. In topping the beet a large knife is used, and any part of the beet that has grown above the ground should be cut off. Care should be taken that the beets are as clean as possible and for this purpose should be left on top of the ground exposed to the sun for one day, so as to dry them as much as possible.

Cost of Crop.

J. B. Hudson, one mile from factory: First crop, 1888, 10 acres sown; cultivating and harvesting, $614 83; yield, 260 tons; value, $1306 96; net profit $692.13; per acre net, $69 21.

A. F. Richardson, two miles from factory: Eleven acres planted; cultivation and harvesting, $535.94; yield, 170 1-20 tons; value, $921.81; profit, $385 87, or $35 08 per acre net.

In the two above examples we have the experience of two farmers the first year with Vilmorin's improved white (Fig. 5 in last issue). In both cases the land was about the same and experience alone would equalize the crop.

Delivering Beets at the Factory.

Beets when delivered by the farmer should be well topped and cleaned, as only the well-developed beet-root will furnish any returns to the factory. In France, a stipulated price is placed on the beet-root per ton. In Germany, a fixed price is paid for beet-roots up to a certain per cent of saccharine, and for every one per cent over, an additional sum is paid. In this country both methods are practiced, but the former seems to be the most in favor with the farmer; the latter is more fair to both parties.

When the roots are delivered to the factory, after having been topped and cleaned, they are received by the yard foreman, who weighs them and then estimates the "tare" which is to be deducted for earth and bad trimming. It is on this estimate that the interests of the farmer and factory clash, and it is for the interest of both parties that the matter is well understood by the farmer.

Storing.

As fast as the beets come in and are weighed and estimated, they are stored in long bins provided with water ditches in the bottom. These bins should be about 30 feet wide and 600 feet long and 8 feet high in the clear. Beet-roots should not be piled any higher, as the weight will cause them to heat. A bin of this size would have a storing capacity of 3600 tons of beets and will be provided with two concrete ditches 10 inches wide, running parallel lengthwise through the bin and 15 feet apart, with proper grade to carry the beets into the factory by means of water.

Extraction of the Juice.

The first step toward the extraction of the juice is to clean the roots of all foreign matter. The roots are conveyed by water from the beet-bin into the wash-room, where they are raised into the wash-barrel, which is also provided with a stone compartment where all stones that may be attached to any of the roots are loosened and caught. This is necessary, or the beet-cutter would soon be destroyed. The beets, as fast as washed and stoned, are now conveyed into a bin located on the roof of the building. This bin should have a capacity of not less than 10 tons to keep up the supply in case of accident at ditch or beet-washer. From this bin the beets are drawn as wanted into a hopper located on scales and capable of holding just 1000 pounds, the hopper being provided with a self-register which will indicate the amount of beets used daily. This should tally with the receipts of beets at the office. The beet-cutter is located under the discharge of the scale hopper and receives the beets direct.

The cutter consists of a hopper, horizontal disk with knives, and vertical shaft with driving gear. By this machine the roots are sliced into thin ribbons and are conveyed directly to the "diffusion tanks."

The "diffusion battery" consists of 12 wrought-iron tanks, each capable of holding from one to two tons of beet-slices, and are arranged in a row or circular, as may be preferred. Each tank has a juice-heater connected and located by its side. The tanks and juice-heaters are all connected with three sets of pipes: 1st, hot water; 2d, "passover," and 3d, juice pipes with proper valves to each. The ribbon-like slices are conveyed into the first tank until full. It is then closed and the slices continue on to the next cell. The tank that has been closed is now filled with hot water and allowed to remain from eight to ten minutes. By this time tank No. 2 is filled and closed, the partly sweetened water from tank No. 1 is turned into tank No. 2, and hot water again fills tank No. 1. Tank No. 3 is now filled and closed and the twice-sweetened water enters No. 3, the once-sweetened water enters No. 2, and hot water for the third time enters tank No. 1.

B. B. CHANDLER,
Alameda, Cal. Mechanical Engineer.

(To be Continued.)

Pacific Coast Potatoes.

Throughout the entire country there is a growing scarcity of potatoes. In all the States east of the Rocky mountains, the potato crop has been in the aggregate comparatively a failure. Prices now are higher than has been the case for several years, and the indications are that they will go much higher. If the statements made by dealers be true, the scarcity may, before the winter is over, assume the aspect of a famine. In this State and all the Pacific Coast States, the yield has been larger than heretofore, but the demand on the market from the East is heavier than ever before, and in consequence prices are even now exceedingly high, with the outlook for a much greater advance. Dealers on the Atlantic Coast are receiving large orders from Europe because of the potato famine in Ireland, which they are finding great difficulty in filling. In all the principal Eastern cities prices are going up, and the States of Washington, California, Oregon, North Dakota and Minnesota are looked to to make up the deficiency in the yield. Nearly all the agricultural products in the States east of Minnesota have been far below the average this year. During the summer the fruit yield was so small that the Eastern dealers were compelled to call upon the fruit-growers of California, Oregon and this State to supply the market. When the present scarcity of potatoes became apparent, Nebraska and Kansas farmers found a rich market in the East. But even in those great potato-growing States, the yield has not been as large as in former years, and the supply was soon exhausted. Prices have already jumped to $2 a bushel in Nebraska, while in Kansas prices are rapidly reaching that figure. In North Dakota and Minnesota the yield has been fair, but by no means as large as was anticipated. The unusual demand from the East has already made such in-

roads upon the supply in North Dakota that the price has advanced to 60 cents a bushel, an increase of over 45 cents over the price of last fall.

The crop in the States bordering on the Pacific ocean has been to a certain extent a surprise. While a large yield was confidently looked for, it was not calculated that it would prove so abundant as it has. Particularly is this true of this State, where the yield has been larger than ever in the history of the State, and even more so than the most sanguine had hoped for. With an abundant yield it was supposed, a few weeks ago, that potatoes would be exceedingly cheap. The demand for the vegetable from the East was, however, soon felt in the market, and the crop has been becoming smaller at a rapid rate and prices have been advancing just as rapidly. Potatoes are now selling in this city at almost double the price that they brought last fall, when the prices were from $14 to $17 per ton. To-day $28 per ton is being demanded, and the prices are gradually going higher. The demand for local consumption is more brisk than a year ago, owing to the large increase in the population. California potatoes were expected to enter the local market, but that State has found a much more profitable field in the East and has found its own supply to be inadequate to meet the demand. California has a very large territory to cover in the potato market, and dealers from that State have already sent to both this State and Oregon to have their orders filled. Oregon has been especially fortunate in securing a bountiful crop and is at present receiving the largest share of the orders from California and from Eastern dealers direct, although this State is not being overlooked, as the advanced prices show.

Inquiry among local commission merchants yesterday, as regards the outlook for a big advance in the price, met with the statement that potatoes would sell at a "very high figure this winter."

Mr. Emerson, of the commission firm of Emerson & Wood, said: "The price will most certainly reach the top notch this winter. There is no help for it. The failure of the potato crop all over the country has been complete, and as the supply is far below the average and the demand as large, if not larger, than ever before, it naturally follows that the price will go up. I do not look for a sudden jump, but for a steady advance. Before the winter is over there is no telling what price potatoes will command. Washington has grown its largest crop during the present year, and this would have been sufficient to supply the demand in this State. The demand from other States, however, has been so extensive that large quantities have been sent away. We cannot turn to California, because California is practically in the same boat and is buying from Oregon."

Onions are also becoming quite scarce, and the indications are that in this city the prices will advance in a few weeks.—*Tacoma Ledger.*

Indications of Prosperity in California.

WASHINGTON, Oct. 17.—In its monthly report of the condition of the crops throughout the country, the Department of Agriculture issues an elaborate statement of the situation in California and Colorado. The following are extracts from that portion of the statement which relates more particularly to California:

"During a hasty visit of the Assistant Statistician to California and Colorado, enough was seen to show that the present year has been one of prosperity to the farming classes, as a whole, in those States. In no branch of rural industry has the year been one of bountiful harvests, but, on the contrary, crop failure in any line is not recorded, while the general advance in agricultural values has made crops of medium or even small volume of greater value in the aggregate than more abundant yields in former seasons.

"A larger monetary return to the producer from the smaller crop is a compensating fact not infrequently occurring in American agriculture. The loss falls upon the individual cultivators who are most unfortunate in location, meteorological conditions or methods of cultivation, while the benefit of higher prices resulting from scarcity accrues to the whole farming population as a class. In the States named, the general gain is accompanied by less than the usual individual loss under similar conditions, the crop shortages being general throughout the whole area rather than the result of local or individual disaster, yet the individual producer making the larger crop, of course, realizes the greater benefit.

"The winter on the Pacific Coast was one of the most severe known; the temperature was very low and the rain and snow were excessive. In the valleys of California, grain-sowing was interfered with, the seed-bed was cold, wet and heavy, and on large areas the plant was drowned out by spring freshets and overflows. Barley, as well as wheat, suffered from these unfavorable conditions. The wheat-fields of the State lie mainly in the Sacramento and San Joaquin valleys, and the conditions governing the cultivation and growth of the cereal are radically different in each valley.

"The precipitation in the Sacramento valley is generally abundant and the soil well able to withstand drought, but peculiarly susceptible to damage from excessive rains and resulting floods. On the contrary, the fields of the San Joaquin valley are more liable to injury from drought and capable of withstanding heavy precipitation with little damage. This adaptability to opposite meteorological conditions in the two grain centers renders a fair crop in one section or the other almost a certainty, and the conditions of the present season, while materially damaging the output in the Sacramento valley, insured good results in the greater portion of the San Joaquin. In Tulare and Fresno counties the yield is probably larger than last year, while in other counties of large production, estimates of the crop range from 25 to 75 per cent of the yield of last year.

"A consensus of local estimates might make the crop of the State from 70 to 75 per cent of that of last year, though the department will make no estimate until the close of the season. Definite estimates of the barley product are difficult to arrive at. Among the arable crops, it is second only to wheat, and its use is so wide and varied that no records of the crop's movement can be made. Large quantities of this grain are now annually shipped from the State both to foreign ports and to domestic markets east of the Rocky mountains.

"The advance in barley is heavy, but any change in wheat is toward lower prices. An excellent authority believes the rise in local freight rates is responsible for the wheat situation; but with the probable shortage of the world's supply and the certain diminished product of this country, it is apparent that higher values must probably soon rule in the California wheat market. The prices received by grain growers during recent years have scarcely been remunerative, and the present good prices for barley and the probable advance in wheat with the general prosperity attending other branches of agriculture, will materially assist this branch of agriculture in the State.

"The most remarkable results of the year have been in the fruit and vine industries of the coast. The fruit crop, as indicated by the department reports during the season, was one of only medium production, below the usual average or standard, both in quality and quantity, the hard winter and wet spring being unfavorable to full development. Under ordinary conditions, it would have been a year of discouragement, but the practical failure of all fruits east of the Rocky mountains created such a demand from new markets and so advanced prices as to make it a season of unexampled prosperity to the horticultural interests. As soon as it was apparent that the fruit crop of the East was a failure, early in the year, shrewd dealers throughout the country began to make arrangements to handle California products, and the overland shipments have been enormous, comprising the choicest products. The prices paid have been such as might be said to be larger than growers hoped to realize and the crop was large enough to give all interested in the industry the benefit of the exceptional values.

"The activity in fruit shipment extended to vine products, and many carloads of California's choicest table grapes reached a market heretofore held exclusively by the local product, creating a taste and demand which will continue hereafter even in less favorable years. The year has presented a golden opportunity for dissemination throughout the country of a practical knowledge of the fruits of the Golden State, and every advantage has been taken of it. A trade has been opened up which must continue with mutual benefit to producers and consumers of fine fruit despite distance and costly transportation.

"Records of total shipments to points outside of the State are not yet received, but San Francisco authorities on the fruit trade believe that it will be equal to 10,000 car lots, and a liberal estimate would make the value of these shipments perhaps $10,000,000—a value almost half as large as that of the State's exportation of wheat during 1889. Peaches have brought growers $80 per ton, with higher prices for choice varieties, and all grades, as a rule, have commanded from double last year's prices upward. Wine grapes are bringing better values than ever heretofore realized, the general prosperity of the year extending to all branches of horticulture and vine-growing. On the whole, the year will go into history as one of general prosperity for the agricultural interests of California."

Harrowing Wheat After Heavy Rain.

J. E. Kennedy of Alto, Washington, writes concerning the use of the harrow on crusted wheat-fields in a way that may be suggestive to our wheat-growers when the time comes for the treatment described, even though the conditions here are different:

A walk over the summer-fallowed fields east of the Cascades in the early spring, with a little examination, will show that the ground, no matter how well it was plowed and cultivated, has been battered down by the winter's storms and is quite hard comparatively; the better the soil is and the greater the admixture of clay it contains the harder it will be.

If there was a heavy snowfall, or much rain, the surface has run together and baked, as it is called, and the wheat plants, with their blades pinched and embrowned by their cold surroundings, present a sorry appearance. Then as the season advances and the heat brings freshening life into the plants, and they everywhere become green, the surface of the ground cracks, and these cracks deepen as the weather becomes drier and warmer. The whole field is then divided into a series of checks of irregular shapes, and the cracks deepen until in some instances I have measured them five inches in depth, each clod with its wheat plants sloping toward a center, if the term be permissible for so irregular shaped a body, and resting on a base, in many instances not larger than a dollar. I have examined a great many summer-fallowed fields in this valley year after year and rarely found an exception to the rule. True, in some fields the cracks were shallower than in others, depending on the nature of the soil, on its exposure to the wind, the varying amount of rainfall, etc., but their average depth I should judge to be, before the wheat is ready to ripen, over two inches.

It is almost incredible that under circumstances such as I have described, with the sun's rays and the searching wind actually penetrating the earth, in some instances below the roots of the wheat plants, any crop can be produced, and I am nearly sure that it would be impossible, save in a soil everywhere volcanic in the main and fitted to absorb and retain a greater amount of moisture than any other, for long before harvest the roots are not in contact with the moist earth, but they must be, nevertheless, constantly absorbing the ascending, invisible vapor from below till sun and wind, acting in unison, have completed the evaporation of the water stored beneath, to a considerable depth, when the wheat ripens. Of course there comes heavy rain in some seasons in June and the moisture is brought in contact with the roots for absorption in the ordinary way, when the yield will be phenomenal, but the rule is otherwise, and the surface moisture is exhausted comparatively early in the season, and all that falls afterward simply freshens up the fields, for it rarely penetrates to the roots.

When, early in the spring, the cracks begin to form, the ground should be harrowed and reharrowed. A single harrowing will fill the cracks with dust so as to prevent the access of the air to the ground beneath, and then they will not deepen; a double harrowing will thoroughly break the crust, and after that the ground will neither bake nor crust again, for the broken crust and the dust act as a mulch to a great degree.

Some wheat plants will of course be torn up in the process, and the whole field for a few days after it has been completed looks miserably, but the resultant growth and speedy after-effects are truly wonderful, and it is easy to provide by a little more liberal sowing for any possible loss or danger of the stand being too thin.

In a word, it is a thorough cultivation, the only one of which the plant admits with us who grow wheat on a large scale, and is, like all cultivation, beneficial, adding always a yield of several, sometimes many bushels to the acre over wheat not harrowed, causing a sturdier growth and producing a plumper berry. Like all the other operations connected with the growth of wheat here, the harrowing should be commenced as early in the spring as possible; when the cracks or checks begin to form is the best time, for the process is calculated to retard as much as possible the drying out of, and consequently to the conservation to a great degree of, the moisture which is absorbed by the plants instead of being wasted.

When few of the old settlers as yet resort to this remedy for breaking the crust and preventing the deepening of the cracks in the soil, the new ones may be pardoned if they shrink from the adoption of a remedy so heroic, and one they have never seen tried elsewhere. If the reasoning above set forth, and that contained in the previous article in regard to the beneficial effects of cultivation through which the surface of the soil itself becomes a mulch, be not satisfactory to them, let them try the experiment for themselves and take a small piece of summer-fallowed ground planted in wheat and harrow it once, and another plat of equal area adjoining it and harrow it twice, and compare the resultant yields with each other and with that of the ground not harrowed at all, and I think they will soon be convinced that the method herein pointed out is the best.

THE DISPOSAL OF GARBAGE.—When will our cities be brought to a realizing sense of the importance of the question relating to the disposal of garbage? Scores of our large towns and cities are continuing the process of creating hot-beds of epidemic and contagious diseases by filling up vacant lots with garbage, notwithstanding the fact that a perfectly safe and efficient means for its disposal has been invented and has proved a decided success. There is no question but that cremation is the only safe and proper way to dispose of the waste of our kitchens. If sufficient municipal discipline were exercised, every family could be compelled to dispose of its own garbage by burning it in the kitchen range, after each meal, thus saving thousands of dollars to the city. We know that it is possible thus to dispose of all waste from the kitchen as it is done in our own family, and the ashes from the range and furnace are used to advantage on the garden. But it would probably be impossible to impress on the minds of an entire community the importance of pursuing this plan, so that an ample crematory for each town and city would probably be the surest and most practical method to adopt. The large crematory has this advantage in it: in addition to the garbage may be dumped all refuse, such as broken crockery, old tin cans and everything which needs to be disposed of, and the slag which results makes a valuable fertilizer when pulverized, which may be sold to farmers. Thus the crematory may be made partly self-sustaining.

POULTRY YARD.

Alfalfa for Poultry.

EDITORS PRESS:—No greater problem presents itself to the average poultry-breeder than how and what to feed to secure the best results from his fowls. Volumes have been written on the subject, all of more or less merit, but by far the most of them less; and yet the solution is practically within the reach of all. No system of feeding will produce better results than an unlimited supply of alfalfa. It is the nearest approach to a perfect food that we have, and with a *little* dry grain (wheat or barley), morning and night, will make hens lay, if there is any lay in them. Of course the best results are obtained where the fowls are allowed to run on the alfalfa patch and pick what they want; but when this is not practicable it can be cut and given to them, when they will work on it industriously. If green alfalfa cannot be had, buy some No. 1 alfalfa hay, run it through a feed-cutter, soak it 12 or 24 hours, and mix in it a little bran and middlings. If cut fine enough, say one-fourth to one-half inch, the fowls may be given all they will eat up clean, but if cut in too long lengths, there is danger of it causing crop-bound.

As a duck food, alfalfa is invaluable; but ducks should not be allowed to run on it, as a flock of ducks will soon ruin a small patch of alfalfa. Cut up and fed to them, they eat it ravenously and thrive better than on grain exclusively. As an evidence of what can be done with alfalfa, I will give the following illustration: A neighbor has an acre of ground, one-third of which is taken up with house, etc. One-sixth is in alfalfa, and the other half of the acre he plows and sows every year to wheat or barley. He keeps an average of 125 fowls, old and young, which are allowed the run of these two places, all roosting in the one house. From these fowls he sells an average of $18 worth of eggs per month the year round, besides raising enough young stock to replace the old ones. All the grain fed is eight pounds of dry wheat or barley, morning and night, to the lot. No soft feed, meat, oyster shell or egg food is needed. The eggs have remarkably strong shells, and it is very rare that a soft-shelled egg is found. All that is necessary is a plentiful supply of sharp gravel, and a healthier lot of hens would be hard to find. As he generally sells broilers and old hens enough, together with the eggs used, to pay for the grain, his egg receipts are net profit, and this on two-thirds of an acre of ground.

I know of another instance where the fowls run on alfalfa in which the results are quite as good, while on an adjoining place, where there is no green food given, the fowls are an expense instead of a profit, very few eggs being obtained except in the regular laying season.

In alfalfa we have at once an egg-producing, healthy and cheap food, and one on which young stock thrive amazingly. It is easily grown when once started, and if land is well manured and given plenty of water, three or four crops may be cut each year.

Galt Poultry Yard. S. W. PALIN.

Cackles From the Cackler.

To make a cement floor for a poultry-house: Use Portland cement, broken stone and sand. Make a base of broken stone. Mix Portland cement and water to the consistency of cream and pour over the surface, spreading with a stiff broom. When hard, spread with fine gravel mixed with cement and water 1½ or 2 inches deep. Then a coat one inch deep of sharp clean sand (such as is used in mortar) mixed with equal parts of Portland cement, with enough water to make the mass like mortar. This will set strong in one or two days.

The domestic fowl changes its feathers and goes through the critical period called "molting" once a year. This may be said to usually take place during the months of July and August, although certain individuals may molt at any time from May to October, and even in the winter months, and fowls during this dangerous period should be well treated, as they are all more or less stupid and ailing. They should have an abundance of water, and will be benefited by putting in each drinking vessel a few drops of tincture of iron. They need good wholesome feed, care being taken that they are not overfed. One great trouble with many of the "there is nothing in chickens" poulterers is, they keep no records of "incomes" and "outgoes." There are not many who can tell what per cent they make on time and money invested in the business, simply because they keep no accounts. It is unjust, after using the eggs and eating the broilers, to accuse the hens of eating their heads off, unless you have positive proof. If every poultry keeper would keep careful account of cost of feeding his fowls and the return in eggs, we feel sure nine-tenths would be astonished at the result, and save many a faithful laying hen from an untimely death.

"It is dangerous to steal chickens in San Diego, for a recent dispatch from that city says that a well-to-do rancher of Otay, who received a charge of shot in his head and shoulders from a spring gun set in his neighbor's chicken-house, one dark night, some time ago, and was afterward arrested on a charge of chicken stealing, has been found guilty and sentenced to three months in the county jail, and to pay a fine of $250."

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

Votes and Voters.

Ere another issue of the RURAL PRESS appears, the people will have chosen the officers who are to administer the laws of California for the next two years. The voice of the platform brawler will be hushed, and the discordant blasts of political trumpets will be heard but for a few days, while they do honor to the victorious candidates.

We shall then be able to see to what extent the farmer is to be heard in the administration, and how successful the political hirelings have been in their engineering. We shall see how many there are who have been howling about monopoly, corruption and kindred grievances, but who, on election day, will vote for men directly antagonistic to their interests.

If a watch is to be repaired, who thinks of taking it to a blacksmith? If a physician is needed, who employs a surveyor? But when it comes to the ballot, how many there are who prove their inconsistency by blindly following the dictates of the bosses!

The Grange is not a political body, but its members can exert an influence that will neutralize the alert schemes of political tricksters, who would foist men into positions through the political machines. They should unite in supporting those who are identified truly with public and farming interests—men who have reputations not clouded by past profligacy or present intrigue.

We can have good men elected if we will. When the political demagogue finds he is losing his power; when the professional politician becomes unpopular, he will readily change his tactics. Few men will pursue a dishonorable course unless money or power is the reward. So long as politics is a machine, just so long will its iniquitous proceedings be a flagrant outrage on our beloved country.

Yet politics is not all. The assumption that legislation can make a good social order out of any men to whom it is applied is the fundamental fallacy of communistic and socialistic doctrines. Not schemes, but men, must work the cure. A government is what the people make it, and if we hope to gain a pure, wholesome administration, we must sap the foundation of the evil. We must begin in the home—the most sacred and most important factor of our Government. Here and in the schoolroom we must instill into the hearts of the young the blessings of our civilization, and aid them to broaden their minds, strengthen their characters and make themselves better and nobler men and women.

It is a sorrowful fact that the great mass of the farmers of this State have this year been practically disfranchised from voting with any hope of success for the high principle of putting unquestionably our greatest and best men in the highest places of trust in this State. There is no hope of the election of men in the highest stations voted for who will say to oppressive trusts and corporations: "Thus far canst thou come and no farther! Thou shalt not abuse the rights of this people in our names!" Some, at least, of the worst elements in the community have had a hand, in both the "grand old parties," in making State nominations.

Australian Ballot Reform.

We may well be pleased with the favor the ballot reform is meeting. Planks favoring it have been incorporated in the platforms of all the political parties. The Federated Trades, the Grange and similar organizations have indorsed it, and it has become the chief theme of political orators and of newspaper editors. Yet when we get such a system, we must not think the end is accomplished—only one of the means. The best mortar or cement in the world will not make a firm wall if the brick or stone is inferior and crumbles. When we puncture our hand with a pin, no appliances will heal the wound. We must remove the intruder, then Nature will assist.

We have many good laws on our statute-books that are made dead letters through the indifference of the people. The trickster is ever ready to defeat the aim of the best of measures. The Australian Ballot law will be a long step in advance, but we must see that its provisions are not frustrated, and must continue the good work so well begun.

No Drones.

In '88, nine; in '89, ninety-three; in '90, one hundred and ninety. These figures show membership of Watsonville Grange. From the struggle of death to the vigor of the champion in two years. Do you want to know how to induce similar growth in your Grange? The key to the mystery was given in the Master's address when she said: "There are no drones in our busy hive." The ancients sought for the philosopher's stone, which was to change base metals into gold. Herein is the secret of all administrative success, whether in Grange, Sunday-school, Church, State, army or nation. *No drones.*

If a member cannot deliver an eloquent address, perhaps he can bring a pail of water. A sister may not be able to preside like Sister Roache, but she can bring a bouquet. The secret lies in making every one feel that his work is an essential part of the success of the Grange, and to make the Grange so useful that each shall easily recognize it as a vital element in the prosperity of the community. F. S. C.

To the American Farmer.

The passage of the Conger Lard Bill by a vote of 4 to 1 in the House of Representatives, after the most obstinate and bitterly contested fight ever made on a non-political question in the Halls of Congress, is a *grand triumph* for the farmers of this country.

Opposed by the most reckless and unscrupulous lobby that ever attempted to suppress the people's will, the Conger Bill was passed simply because the American farmer demanded it.

I congratulate you, brothers of the plow, that American Agriculture has the voice to speak and the power to be heard in spite of the monopolists' money and rascality.

When the true history of this contest shall be written, the wonder will be that the people's Representatives were so successful, but the lesson taught is that the American legislator is, as a rule, much better than he is given the credit of being.

Now, brothers, having fought the battle and won it in the House, it *depends upon you* to win it in the Senate. Our opponents think they can defeat us in this body, but if you *speak* and *act* and do so at once, they will be beaten as badly as they have been in the House.

With one accord, for agriculture, Patrons and farmers of all associations, let us unite in demanding the passage of the Conger Lard Bill.

Yours for Agriculture,
ALEX. J. WEDDERBURN,
Chairman Leg. Com., Va. State Grange.

Lights of the Farmhouse.

[Written by LILLIAN H. SHUEY of Temescal Grange and read before the last State Grange by SISTER S. H. DEWEY.]

I.

It is a soft October evening, and the moonlight shines down on the wide gray roof of an old farmhouse. To the right lies a small orchard yet green; and on the left a field of standing stubble bleached by the early rains stretches away into the misty distance. There is a radiance more than natural in the effulgence of the moon as it strikes the slanting roof.

O Memory! sweet and gracious,
Come wait beside my chair.
Your tongue can tell what hallowed spell
Unfoldeth softly there.
The light so fair upon that roof
Still lingers night or day;
It is the light, set forth aright,
Where Truth and Virtue stay.
It is the light of blameless lives
From petty trickeries proof.
No life can be from sin so free
As 'neath the old farm roof.
It is the light that falls alone
Where honor's soul is free—
Sin's long surcease—the sun of peace—
The light of liberty.

It shines nowhere so tenderly,
It shines nowhere so fair,
As now I see, through Memory,
Its soft light shining there.

II.

The scene changes; the moon rises higher in the heavens. Lights appear in all the windows of the house, showing it to be roomy and spacious. The lamplight streams out on to the wide verandas. Carriage-wheels are heard, and voices of laughter and welcome break upon the calm night air.

What time the harvest-fields were white
And rustling in their pride,
In tempting reach the mellowing peach,
Rich promises supplied.
We thanked the Lord and blessed His name,
And opened heart and hand.
What place on earth, more fit for mirth,
As this, our homestead land!
This is the light that shineth now
From this dear home so free.
All gather here; 'tis goodly cheer;
'Tis hospitality!
It is the light that searcheth out
Where want and care have birth;
The light that lives, the light that gives,
And cheers the sad old earth.

It shines nowhere so bounteously,
It shines nowhere so fair,
As now I see, through Memory,
Its glad light shining there.

III.

The October moon passes away, and a dark and rainy night in December comes into view. The undrawn curtains reveal under the dripping eaves a warm, cheerful room, where the family group are drawn around a well-lighted table before an open, sparkling fire. There are many books and papers.

The generous range of farm-life thought
These evening tasks confess—
The classic sage—the crisp, new page,
Yet fragrant from the press.
The shut-in leisure of the rains,
The quiet Sabbath nook,
Full time commands to teach all hands
The comfort of a book.
Nowhere can wisdom so avail,
From vain distractions proof,
Nowhere has thought such pure work wrought,
As 'neath the old farm roof.
The light of knowledge floods the house,
The radiance of each hour,
It ne'er grows dim; 'tis life within,
'Tis grace and joy and power.

In shines nowhere so gratefully,
It shines nowhere so fair,
As now I see, through memory,
Its rich light dwelling there.

December passes by. The storms beat on the sodden fields, the trees stretch their gaunt arms to the rain. The country roads are deserted. The family gather more and more into the cheer and comfort of its inner life. Family pride is more distinct than in urban civilization, and mother-love is the great central star.

The self-made pleasures of the farm,
Its isolated cheer,
Makes faith more pure, and trust more sure,
And home life doubly dear.
Each tale or legend best beloved,
Each romance of our race,
First laid its scene, or found its dream,
On some old country place.
Nowhere can home love shine so true,
From wild temptations proof;
Nowhere so sweet, so warm, complete,
As 'neath the old farm roof.
O mother-love, sweet star divine,
O'er life's dark journey set,
Through all my tears, through sorrow's years,
I see it shining yet.

It shines nowhere so faithfully,
It shines nowhere so fair,
As now I see, through memory,
Its sweet light shining there.

Yuba City Grange.

In a private letter from Bro. Ohleyer he says: "On Saturday next, Nov. 1st, Yuba City Grange will hold its regular monthly meeting. It will convene at 10 A. M., transact business, confer degrees and partake of a social feast. Bro. J. H. Hale hopes to return from the Northern Coast States to be with us, and Bro. Flint promised to come up from Sacramento to help us along."

Past Master Hale of Connecticut.

His Travels in Oregon and Points to Be Visited in California.

DEAR BROTHER DEWEY:—Having done the Sound country, Spokane Falls, Walla Walla, etc., I shall attend a Grange meeting with Bro. Russell at Vancouver, Wash., to-night, then meet with Bro. Hayes' Grange to-morrow, and spend Sunday with Bro. Boise at Salem. Then I shall return at once to California, working next week in Tehama, Butte and Yuba counties, and attend meeting of Yuba City Grange on Saturday, November 1st. Future plans are about as follows: About Newcastle and Auburn, Nov. 3d and 4th; Sacramento, 5th; Lodi, 6th; Stockton, 7th; 8th and 9th, Sacramento Co., with Bros. McConnell and Johnston; 10th and 11th, Livermore, Niles and San Francisco; 12th, Napa and St. Helena; 13th and 14th, Santa Rosa; 15th, 16th and 17th, San Jose; 18th and 19th, Horticultural meeting, Santa Cruz; 21st and 22d, Modesto and Merced; 24th, Fresno; 25th or 26th, Tulare. After that, while I have made no dates, my plans are to work along south through the State for a month or so. Of course my work will be in the country surrounding the points named. The dates and places named are where I expect to spend the night and receive mail. Therefore if there is anything in the way of Grange work or attending Grange meetings that I can do without materially interfering with my work, please let me know. I greatly enjoy associating with the many good Patrons on this coast. Fraternally, J. H. HALE.

The Dalles, Or., Oct. 24th.

Patrons and Farmers, Turn Out and Hear Him.

Bro. Hale is an eloquent and interesting speaker. He has good points to tell the Grangers and farmers of California, and is not slow in saying them.

While he may not be able to speak at many of the places named above, he will undoubtedly be willing and prepared to meet all who will gather at convenient points named for district or county meetings and give an afternoon or evening's speech if notified in season by those who will make proper announcement and advertisement of his coming.

Patrons or others wishing to hold such meetings should lose no time in corresponding with Bro. Hale direct or through the Secretary of the State Grange by letter, telegram or telephone, and make the announcement in each case as early as possible in the local papers, by hand-bills, etc.

Bro. Hale will visit the places named in the discharge of his duties as special agent of the eleventh census for the investigation of the nurseries, seed farms, truck farms, florists' establishments, and the production of semi-tropic fruits and nuts of the United States.

Those who meet him will do well to be prepared to give him ready information and aid him in making as full and reliable reports as possible.

Effect of Enterprise.

This was well illustrated in a late visit of the RURAL PRESS man to Smithville or (as Uncle Sam has it) Little Stony Colusa county. A little more than two years since, Mr. Smith sold a tract of 1500 acres at about $20 per acre, and we heard it rumored far and near that the buyer had shown the poorest judgment, in fact been "played as a tenderfoot." Since then the property has often changed hands, always at advanced values. The present owners have put up a fine mill, laid off a townsite, brought in irrigating ditches, sold some town lots, and only a few days since the original owner bought back a five-acre tract at *three hundred dollars* per acre.

The prophets of evil now claim that wheat to supply the mill cannot be raised in the valley which is somewhat shut in by foothills. One of the citizens made a good point on this upon being asked, "Where are you going to find the land to raise fruit after you have raised wheat to supply the mill?" He quickly replied, "We'll raise that on the other side of the land."

To appreciate the force of the remark, one needs to stand upon the scene and view Mt. St. John, Snow mountain, and all the great family of lesser peaks. Truly they can come as near to working both sides of their land as anybody.

Mr. Stillwell, the proprietor of the mill, tells me that they can save $400 to $500 per month in current expense over a steam-mill of like capacity. As they grind only 50 barrels of flour per day, that sum will pay for hauling wheat in and flour out either from Sites or Elk creek, and so place the mill at once level with a steam-mill at either of those places, even though no grain was produced in the vicinity of the mill.

The projectors of this enterprise are investigating the policy of adding a creamery, and either a cannery or a drier to their plant. They recognzie that the prosperity of a town depends upon the developed resources of the surrounding country. There are tracts adapted to alfalfa where it would be folly to sow grain, and orchards can nestle among the hills where a header could not be driven or turned. There is many a place where big red apples will grow with a flavor unknown in valleys, that were only a few months ago Government land. A good enterprise would be a fruit-house for buying and storing these apples, insuring a steady market and encouraging the planting. A good rustling nurseryman would also contribute largely to bring this about.

The history of this place is a fine object-lesson in the effect of enterprise. There is very little in sight yet of improvement, but enough to infuse confidence and inspire thrift in the balance of the community and stop the mouths of half the croakers.

F. S. C.

Farmers' Mutual Insurance Companies.

The resolutions adopted at the late session of the State Grange in favor of an Enabling Act by the Legislature for organizing Farmers' Mutual Fire Insurance Companies is a popular expression that will no doubt be supported by farmers generally. Such companies, insuring nothing but detached farm property, have been for many years successful in States east of the Rocky mountains, and have already saved the farmers millions of dollars. In no part of the United States are such organizations so much needed as in California.

TO MEMBERS OF THE ORDER.—As we are beginning a new Grange year, the Worthy Master requests all members of the Grange who have any suggestions for the Good of the Order to put them in print or send them to the chairman of some standing committee.

March Grange.

From General Deputy Daniel Flint.

I left Sacramento Friday, the 24th, at 3 o'clock P. M., for the above Grange, situated at Pennington, in northern part of Sutter county. In going to Marysville I had a pleasant chat with the debris strategist, Ohleyer and daughter, who were returning home from San Francisco.

Bro. Lam, Master of March Grange, met me at Live Oak and took me home with him in his buggy, a distance of about 10 miles. This ride was of great interest and afforded more food for thought than any one that I have taken for many a day.

Bro. Lam and myself kept up quite a chat all the way, but my eyes and attention were riveted on the panorama before me. We were passing within a few miles of what is familiarly called Marysville Buttes, but they are in Sutter county.

The moon was not quite full, but shining brightly on our backs, and "one star alone of all the rest" was in her full evening dress, poised just above one of the highest peaks, and I thought for awhile it would rest there as a beacon light to guide the wanderer and lost one through this great valley. Not a cloud could be seen and these ragged black peaks showed their clear-cut sides against the blue sky, forming a background which would be a rarity among the works of art. Who can approximate the thousands of people who have looked upon this pile of stone and earth and attempted a solution?

Is it an upheaval from the infernal regions as a resting-place for Noah's Ark? A stray glacier that took in more than it could pack and had to dump its load? The artificial mound of some prehistoric nation? The refuse matter from the quarry of the natives of the Atlantus?

As I cast a long, fond look at this grand sight, with that large, bright star gradually sinking out of sight, I thought of those beautiful and popular lines that the school-children used to sing 20 or 25 years ago, "Star, Star of the Evening, Beautiful, Beautiful Star."

As we approached Bro. Lam's house he could truthfully say, there is a light in the window for me, and dear ones watching and waiting.

Although late when we arrived, the Matron did not neglect to give us good cheer and a bountiful spread fit for the gods, and that was fully appreciated after so long a ride.

We arrived at the hall a little after ten o'clock, and almost the first I saw was Bro. Frisbie, wife and son. The gavel was tendered to me, but I most respectfully declined in favor of Bro. Frisbie, who instructed a sister in the third and fourth degrees in his usual able manner. Then came the feast, and it was such a one as none but Matrons are capable of presiding over—elegant, ample and appetizing. I had been to this hall before when Bros. Spilman and Nelson's faces and voices were so familiar to every Patron in the State, but now silent and gone.

I had the pleasure of exchanging the Patron's grip with Sister Spilman, whose motherly face gives token of the true heart within. I gave an address or talk of about half an hour, and I will guarantee if they will ponder over some of my suggestions and adopt them, that their Grange will be doubled in numbers in two months. Right in the midst of a large, prosperous farming community, the Grange is indispensable. Bro. Frisbie and others made remarks appropriate to the occasion.

Sister Frisbie gave an amusing recitation in dialect, which was well received.

This Grange is not large, but they make up in zeal, intelligence, and tenacity of purpose.

Bro. Frisbie always has an extra seat in his carriage, a chair at his table and a bed in his house, and those three extra things have frequently taken my measure and I have always pronounced them a splendid fit.

Although the ride was rather long, I was glad to accept the invitation with such agreeable company. I believe that Bro. Frisbie, wife and son must be somewhat related to the emblem of the Gate-Keeper, for they piloted us across trackless grain-fields and over barbed-wire fences while quite dark. They seemed to know how to pick a barbed-wire fence as easily as a burglar would a bureau drawer.

After getting over the rough fields, ditches and wire fences, the ride was delightful and cool, with smooth roads. The brother kept me over night and took me to train in the morning and sent me on my way rejoicing.

I believe Sutter county is destined to become one of the largest fruit-raising and fig-growing sections in the State. I formed a temporary acquaintance with some of the brother's samples, and I pronounced them of superior quality.

Bro. Hale on Farm Institutes.

As this gentleman is a leading worker all along the line of agricultural progress, he was called out at the State Grange on the subject of Farm Institutes. We are sorry that we have not a careful report of his remarks, as they were pointed and practical, but we summarize from memory.

Farm Institutes are modeled after the idea of Teachers' Institutes, or, in other words, are schools where farmers meet annually to compare the results of their reading and experiments. Papers are read by such as have become prominent in the specialties they represent. These gentlemen are then questioned by the audience, and in turn others are questioned until a valuable fund of information is developed.

The State makes an appropriation sufficient to cover the expense of enough organizers and lecturers to secure the end designed by the meetings. In Wisconsin, the system has been on trial with increasing popularity for many years, and her intensely practical Governor, W. D. Hoard, said to Bro. Hale that the increased wealth resulting to his State from Farmers' Institutes had returned their cost a *thousand* fold.

Upon this ground, our Legislature should be asked for such appropriation as is needed, not as a gift to a class, but as an investment for the public good, on the same ground as we would improve our rivers, sustain our schools, or encourage immigration.

Upon the question being raised as to its effect on the Grange, by one who evidently held that it was a scheme to have the State do the work of the Grange and so supersede our Order, Bro. Hale replied, "*It is the biggest scheme in the world to boom the Grange.*"

In explanation, he showed that the meetings would be managed by expert organizers, whose example would be valuable to Grange officers. Again, they would draw out the best talent in the community and encourage them to do their best to put their experience in such shape that its results would be assimilated. In proportion as the Grange learns to do this work will she prosper.

Again, it calls attention of the masses to the importance of meetings designed to assemble practical men for their business interests, and so favorably advertises the Grange as to bring in many valuable members who have not hitherto been reached.

We understood that in the State of Wisconsin, about 80 of these meetings are annually held, at an expense to the State of something like $15,000. There have been developed some 2000 leading farmers, who devote more or less time to the Institute work. We suppose this includes only such as are accustomed to take leading parts, as the meetings usually last for three days, are commonly crowded, and the aggregate annual attendance must run up toward the hundreds of thousands. Farm Institutes are prominent in New York, Minnesota and Michigan, as well as in Wisconsin, and there has been some movement toward making them National. F. S. C.

National Grange Commissioners.

Bro. Wm. Johnston, chairman of the National Grange Commissioners, read the following report at State Grange:

Worthy Master, Officers and Members of California State Grange: The Committee appointed by his Excellency, Gov. R. W. Waterman, in accordance with the bill passed by the Legislature for the reception and entertainment of the National Grange, report as follows:

The President and Secretary of the Commission met and received the members of the National Grange, P. of H., at Humboldt, Nev., Nov. 11, 1889, and escorted them to Sacramento, where they arrived Nov. 12th. On the evening of the 12th, the citizens of Sacramento tendered them a banquet of welcome. The session continued until the 20th of November, inclusive. Many courtesies were tendered by citizens of Sacramento, several of which were declined for want of time.

On Nov. 21st, the Grangers were escorted to the Folsom State Prison, where they were cordially received by Warden Aull and his estimable lady. They were shown through the prison and to the dam across the American river, returning to Sacramento for the night, much pleased with the freshness and beauty of the American River valley.

Nov. 22d, we started at 8 A. M. for Marysville, where we were met by the members of the Wheatland and Yuba City Granges and the citizens of Marysville, where carriages were provided to drive the party around the city and to some of the adjacent farms in Sutter county. A fine collation awaited them at the Agricultural Pavilion, which was served by the ladies. At 3 P. M., the party started for Chico, arriving at 5 o'clock, where they were met by the people of that place and were tendered a banquet, and entertainment at the hotels and private residences of citizens for the night.

On the morning of the 23d, they were driven around the town and through the grounds of Rancho Chico and other points of interest, and at 1 P. M. started for Vina, where they stopped at the vineyard of Senator Stanford, visiting the wine-cellars and stock barns. They left Vina at 3:30 P. M. for Tehama, where they crossed the Sacramento river and turned down the west of the Sacramento valley.

At Willows, the party were greeted with music and an impromptu reception in general—one of the pleasing features of the whole trip.

On arriving at Woodland, the party were taken in charge by the citizens of that place, and, after an entertainment of the inner man, were escorted to the Opera-house, where they listened to an essay on irrigation by Wm. H. Mills.

On the morning of the 24th, many took advantage of the courtesy of the local citizens' committee and rode out into the rich country surrounding Woodland. Others embraced the opportunity of attending church and taking a little needed rest. At 1 P. M., the party rolled for Santa Rosa, where they were taken in charge by the local Grange of that place; and after a bountiful spread had been justly disposed of, the party repaired to the Grange hall, where the praises of California soil, climate and her people were sounded full and strong.

Nov. 25th, we left Santa Rosa for Geyserville, Cloverdale and Ukiah, where we partook of the hospitality of the people of Russian river, and returned to Santa Rosa and thence to San Francisco, where we put up at the Palace hotel, where we remained two nights, giving one full day to the city and surroundings.

Nov. 27th, we visited Leland Stanford Jr. University, Palo Alto stock farm, and passing on to San Jose, took carriages for a drive over the valley, and took lunch at the Quito olive farm and returned to San Jose, where a banquet awaited us presided over by the genius of the grand and good citizens of the place.

Nov. 28th, we visited Del Monte, Monterey, and Pacific Grove, dining at the Del Monte hotel, and returning to San Jose, thence to Oakland for the night.

Nov. 29th, we left for Stockton, where we met with one of the warmest receptions, the full carrying out of which was prevented by an incessant storm of wind and rain.

Nov. 30th, at 4 A. M., we left Stockton for Merced, where we were warmly received, and breakfasted. The people here were prepared to give us further entertainment, but the time-table of the regular business of the railroad required that we leave at 10 A. M. for Fresno, where we lunched and in the afternoon rode through Fresno's far-famed raisin vineyards and were banqueted in the evening.

Dec. 1st, we breakfasted with the Patrons of Husbandry of Tulare, and took an excursion to Visalia, and moved on to Bakersfield, where we took lunch and were driven over about 60,000 acres of the Haggin & Carr rancho, returning to Bakersfield to a sumptuous banquet, which closed the hour of 10 P. M., when we took our departure for Los Angeles, where we arrived Dec. 2d, on schedule time.

Breakfasting at Los Angeles, under the care of the Board of Trade and other committees, we were then driven through the principal business and residence streets and to other points of interest, after which we visited Alhambra, viewing the (to the Eastern people) wondrous citrus groves of that place, and, after an enjoyable lunch and a pleasant interchange of sentiment, we returned to Los Angeles and moved south to San Diego (by way of Oceanside), where we put up at the Coronado hotel, under the entertainment of Kimball Bros. and Mr. Babcock.

On December 3d, the party crossed the U. S. line into Mexico, and, on return, lunched with "Betsey Snow," visited the Sweetwater dam and the orange groves along the route and returned to Coronado for the night.

Dec. 4th, we visited Riverside, thoroughly inspecting the vast area of citrus groves, and returned to Los Angeles, where, on the morning of Dec. 5th, the members were met by the Los Angeles committee and presented with a basket of oranges and a bottle of wine each, as a final parting tribute.

It was noticeable that, throughout the entire trip, every variety of fruit, from the orange to the apple, was grown in perfection at every point, and the visitors were thoroughly impressed that, as a whole, California has no equal. It would require a volume to give an elaborate report.

This, in connection with the financial statement, will show fully whether the action of the Committee was sincere and judicious.

FINANCIAL STATEMENT.

Dr.

Check No. 1, F. T. McDowell	$5 000 00
Check No. 2, Richard Cone	20 00
Check No. 3, L. L. Landsborough	40 00
Check No. 4, A. A. Krull	400 00
Check No. 5, G. W. Hancock	50 00
Check No. 6, W. S. Butler	7 00
Check No. 7, J. H. Hall	63 00
Check No. 8, W. O. Bowers	98 00
Check No. 9, J. P. Meehan	160 00
Check No. 10, H. S. Crocker & Co	41 00
Check No. 11, T. H. Goodman	500 00
Check No. 12, J. P. Meehan	80 00
Check No. 13, S. F. Thorne	846 35
Check No. 14, Hotel del Monte	143 50
Check No. 15, R. M. Davies	300 00
Check No. 16, J. P. Meehan	600 00
Check No. 17, T. H. Goodman	525 00
Check No. 18, S. B. Hynes	370 00
Check No. 19, Hotel del Coronado	142 45
Check No. 20, Wilson & Mitchell	39 00
Check No. 21, Cyrus Jones	75 00
Check No. 22, A. T. Dewey	19 75
Check No. 23, A. T. Dewey	30 00
Check No. 24, W. L. Overhiser	85 30
Check No. 25, G. W. Hancock	57 30
Check No. 26, G. W. Hancock	50 00
Total	$9,742 65

Cr.

Appropriation by Legislature	$10,000 00
Rebate, A. A. Krull	62 10
Total	$10,062 10
Balance returned to Treasury	$ 319 45

Respectfully submitted, WM. JOHNSTON, Pres.
G. W. HANCOCK, Sec'y.

A Significant Inquiry.

A. T. Dewey, Esq., Secretary State Grange, S. F., U. S. A.—SIR: The inclosed newspaper cutting is from the PACIFIC RURAL PRESS, which paper I take regularly. I would like very much to obtain the instructions for organizing a Grange; in fact, if you have any pamphlets referring to the rise and progress of what are termed the Granges, I would take it as a very great favor if you would let me have some copies. If properly placed before our farmers I think your system of combination would take root here. Hoping for a reply by return mail, I remain yours faithfully, A. M. N.

Melbourne, Sept 30, 1890.

We welcome the above with pleasure. No doubt much good could be accomplished to the farming population of Australia by the establishment of the Grange in the province of Victoria as well as others.

We shall forward the author of the above letter copies of the Constitution and By-laws and such other printed matter as may be admissible, obtaining such information as he may desire. We also call the attention of Worthy Master Davis to the matter, with the view of his making definite inquiries at the coming session of the National Grange in regard to what authority could be given and assistance rendered to enable the farmers of Australia to transplant the Grange tree abroad in a safe manner to have it flourish upon the soil of Victoria.

After receiving the printed matter sent to Mr. A. M. N., we should be glad to have him correspond further. It is a pleasure to note among our foreign readers one who has a desire to extend the beneficent purposes of the Grange.

On the "Lope."

Antelope Grange is "livening" up nobly. The secretary writes: "At our last meeting the Grange acted on the petitions of 16 applicants, so we shall have a good class. The next meeting will be held in Maxwell, and it is possible the change to that place may be permanent." Fraternally,

G. F. MYRICK, Sec'y.

Visiting San Luis Obispo.

We learn by a letter that Past Master I. C. Steele left on the 25th ult. for a visit to San Luis Obispo. We hope he may be in good health and strength to speak to the Patrons in that section, as his words will always be favorably remembered.

VISITING THE EAST.—Bro. B. F. Walton of Yuba City, who has been East some time for the benefit of his health, was last heard from through Worthy National Grange Lecturer, Mortimer Whitehead, who writes, in Washington, Oct. 24th, viz.: "We enjoyed a call from Bro. Walton and daughter this week." We hope Bro. Walton will return fully restored to health, and that we shall have a report of some of the pleasant and interesting observations made abroad by himself and daughter, for the benefit of our readers.

SISTER L. CANFIELD of Boyd, writes: "I hope to get a few subscribers for your paper as soon as the farmers get their money for their wheat, but this being a part of the burnt-out district of last year, money is very scarce. The farmers should not lose hope, but should fortify themselves with a little more reading of the PACIFIC RURAL PRESS."



"From Manger to Throne."

[Written for the RURAL PRESS by S. K.]

"From Manger to Throne!" How sublime! Wha a theme
Is embraced in this title, which casts such a gleam
Of light o'er the advent which the prophets foretold
The world in the fullness of t me would behold!
'Tis the awe-striking story of God's promise to man
When in Eden's fair garden by sin he began
That life which was given him by a Power divine
Better uses to put to than to launch into crime.
'Tis the story of Jesus, the Babe that was born
In Bethlehem's manger that one blessed morn
Which in peace and good-will brightly dawned upon earth;
That morn when the Angels proclaimed loud His birth.
'Tis the story of miracles wrought by Jesus alone
From His birth in the manger to His filling the Throne
By the right hand of God, when He rose from the dead
After all that was mortal in life's blood had been sped.
"From Manger to Throne!" An inspiration divine
Surely 'twas that suggested this one simple line;
A title, indeed, to be claimed for his own
By him who has penned "From Manger to Throne."
Of traditions and landmarks that survive in the place
Where Christ gave His life for the whole human race;
Where, with love, mixed with sorrow for the woes of mankind,
He healed the sick, the lame, and the blind,
Will the story be found in "From Manger to Throne."
Not a story for those with hearts made of stone,
But for those who with feelings of gratitude yearn
Of His beautiful life more truths yet to learn.
Let all read and study this life that was given,
That we, poor sinners, may join Him in Heaven;
Let all ponder o'er it till all the world own
That the Babe of the manger is now King on the Throne.

Watsonville, Cal.

The Fellowship of Truth.

Truth shall keep the field at last,
She is not lightly overthrown;
But what of him whose lot is cast
To fight for truth alone?

Blind men shall proclaim him blind
In seeing what they cannot see;
And shouts of "Traitor" from behind
Shall hold him from his victory.

A lonely lot is his. And yet
Alone—he is not all alone;
Though others scorn him or forget,
Strong Truth is still his own.

And they who scorn and they who fear,
Blind age and boastful callow youth
Shall envy him, at last, the dear
Companionship of Truth.

—*I. O. Rankin in Overland.*

How Mrs. Jones Managed Her Husband.

On the public road just outside of Bridgeton, N. J., there lives a farmer and his wife, who may often be seen in town on Saturday afternoon, trading off butter and eggs for groceries. I believe they drive two white horses to a little carriage, and are what the world calls "pretty good sort of folks," but the world don't know anything about the awful time that rosy-cheeked, smiling-faced woman had getting her husband, Jedediah Jones, Esq., cut out to suit her own mind; because, you see, he had had a first wife, an easy sort of a woman, who let her husband do just as he pleased and never said a word back. There are very few such women nowadays, and when there are they don't live long, and so, of course, Rachel Jane No. One soon died, leaving Jedediah alone with all his faults to hunt up another good woman. Well, Jedediah had such an easy time with his first wife that he was in a powerful hurry to take another, believing all women to be angels.

Now the greatest fault this man had was poking his nose into something that was none of his business. His new wife called it "cot-bettying," and was determined to break him of it.

It was very annoying to a woman of such spirit as Sarah Ann Jones to have her husband leave his work outdoors, five or six times a day, to see what she was doing in the house. As the honeymoon wore off, it became more unbearable, until Sarah Ann at last determined she would have no more of it.

One day in particular he seemed more cotty than usual; in going out to his work, he stopped in the shed to turn the broom brush-part down, saying as he did so: "Sarah, don't you know any better than to turn a broom upside down? Rachel Jane never did such a thing."

"I am mistress now, and not Rachel Jane," said Sarah Ann as she stepped out to turn the broom up again.

He cast upon her a look of defiance which meant that war had commenced and we would see who came off conqueror.

Accordingly, much earlier in the day than usual, he came into the house and lifted off the lid of the dinner-pot to see what he was going to have for dinner.

"Humph," he grunted, "you bile your taters in too much water. You don't want more'n the bottom of that pot covered with water. Steam will do the rest," and he lifted up the pot and poured out half the water; but no sooner done than Sarah Ann slipped in more water, saying: "Who's biling these pertaters, you or me?"

Jedediah, thinking it best not to notice the fresh addition of water, began to gather up all the chairs and slip them, seats first, under the extension-table.

"I'll not have my chairs put out of sight in that way," said Sarah Ann. "You make the room look as empty as a barn," and she began scattering them about again, one near a little stand, another under a window, until the old cosy look came back, much to Jedediah's disgust, who went up-stairs, slamming the door behind him.

Mrs. Jones could hear a great deal of hauling and moving up above her, but thought it best, just then, to keep on getting dinner.

Mr. Jones soon came down, looking very red in the face, but triumphant, as he passed on out of doors.

I must go and see what he has been about, said Mrs. Jones to herself.

She found the bedsteads, bureaus, wash-stands, towel-racks and chairs all arranged on one side of the room, while the other sides were left entirely bare. She was so angry that it did not take her many minutes to get things back in their old positions, and down-stairs she went, in time to meet her husband coming in to dinner.

"Look here," she said with flashing eyes, "if I am not capable of managing this house, the quicker you get another housekeeper the better."

"I reckon a man has a right to have things in his own house as he sees fit."

"Then I suppose you will concede the same right to a woman when she neglects her own work to slip outdoors and help the managing there?"

"That's another thing," grunted Mr. Jones. "Rachel Jane and I got along like turtle doves; never had a quarrel in our lives."

"And you meddled with the indoor affairs when she was alive, just as you do now?"

"It was Rachel Jane's pleasure to let me have things just as I wanted them."

"No wonder she died, then; but I want you to understand, Jedediah Jones, that I'll have none of your interference in the house. You attend to your business and I'll attend to mine."

"I'll not be ruled by petticoats. Rachel Jane—"

"There, don't bring her up again. One thing I notice, you and Rachel Jane accumulated a very small portion of this world's goods, and I don't wonder, if you let your hay rot in the fields and your apples spoil on the ground, as you do now, to come to the house and oversee me. You have had your say and I'll have mine if you don't take my advice and leave me alone. No woman with any spirit would stand it."

It was almost a quarrel and each party finished the meal in silence.

Mrs. Jones tried to be even more careful with her housekeeping the next day than ever before, but all in vain. Mr. Jones came into the house and gave his orders just as usual.

"It is my turn now," said Mrs. Jones, as she tied on her bonnet and followed her husband outdoors early the next morning.

She paused before the woodpile, where he had stopped to saw a few armfuls of wood.

"Jedediah," said she, "you are sawing that wood entirely too short—a perfect waste of time."

Mr. Jones looked up and scowled. Mrs. Jones walked on, and, entering the barn, began to pitch more hay down to the horses.

"What are you doing there?" he called out angrily, his eyes having followed her.

"Mr. Jones, you don't give your horses half enough to eat, they're poor as snakes."

"The thunder they are!" shouted Mr. Jones. "Go in the house and mind your own business."

"I am going over to Joe Brown's first to see when he is coming after the corn in the south crib. The 'varmints' are eating it all up."

"Perhaps you are," said Mr. Jones, throwing down his saw and striding after her.

But she was far down the road, almost beyond shouting distance, and he feared attracting the attention of a milk-wagon that was just passing.

At quarter before twelve she came up the walk and found her husband sitting moodily on the porch.

"Well," she said, sweetly, "Mr. Brown is coming up after that corn this afternoon."

"Where is my dinner?" growled Jedediah.

"I have been so busy all the morning with your affairs that I am thinking we will both be obliged to put up with a cold bite."

"I'll break your ugly neck if you don't let my business alone."

"There is a law against that," said Mrs. Jones, coolly.

"Then I'll have a divorce, the sooner the better," said he, as he strode out to gear up a horse, to go in search of a lawyer.

But when that learned man was found, he advised Mr. Jones to let his wife alone in the house and he would come out all right, for divorces were not being granted in the State of New Jersey on such trivial causes, and so Jedediah paid the lawyer five dollars and went home a sadder but a wiser man.

"Let her have her own way and be hanged," he muttered early next morning, and from that day hence he never went into the house to direct or order, and to his surprise things began to wear a better aspect on the farm. He now had more time to attend to his own affairs, and Sarah Ann, left to herself, soon began to develop a wonderful capacity for saving. Mr. Jones, more to his surprise than ever, soon found that they were growing rich, while his wife grew rosier and rounder every day. Mr. Jones is now of the opinion that women are just as capable as men, especially in their own spheres, and that every sensible man ought to leave them alone.

And that is the way Mrs. Jones managed her husband.

An Odd Discovery.

[Written for the RURAL PRESS by M. M. S. P.]

In my reading, I lately came across a bit of information that seems to be authentic, and is certainly of considerable interest. It is relative to the stars in our flag.

The discoverer was, I believe, an English gentleman, and one who was sufficiently interested in the subject to visit the church at Brington, England, near Althorp, where is to be seen the memorial brass plate of the Washingtons.

This brass plate bore the arms of the family, the stars and stripes. On the tombs of other members of the family as far back as 1560, were found other brass plates all bearing the same design—the stars and stripes.

George Washington's great-grandfather, John Washington, brought with him to America when he emigrated, his family shield and crest. In due course of time, our great Washington of Virginia began to use this emblem of his family.

It was on the panels of his carriage, on two watch seals and on a bookmark. It is described thus: "Red bars, the five-pointed stars and the raven issuant out of the ducal coronet."

This must be a genuine account, as some of the commissions still preserved of officers who served in the Army of Independence, bear this seal.

It is not surprising that this emblem was chosen to be used by the country George Washington served so well and long

It was quite new to me to find that what we call stars were not originally so at all. They were intended to represent the rowels of spurs, or as they would be termed in speaking of heraldry, a science little known in our own country, "mullets."

Just fancy! Our glorious spread eagle was in the original design only a raven "issuant out of a ducal coronet."

"Issuant" is only the proper way of saying coming out of or on the rise.

Treasure Trove very pertinently says: "The whole concern has been on the rise ever since; the rowels of war have already been transformed into the stars of peace, and although the eagle allowed the ducal coronet to fall from its talons at the first flap, we Americans are proudly confident that our glorious bird will continue its upward course until it reaches the sun."

Lotteries.

The objection to lotteries is based upon morals as well as upon public expediency. *Lotteries continually invite the poor, and persons who are not well gifted with the moral sense and the quality of self reliance, to depend upon something else than their own efforts to take care of themselves.*

The lottery originated in corruption. The earliest legislative bodies of modern Europe protested against royal lotteries, and the first Assembly of the French Republic suppressed them as "an invention of despotism to make men silent about their want, by enticing them on with a hope which aggravates their distress."

Lotteries have been condemned in principle, though they are not as yet wholly suppressed in nearly every country in Christendom. In most of the States of the American Union they are forbidden by law. In England they have been prohibited since the reign of George II; in Belgium they were suppressed in 1830, and in France they are nominally forbidden, though the Government has permitted the element of chance to be introduced in the raising of money for certain semi-public purposes, as, for instance, the Panama Canal.

Lotteries have been well called schools of public demoralization. They introduce scandals and corruption in public life. Such scandals, involving charges of bribery of legislators, have lately arisen in Louisiana and North Dakota.—*Harper's.*

WOULD YOU?—Would you leave such legacies as the following? The *Christian Inquirer* gives it as the (unprobated) will of a drunkard at Oswego, N. Y.: "I leave to society a ruined character and a wretched example. I leave to my parents as much sorrow as they can in their feeble state bear. I leave to my brothers and sisters as much shame and mortification as I could bring on them. I leave to my wife a broken heart. I leave to each of my children poverty, ignorance, a low character and a remembrance that their father filled a drunkard's grave."

Hollyhocks.

'Mid drowsy sunflowers tall,
That rear their heads above the garden wall,
The stately hollyhocks stand,
With crimson flowers close along each stem
That glisten like the ruddiest ruby gem
Set in an emerald wand.

Upon their native ground,
Like troops of well-drilled soldiers are they found,
Nature's own body-guard;
And, clad in their bright scarlet coats-of-mail,
They for a time continue to prevail,
Unbroken and unscarred,

Till swiftly on the spot
Comes August, a commander fierce and hot,
Leading his army forth.
Tossing their yellow plumes high in the air,
A valiant host of golden-rods appear,
And prove superior worth.

O hollyhocks that grow
So far above your sister flowers below,
Ye seem, while there ye stand,
The spires of God's cathedral, vast and free,
That point forever upward hopefully
Unto the better land.

The moist-eyed buttercup,
Low at your feet, admiringly looks up,
With sense of awe profound,
While ye perform your mission pure and meek,
And with your golden tongues a language speak
More eloquent than words.

—*A. G. G. in Christian Register.*

An Eschatological Fable.

It was the evening of the last day of the world. The heavens had been rolled together like a scroll, the seals had been opened, the last trump had been heard. The righteous people of the earth had been gathered to the fold and the unrighteous had been sent down into the bottomless pit, divided into day shifts and night shifts, and set to work digging sulphur for the old serpent, who was chained for a thousand years. There was darkness upon the earth; the sun, covered with sackcloth and ashes, had sunk from sight, and the moon, a blood-red ball, was hanging low above the horizon. There was an awful silence. The earth had been turning slower and slower upon its axis, and there was reason to expect that it would soon stop altogether.

Alone in that vast solitude, with his haggard features dimly lighted by the crimson rays of the blood-red moon, with frozen tears upon his cheeks and a wild, hungry look in his eyes, sat one man upon a stone. The last man. The only man on all the deserted earth, waiting for the final throe when the world would become a defunct body, a dead sphere.

Suddenly there was a soft whirring of wings, and an angel sped down through the vast space of the infinite realm and alighted by the side of the forsaken man.

"Why are you here?" asked the angel. "Why did you not follow the procession when it left for the pearly gates of heaven?"

"Alas!" said the man.

"Why," said the angel, "did you linger here? Was it because you loved the earth?"

"No," said the man.

"Was it," continued the spirit, "because you were ashamed, or proud, or undeserving?"

"No! no!" cried the unfortunate man.

"Then," said the angel, "what was it?"

"Alas!" groaned the man. "I'm a country editor, and I was starved to death by my delinquent subscribers. I could not follow the procession. I was too weak. I—"

But the angel stopped him. Tenderly he took the editor under his arm and floated through space, up, up, until he reached the pearly gates. A whispered word to St. Peter and the gates flew open. There was a burst of celestial melody, and a ray of celestial light shot forth and shone through the voids of space. At the same time there came up from the bottomless pit a wail of awful agony—the old serpent was flogging the delinquent subscribers with his tail!—*G. V. Herald.*

A Righteous Judge.

A certain ignorant justice who does business up in Fulton county was elected over an able but very unpopular lawyer, and his first case was that of a prisoner charged with violating the fishery law. The complaint and warrant were defective; and this the defendant's lawyer took exception to in a masterly argument, winding up by moving the prisoner's discharge. "Is the motion seconded?" asked the justice. "It is," replied the prisoner. "Gentlemen," continued the justice, "it is regularly moved and seconded that the prisoner be discharged. All those in favor of the motion say 'Ay.'" "Ay," came from the prisoner and his counsel. "Opposed, 'No.'" Silence followed; after a short pause, the scales-holder said, "The motion is carried and the prisoner is discharged." And thereupon, to the surprise and amusement of all, court was adjourned.—*Amsterdam Democrat.*

AN EXAMPLE FROM HISTORY.—Freddy (studying American history): Papa, is there anything in what people say about 13 being an unlucky number? Old Sugge (English by birth): Yes, it seems so. Freddy: Well, how was it the Union was so lucky? It commenced with 13 colonies. Old Sugge: Oh—er—that was unlucky for King George.—*Munsey's Weekly.*

A Reason for Working.

Anna C. Wright, in a letter to the Chicago *Inter-Ocean*, writes:

There is a lady in our town who manages a profitable business which she established before her marriage to a leading business man. Contrary to custom, and also the expectations and perhaps the desires of her friends, she continued in her business after that happy event. Many years have gone by, yet she works as diligently as ever, and adds much to the luxury of her hospitable home by her earnings.

One day recently a friend rallied her upon her untiring industry.

"Well, why shouldn't I work?" she inquired quickly. "I'd rather work than practice self-denial. I can't beg or steal, and it is easier for me to work than to deny myself all the time. I suppose I'm extravagant. Anyway, I can't do without money." If that lecture had not been interrupted by a caller on business it would have been longer. Her questioner shook with inward laughter and wished she might hear more of the lady's reason for working. Is it not true that many people go through life practicing self-denial when work would bring self-gratification?

Self-denial for the purpose of helping others may be a Christian virtue, but self-denial, which is merely doing without things because one is too lazy or too proud or too incompetent to work for them, is a good deal more common than the other kind, and is utterly without excuse in the opinion of such people as this brisk business woman whose words are quoted here.

A Pointer.

The *Bundle of Sticks* is accountable for the following:

Wife—"This is a nice time of night to come home; are you not ashamed of yourself?"

Husband (pulling off his boots)—"Don't scold, couldn't get away a moment sooner. Had a big argument."

Wife—"Big fiddlestick."

Husband—"Fact, I assure you. What do you think? All the men at the Lodge in it. Question was which of us had the most amiable and beautiful wife. I beat them all. Described your beautiful eyes, silky hair, cheeks of roses, teeth of pearl, lips of cherries, temper like an angel. Offered to fight them all if they would not admit it. They gave in. So here I am, late I own, but victorious with the finest wife in the world."

Wife (with a sweet smile)—"You are a sad fellow, John, I am afraid you'll never be anything better. Let me help you trke off your coat, dear."

Chaff.

WICKWIRE: Mudge is not so hopelessly lazy as you think. There is considerable go about him. Yabsley: Yes; that's so. Lots of people have to go about him, because he is too lazy to get out of the way.—*Terre Haute Express.*

"You may say what you will, but Bismarck is the greatest man of this century." "Hu-s-h! Don't speak so loud. The mayor's sitting at the next table and you might hurt his feelings."—*Fliegende Blatter.*

SOME men manage to get out of a dilemma by drinking both horns.—*Binghamton Leader.*

AMY: There's a hole in your stocking as big as a dollar. Mabel: A gold dollar or a silver dollar? Amy: No; a paper dollar.—*Ex.*

I SAW Jack Dayton, a rather simple-minded neighbor of mine, nailing up a box which I knew contained articles which he intended sending by express. So I ventured the suggestion to Jack to place the much-abused "This side up," etc., conspicuously on the cover. A few days after that I saw Jack. "Well, Jack," said I, "did your goods get there safely?" "Every one smashed," replied Jack angrily. "Hang the express company!" "Did you put on 'This side up,' as I told you?" "Of course I did; and for fear they would not notice it on the cover, I put it on the bottom, too."

AN EFFICIENT SWITCHWOMAN.—For 40 years Mrs. Mary Carroll has been the switchwoman at the Central railroad junction of Macon, Ga., where several different railroad tracks meet. During this time she has always been faithful and efficient. She has never been the cause of an accident. Her tracks have always been set right. Her duties have been responsible, but the road has never incurred a dollar of breakage, a moment of delay, or the injury of a person on her account. She is, perhaps, the oldest and only switchwoman in the United States. There are hundreds of people who will recall seeing her in the little switch-house, at the junction, one mile from town. After so excellent a record, and so many years of capital service, in sunshine and storm, in cold and heat, the Central road has placed her in a less irksome position. She has been made gatekeeper at the shop of the road in that city.

YOUNG FOLKS' COLUMN.

A Halloween Party.

[Written for the RURAL PRESS by MAUDE S. PEASLEE.]

It was a cold, rainy Saturday in October. Outside, the rain came down in torrents, the wind blew and whistled angrily through the dry branches of the trees. Within, a bright fire blazed in the fireplace and danced on the gilt frames of the pictures upon the wall.

It failed, however, to brighten the faces of the two children who sat disconsolately at the table in the center of the room.

"One can't read all day long," growled Bert, as he pushed his *St. Nicholas* away from him and buried his curly head in his arms.

Bess agreed with him. When was she ever known to refuse him sympathy?

"If we could only go out of doors," she said in a very forlorn tone, "or go to see some one, it wouldn't be so bad. I just wish we hadn't been invited in the first place. I 'spise disappointments."

"We would have felt bad if we had been left out when the rest were invited, and I suppose the other boys and girls are as much disappointed as we are," said Bert with the unconscious philosophy of thirteen years.

Grandma, who had listened quietly, now said:

"How could you help being disappointed? I'm sure I should have felt it myself, if I expected as much pleasure as you did."

That was the loveliest thing about the dear old lady. She was always ready to sympathize with any one in trouble, from the little ones to her own sons and daughters who still brought many of their troubles to "Mother."

"You see," she continued, "its being a lawn party spoilt it all this time. Now I want to tell you about a party I had when I was a girl, a party at which we all had such a good time that I remember it yet."

Both the children brightened up at once. Grandma's stories were sure to be nice ones.

"I was older than either of you," she said. "I was just past my sixteenth birthday, but I had younger brothers and sisters who enjoyed it nearly as much as I did.

"It was on Halloween, the last night of October, the eve of All Saints' Day, when all the good fairies are supposed to be about ready to do one's bidding."

"Oh!" breathed Bessie in delight at the thought of a fairy story.

"It was only a superstition, dearie," said grandma, smiling, "only a notion that people had believed in so long that it seemed true. All my playmates and young friends were invited and it happened to be a clear night, which made it pleasanter, but I think the boys and girls would have managed somehow to be there, for many a frolic they had had in our large bright kitchen."

"What made you take them into the kitchen, grandma?" asked Bert in a tone of surprise.

"We were not there all of the time, dear. Of course I received my company in the parlor, but the real fun never began until we got out in that nice clean old kitchen with its well-scrubbed floor and its shining tins and saucepans."

"I guess it would have been nicer," said Bert reflectively.

Grandma smiled and continued: "The boys and girls came quite early, and glad we all were to see them. Mother entertained us for quite awhile with stories of Halloween parties she had been to when she was a girl, and also read us a few lines from the poet Tom Moore about the celebration of Halloween.

"When we went out in the kitchen we found on the floor two tubs filled with water, containing also a number of apples with bits of paper pinned to them floating about on the surface of the water. We afterward found that the tub for the boys had apples with girls' names written on the bits of paper, and the one for the girls was arranged the same way with boys' names. As the writing was turned downward, of course we could not see the names.

"It was great fun, for in order to get the apples we had to kneel on the floor and pick up each an apple with her teeth. They all had long stems, but it was not so easy as it seemed, since if we began to laugh and touch the apple anywhere without catching it with the teeth, down it bobbed under the water. When we had each an apple, we had great fun comparing the names. As only the names of those present were used, each boy had a partner for the evening. The girls kept their papers, for sometimes, you see, they didn't get the name of the boy who came to claim them for the games."

Bert and Bessie were much interested, and all disappointment over the lawn party was forgotten.

Grandma smiled down at their upturned faces and continued:

"Then we melted lead in an iron spoon, and dropped a piece for each one into a bowl of water. The queer shapes were supposed to indicate the profession each boy would follow, and the profession of the man each girl would marry. Sometimes it would seem to indicate that the girl was going to be an old maid. It was wonderful the things we would fancy we could see in those queer-shaped bits of lead.

"Afterward we roasted chestnuts in the hot ashes, each pair being named for some boy and girl. Sometimes they would roast quietly and happily together and again would pop suddenly apart. This the boys and girls called having a quarrel.

"The next thing was supper, and mother had baked a cake with a ring in it. The one who got that was to be married first. We each ate an apple at the table after naming it and counted the seeds just as you do now—'one I love; two I love; three I love I say; four I love with all my heart; five I cast away; six he loves; seven she loves; eight they both love; nine he comes; ten he tarries; eleven he courts; and twelve he marries.'"

"I wonder who made that up," said Bert.

"I think it is very old, dear," answered grandma. "After supper we girls wanted to try going down-cellar backward and looking in a glass while we ate an apple. Mother was afraid some of the boys would be mischievous enough to try to frighten us by looking over our shoulder, so she wouldn't let us try it.

"She said we might try unwinding the ball, and told us how to do it properly. The girls wanted me to try it first, so I went to the parlor window alone and threw the ball out, saying aloud as I leaned out, 'Whoever my future true love shall be, take hold of the end of this string with me.' I kept fast hold of the end of the string and waited. Just before I went in we had heard the whistle of the late train and some one spoke of it. I, however, had forgotten it, until now I heard footsteps coming nearer and the low laughing of two men."

"Oh!" exclaimed Bessie. "Wasn't you frightened, grandma?"

"Yes, dearie, I was, but only for a moment, for just then I recognized the voice of my oldest brother, who was a medical student. I rushed to the front door to let him in, and after kissing him was greatly embarrassed to be introduced to his friend, who gravely but with twinkling eyes handed me the ball I had thrown out with the string neatly rolled up. He afterward told me the ball had fairly hit him as he came up the walk. Their arrival only made more fun and maybe there was something in it, for he was very nice to me after that."

"I know," said Bessie, dancing about and clapping her hands. "It was grandpa; now wasn't it, grandma?"

"Yes," said the dear old lady with very pink cheeks, "and he likes to tell it yet himself. If you will be good children, I'll ask mamma to let you have a party just like it a week from to-morrow; that will be Halloween, you know."

Both the children were highly delighted, and it is only fair to say the party was a grand success and that no one enjoyed it more than grandma and grandpa.

His First Cigar.

Dr. Talmage tells in the *Ladies' Home Journal* how he smoked his first cigar and how he enjoyed the experience, as follows:

The time had come in our boyhood which we thought demanded of us a capacity to smoke. The old people of the household could abide neither the sight nor the smell of the Virginia weed. When ministers came there, not by positive injunction but by a sort of instinct as to what would be safest, they whiffed their pipe on the back step. If the house could not stand sanctified smoke, you may know how little chance there was for adolescent cigar-puffing.

By some rare good fortune which put in our hands three cents, we found access to a tobacco store. As the lid of the long, narrow, fragrant box opened, and for the first time we owned a cigar, our feelings of elation, manliness, superiority and anticipation can scarcely be imagined save by those who have had the same sensation. Our first ride on horseback, though we fell off before we got to the barn, and our first pair of new boots (real squeakers) we had thought could never be surpassed in interest; but when we put the cigar to our lips and stuck the lucifer match to the end of the weed, and commenced to pull with an energy that brought every facial muscle to its utmost tension, our satisfaction with this world was so great our temptation was never to want to leave it.

The cigar did not burn well; it required an amount of suction that tasked our determination to the utmost. You see that our worldly means had limited us to a quality that cost only three cents. But we had been taught that nothing great was accomplished without effort, and so we puffed away. Indeed, we had heard our older brothers in their Latin lessons say *omnia vincet labor*, which, translated, means if you want to make anything go, you must scratch for it.

With these sentiments, we passed down the village street and out toward our country home. Our head did not feel exactly right, and the street began to rock from side to side, so that it was uncertain to us which side of the street we were on. So we crossed over, but found ourself on the same side that we were on before we crossed over. Indeed, we imagined that we were on both sides at the same time, and several fast teams driving between. We met another boy who asked us why we looked so pale, and we told him we did not look pale, but that he was pale himself. We sat down under the bridge and began to reflect on the prospect of early decease, and on the uncertainty of all earthly expectations. We had determined to smoke the cigar all up and thus get the worth of our money, but were obliged to throw three-fourths of it away, yet knew just where we threw it in case we felt better the next day.

Getting home, the old people were frightened, and demanded that we state what kept us so late, and what was the matter with us. Not feeling that we were called to go into particulars, and not wishing to increase our parents' apprehension that we were going to turn out badly, we summed up the case with the statement that we felt miserable at the pit of the stomach. We had mustard plasters administered and careful watching for some hours, when we fell asleep and forgot our disappointment and humiliation in being obliged to throw away three-fourths of our first cigar.

PA: Have you seen with the microscope all the little animals that are in the water? Tommy: Yes, papa, I saw them. Are they in the water we drink? "Certainly, my child." "Now I know what makes the singing in the teakettle when the water begins to boil.—*Siftings.*

DOMESTIC ECONOMY.

Boiling an Egg.

"Isn't it strange," said a short, foreign-looking man the other day to some companions, while lunching together at one of the restaurants, "that not one cook in fifty, nor housekeeper either, knows how to boil an egg? And yet most people think they know this simple matter. They will tell you to drop it into boiling water and let it remain three minutes, and to be sure the water is boiling.

"Here is where the mistake is made. An egg so prepared is indigestible, and hardly fit for a well person, let alone one who is sick, to eat. The moment it is plunged into boiling water the white hardens and toughens. To boil an egg properly, put it in a vessel, cover with cold water, place over the fire, and the second the water begins to boil your egg is done. The white is as delicate as a jelly and as easily digested and nutritious, as it should be. Try it."

The information is worthy of consideration, since the speaker has occupied the place of chef at several of the largest hotels in the country.—*Chicago Tribune.*

FEATHER CAKE.—One egg, one cup of sugar, one tablespoonful of butter, one-half cup of milk, one and one-half cups of flour, one teaspoonful of cream of tartar and one-half teaspoonful of soda.

TURNIP PASTRY.—Boil thoroughly one-half dozen turnips, mash them up, adding a teaspoonful of cream and seasoning with salt and pepper. Put paste around this mixture, like a dumpling, and bake or steam.

COCOANUT CAKES.—Scarcely half a pound of loaf sugar to a large cocoanut grated; put into a preserving pan till the sugar melts. Form into cakes; put on white paper. They should be well baked in a very cool oven, and when cooked ought to be very pure white.

GINGER SNAPS.—One cup and a half of molasses, two-thirds of a cup of butter or lard, one teaspoonful of soda, one-half cupful of water, two tablespoonfuls of ginger. Mix soft, and roll very thin; bake in a quick oven. Put in the pan so they will not touch each other.

TO BOIL RICE.—Take one cup of rice, cover with cold water, and let it boil until the water is most gone, then add one cup of milk. When that boils, stir in one beaten egg, and season with lemon, vanilla or nutmeg. When done, serve with butter and sugar stirred to a cream.

CRAB APPLE JELLY.—Wash and wipe Siberian crab apples, quarter, but do not core, put in a kettle, and cover with cold water; cook until soft. Strain twice through a jelly bag. Put the juice on and boil twenty-five minutes. Add a pound of sugar to every pint of juice, with the juice of one lemon. Boil until it jellies.

GINGER SNAPS.—Bring one cupful molasses to a scald; mix together one cupful of sugar, ½ cupful of butter, one egg, a little salt and one teaspoonful of ginger. Stir 1½ teaspoonfuls of soda into the boiling molasses, pour over the other ingredients and add flour enough to make a stiff dough. Let it set a few minutes before rolling out.

BEEF TEA.—Cut two pounds of lean beef very fine with sharp knife. Pour a pint of cold water over it and let it stand for several hours in a double boiler on the back of the stove, where it will heat to the boiling point but not boil. When the juice is all extracted from the meat so that the meat is white, drain off the liquid and salt to taste.

QUINCE MARMALADE.—Pare, core and slice the quinces. Stew the skins and cores by themselves with just enough water to cover them, and when soft, strain through a jelly bag. Let this liquid cool, and when cool put the quinces into it. Boil, stir and mash as the fruit becomes soft, and when reduced to a paste stir in a small three-quarters of a pound of sugar to every pound of fruit. Boil fifteen minutes, stirring constantly. Put into small jars or glass cans. The juice of three or four oranges to every six pounds of fruit some consider an addition.

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SAN FRANCISCO:
Saturday, November 1, 1890.

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[NEW THIS ISSUE.]

Gang and Sulky Plows—Baker & Hamilton.
Economy Horse Power—F. W. Krogh & Co.
American Wonder Machine—F. A. Frank & Co., N. Y.
Little's Antipest—Catton, Bell & Co.
The Garrett Fence Machine—K. C. Dussenberg.
Seed—Westcott & Co.
Stock Food—Manhattan Food Co.
Leather Belting, Lacing and Hose—H. N. Cook.
Political Announcement—J. R. Hebbron, Salinas.
Peach Pits for Sale—Thomas Meherin.
Incubators—Geo. H. Stahl, Quincy, Ill.
Cards—Home and Youth, Cadiz, Ohio.

See Advertising Columns.

The Week.

Whether the weather or the political campaign has been the hotter during the last week no one has energy enough left to determine. The only thing which makes life endurable is the expectation that this week will practically finish up both heating agencies, and we shall then glide smoothly into the season of rains, holidays and legislative proceedings.

We trust that no reader of the RURAL will forget to vote next Tuesday, for such votes are needed to overcome the thousands of ill-considered, mercenary or vicious suffrages which will be cast. No one can tell how far-reaching the effects of even a single honest vote may prove.

It is announced that the great coal strike in Australia is over and that ships will be headed this way. Such a movement will bring us cheaper wheat charters and cheaper coal, both of which are things to be ardently wished for at this season of the year.

Who Will Get the Sugar Bounty?

A friend sends the following from the *Monache Tidings*, published at Porterville, Tulare county, and asks our opinion upon it:

The new tariff does away with the duty on foreign sugar and gives a bounty of two cents on the home manufactured. See how this works. The duty off sugar admits sugar free for Mr. Claus Spreckels. The bounty of two cents more than furnishes him with the beets to make sugar from in California. At the Watsonville refinery a short time ago, Mr. J. M. Moore of this county was told that $1600 worth of beets were used daily. He was also given the amount of sugar produced from the $1600 worth of beets. Figuring up the bounty on the sugar produced, he found it to be $1800—$200 more per day than the cost of the beets produced by the American farmer.

The point involved is important and probably cannot be fully determined without careful investigation. We are not prepared to state that the illustration with reference to the working of the bounty at Watsonville is correctly drawn. We are not familiar enough with the manufacture of beet sugar to affirm or deny the computations made by the writer. We print them subject to future revision if necessary.

There is, however, a general question involved which is of the greatest importance and which should be carefully considered. It is this: How can the beet-grower realize his share of the bounty? The bounty is not offered for the growth of beets. If the reader will refer to our issue of Oct. 11th, page 319, he will find the leading provisions of the Tariff law as relating to sugar production. We do not there find any plums for any one but the one who makes the sugar. The maple-sugar maker who draws the sap from his trees, boils it down and markets not less than 500 pounds of sugar in a season, is entitled to the bounty. The beet-grower or sorghum-grower could clearly also collect the bounty, provided they could themselves put forth over 500 pounds of sugar. The question then is whether a beet-grower whose yield of beets is sold to a sugar manufacturer is entitled to a share of the bounty, or whether the manufacturer is entitled to it all. It seems to us from the law that the manufacturer only can collect the bounty. It is, however, suggested that if growers of sugar beets take proper steps, they will be able to secure the greater part, if not all, of the bounty. One who holds this view says that if beet-growers would organize and secure indisputable assays in their own interest of the saccharine contents of their beets, the association could secure for each grower a proper pro rata share of the bounty awarded the manufacturer who works up the beets. We don't know how much force there is in such a claim or how the law might be interpreted by the courts if such a claim was made. That is an undetermined problem.

The question is then advanced, Will the bounty make manufacturers pay the growers any more money for the beets? Will Mr. Spreckels, for example, pay more for beets next year? We have seen no statement from him on the subject, and, in the absence of any, there is the common business inference to be drawn that Mr. Spreckels desires to make money and will not pay more for beets than he can secure a supply for; consequently, so long as he can secure all the beets he wants by growing them himself or buying them at old rates, he will turn the bounty to his own account. If the market price of sugar declines (as one side claims and the other denies), then it does not appear that Mr. Spreckels can do any better by collecting his bounty than he could before by selling his product at an advance equal to the bounty. There are, of course, several undetermined conditions liable to affect this aspect of the question.

However the doubtful features of the problem may be discussed, there is a way that a beet-grower can get his share of bounty, whatever that share may be. This way will be by co-operation. It may operate by refusing to sell beets to a manufacturer unless the growers are satisfied that the price represents their share of the bounty, or co-operation may enable beet-growers to combine their capital and material and establish sugaries of their own. This would seem to be in the line intended by the projectors of the existing law, and it remains to be seen how far such co-operation will be practicable or profitable. The series of articles now appearing from week to week in the RURAL PRESS is designed by the writer to throw light upon the subject of co-operative sugar factories, and we invite other contributions to the same end from those acquainted with the matters involved.

The Cause of It.

No doubt all who have been depressed and disgruntled by the unusual duration of hot, dry weather will be glad to know the reason why the peculiar phenomena exist and continue so long, and why we had a wet October last year and just the opposite this year. Lieut. Finley of the Signal Service, being interviewed by a city reporter gave the following interesting statement:

"It is true that the difference between the temperature of this month and that of October, 1889, is most marked. In the latter month there was not a single day when rain did not fall somewhere on the Pacific Coast.

"In October, 1889," said the lieutenant, "the rains which come from the Japan current moved eastward over British Columbia, carrying the rain center northward of this portion of the United States. They then moved farther south, carrying the area of precipitation into California. In October, 1890, these storms have moved eastward so far north that the rain which attended them has been confined to Oregon and Washington, and did not reach California.

"As to the north winds which for the past week have prevailed, bringing a heated spell, they are due entirely to the presence of an area of dry air and clear weather prevailing over Nevada, Utah and South Idaho, with a slight depression of the barometer just off the coast of Southern California. This area of dry weather is called on the charts 'high,' because the air is denser and heavier. The depression off the coast of California is called 'low,' because the air is moist and lighter. The north winds result from the movement of the clear, dry air of the 'high' to the warm, moist air of the 'low.' There is a gradiance between the two which causes the air to flow away from the place of the highest pressure to the lowest. The air in moving from the 'high' to the 'low' is obliged to pass over the heated sandy soils of Nevada, and by the time they reach California have absorbed an enormous quantity of heat. They therefore appear as scorching hot winds. The sun beats down from a cloudless sky on the desert regions of Nevada, and the earth becomes quickly heated to a high degree, so that the air as it passes over the ground takes up the heat of the soil and carries it onward."

At the time of the interview on Tuesday last, Lieut. Finley thought the same weather might prevail a couple of days longer at least. A rainstorm breaking loose from the Japan current seems to be our hope for relief, and we trust it will not be long delayed, though this weather has done well in bringing in the outstanding fruit in the best condition.

Mohair and the Tariff.

In a circular just received, Wm. Macnaughton's Sons of New York express their belief that the new tariff will be of service to the mohair producers. They say that the new tariff will practically add two cents more per pound to the cost of foreign mohair (much has heretofore come in under the 10c. duty), and in all probability create a more steady demand for the domestic clip. The increased duty on foreign mohair goods will curtail importations and give a larger market for those made here, naturally increasing the demand and consumption for domestic mohair among our mills. Prices are now on a very good level, and they will undoubtedly remain firm with an upward tendency. All mohair will sell quickly and well, but as is always the case, lots in the best condition will receive the most attention from buyers.

STATISTICS OF IRRIGATION.—The subject of irrigation has been made a matter of special investigation in the Division of Agriculture of the Eleventh Census. It is estimated that upward of two-fifths of the acreage of the United States need irrigation. The total number of acres now irrigated, together with the quantities and varieties of crops grown under the system, will be shown. The melting snows of the mountains and the rivers that heretofore ran free will more and more be utilized and led over the great plains, causing them to become fruitful and to afford happy homes for millions yet to come.

SERICULTURAL SPECIMENS.—The State Board of Trade has on exhibition two large glass cases containing some beautiful samples of cocoons from 30 counties of this State. They were forwarded by the Ladies' Silk Culture Society.

Sorosis Fruits.

One of the handsomest packages of California canned fruits is that bearing the legend "Sorosis Brand," and the source of the merchandise is the Sorosis Fruit Ranch of Mary R. Smith and Ida L. Calkins of Santa Clara. The can also bears such attractive announcements as "Selected Fruit Fresh from the Tree" and "Fully Ripe—Put Up at Home." This is just the kind of enterprise which has often been advocated in these columns, and we are glad to see it undertaken and put forward in such unique and acceptable style as the Sorosis ladies are doing it.

The picture upon the label represents a bevy of five beautiful young ladies regaling themselves at a table upon which are spread various kinds of fruits. On the pendent portion of the tablecloth nearest the spectator is delineated a map of California, the cloth being so arranged that its lower edge represents the well-known coast line of California, and back of that the valleys, rivers and mountain ranges are traced in delicate lines. The leading towns are also shown, and at its proper geographical position, the "Sorosis Fruit Ranch" is marked. It is a very commendable idea to locate the region whence the fruit comes in such unique fashion. The picture is a very pretty one in itself, and its fitness to the purpose intended is striking.

We learn by inquiry that the Sorosis Fruit Farm contains 200 acres planted to fruits of the choicest canning varieties. The cannery is conducted by ladies, and women only are employed. This is the first year of its operation, and 6000 cases of two dozen 2½-lb. cans each was the output. Each can is wrapped in fine tissue paper. This year's product found a quick market.

The undertaking of the Sorosis partners is suggestive in many ways. There can be no doubt but that ladies having the capital necessary and the ability to apply it in the growing and canning of such fruit will succeed. Of course lack of either capital or skill or business talent might prevent success, so we do not unqualifiedly urge such an undertaking upon all ladies who would like to turn their time to good account. Still the fact remains that such enterprises will produce our best canned fruit and will command prices considerably in advance of those secured for the bulk of the commercial pack of the State. If the fruit is well selected, well put up and given a style which, as in the case of the Sorosis brand, attracts by its beauty, it is almost sure to reward its producers and add to the fame of the State.

The Fruit-Growers' Convention.

Our fruit-growing readers should begin now to arrange their affairs so as to attend the convention, to be held about the middle of November, at Santa Cruz. It has been a year of novel experiences and not devoid of surprises, some very agreeable, some otherwise. There probably never has been a time in our recent history when a general convocation of fruit-growers and a free discussion of subjects affecting their interests can yield more valuable results than at present. For this reason we trust that there may be a general disposition to rally at the Santa Cruz meeting.

It will be the fourteenth convention called by the State Board.

The convention program is not yet formulated, although many of those from whom essays are expected are busy getting their ideas upon paper. Among others, J. H. Hale, the Connecticut horticulturist, who is here now collecting fruit-growing facts for the Census Bureau, will make an address. He is full of progressive ideas, gained from New England experience, and his suggestions will doubtless be of interest and value. The railroads and steamship lines will, as usual, grant special rates to all who attend the meeting, and the hotel managers of Santa Cruz have promised to scale their prices to an economical fruit producer's standard. Altogether, Secretary Lelong of the State Board feels confident the assembly will be one of pleasure and profit. The local Board of Trade has taken the matter of preparations in hand, and assures a warm greeting to all fruit-growers who may attend.

IRRIGATION TAX.—At a meeting of the Turlock irrigation district, 28th ult., the tax levy for the fiscal year was placed at $1.25 on $100 valuation.

TRACK AND FARM.

Intelligent Horse-Breeding.

EDITORS PRESS:—There is no business connected with the farm that requires the keen intelligence and cool judgment that horse breeding does. The American trotting horse has a history, but it is not within the leaves of one book nor of those of a hundred; hence the man who would know the history of the American trotting horse has a task before him.

Also, to be capable of competing in the markets, he must have good goods. The time was when the horse jockey was the exponent of pedigree and record. Such is not now the case. The trotting horse has a stud-book, called a register, and a year-book is published giving all the important records and all the gilt-edged produce of sires and dams.

But a few years since trotting-horse breeding was a haphazard business; it has now become a science. There are certain strains of blood that, when bred together, produce a certain trotter. To know these strains and to have the means to purchase them is like holding the magic wand. Many and many a failure is recorded by reason of lack of knowledge where means is abundant. Many have failed because they had not the means to *use* the best; many and many have failed because they would show their neighbor that he was on the wrong track. All desire to know the road to success, and in this business there are several, but they all have the same landmarks for guidance of those who have not been over the route. These landmarks are the record of performances by the representatives of the great families and their pedigrees, showing the collateral lines and branches as they run back to the third or fourth generation. There is no need to go farther; if it is good four generations back, you are on solid ground. If it is not good at that point, there is no use in going back farther.

To be capable of analyzing a pedigree without prejudice or favor—that is the point. First after seeing that the animal under consideration is reasonably good for the purpose required, look to the sire. He should be of a family of producing sires (and *his* dam should be of a family of producing dams) The dam should be also of a family of producing dams, and should be sired by a producer of a producing family by sire and dam also. Just as far back as you can fill those requirements, just so much surer you may rest content that you are on the right road.

Now comes the great problem: How to blend the different families of the American trotter. Nearly every great breeder has a hobby, and it has been created by his own experience; but he who by wise judgment foresees the lines that will make the best dams, and the lines that will make the best sires, will certainly win his share of success. The meeting of Hambletonian 10 with Clara by American Star produced Dexter, the king of his day; also Dictator, who has sired Jay-Eye-See 2:10, Phallas 2:13¾, and Director, who has sired Margaret S, 2:12½, at four years. American Star produced but four trotters with records better than 2:30, and left no son that has produced even four; but he left 35 daughters that produced 45 2:30 performers at the trotting gait and one pacer. Here we have an exemplification of the fact that there are families of dams as well as of sires. Hambletonian 10, mated with Dolly Spanker by Henry Clay 8, produced Geo. Wilkes, sire of 60 trotters and 6 pacers in 2:30 and better. Henry Clay 8 sired but three with records of 2:30 and better, and the dams of but seven with records of 2:30 and better, yet the son of one of those dams has sired 66 performers, 41 sires of performers and 19 dams of performers.

Though American Star is ahead of Geo. Wilkes as a sire of dams that are producers, he will undoubtedly be far in the rear when the final count is made up. Blue Bull is another remarkable sire, having 59 performers to his credit in 2:30 or better, and 20 dams of performers, with only 9 sires of performers, showing, though a great sire, he is breeding on in the female line stronger than in the male line.

Nutwood 600 (by Belmont 64, a grandson of Hambletonian 10), dam by Pilot Jr., is producing trotters, sires of trotters and dams of trotters, yet in his dam he goes to the thoroughbred that has not been a success at trotting.

A. W. Richmond, the sire of Columbine, the dam of Anteeo and Antevolo, has made a remarkable showing on the dam side of breeding, considering his opportunities, Columbine being the first dam of two entire sons with records below 2:20. The scattering of the Richmond mares by Mr. Hill's sale will make a stronger showing in that line as years roll on. There is already a filly by Director out of a Richmond that can go in the 2:20 list whenever called upon.

Many of the great breeders are believing that there are great sires, and sires of sires and also great sires of dams. The American Star cross through females was great, but in succeeding generations it has been excelled in the male line. The Clay cross has been great in producing males that have bred on in both lines as well as great speed, and do not overlook that extreme speed is far richer in results than medium speed. The records of sires and of dams show that there are two points to be considered: What line of dams and what line of sires are to be taken. You pay your money, take your choice; but if you choose without study, you are as liable to fail as to win. Don't forget that Nelson 2:10¾ is by a pacer; that Stamboul is a Union Clay and Hambletonian; Electioneer, Hambletonian 10 and Clay; Geo. Wilkes, Hambletonian 10 and Clay; Nutwood, Hambletonian and Pilot Jr. (sired by a pacer and thoroughbred); Guy Wilkes, Hambletonian and Mambrino Patchen—a great sire of trotters, sires and dams. Director is Hambletonian and Mambrino Chief—a great sire of sires, and of dams as well.

I trust that to those who think, it will become clear that the great success of some breeders is not by accident, as it will also that the great sires are not by accident either. Guy Wilkes at 11 years of age has 4, with records below 2:20 at 3 years old; also is the sire of Sable Wilkes, sire of Freedom, with a yearling record of 2:29½—distinctions that none others share. But there are no more of the old Clay family to breed to, and the Mambrino Patchens are all placed, except one has a long purse. But something will take their place, either of the younger of the same families or other blood. He who can discern whether it be the pacer, the one half thoroughbred, or the blending of the best producers of the sires and dams, or the sires in one instance and the dams in the other—he who is the best judge will be the greatest winner. PRO BONO PUBLICO.

FLORIST AND GARDENER.

A Pioneer Plant Sale.

EDITORS PRESS:—In the fall of 1853 I bought land in Alameda and moved from San Francisco in January, 1854. I commenced to grow flowering and ornamental plants and soon had quite a stock for those days; but I found there was no sale for them in Alameda. I arranged with Wainwright & Randall on Merchant street to have an auction sale. The little steamer that was running from San Francisco to Alameda was blown up soon after my moving over. I got the plants ready and hauled them to a sloop, put them in the hold and went with them to San Francisco. I had them hauled to the salesroom and advertised them three days. They attracted a great deal of attention. One lady would say to her escort, "Buy this for me," and another, 'Buy that for me," and frequently selecting the same plant. On the morning of the sale there was a large crowd. Gov. Wainwright was in his happiest mood, calling *Cinerarias* "Senoritas." The bidding was spirited. Everything went like hot cakes. Carnations brought from $2.50 to $5; one monthly tree carnation six feet high brought $10; *salvia splendens* from $2 50 to $5; roses from $2 to $7; a cactus *Jinkinsonii* grafted on the Opuntia or prickly pear, $30; a Camellia Japonica, $30; cinerarias from $1.50 to $2 50; chrysanthemums, $2.50; a well-trained rose geranium, $34. The sale netted me a handsome sum. I had an auction sale every week for several weeks with quite good results.

Oakland. JAMES HUTCHISON.

[This reminiscence is decidedly interesting. We should like to have other pioneers' recollections. They should be recorded for the benefit of coming horticultural historians.—EDS. PRESS]

The Victoria Regia in Bloom.

Many persons, loving rare and beautiful flowers, who have been able to reach the conservatory in Golden Gate Park at the right times within the past fortnight, have greatly enjoyed the privilege of seeing the great waterlily *Victoria Regia* in blossom. A lady who has watched it closely and lovingly, writes of it in the *Chronicle* this week:

The blossom of the Victoria appears one day and disappears the next. No sooner does it reach its hight than it begins to fade. The outer petals sink into the water nearly as fast as the center expands, so that unless the observer watches carefully it is difficult to realize the actual size of the flower, which is quite large. Indeed, one of the most wonderful characteristics of the blossom is the rapidity with which it blooms and fades. To use a common phrase, the beholder must literally "catch it on the fly" in order to appreciate it at all. The extreme delicacy of the flower is surprising when one considers the stoutness of the stems and the enormous size of the leaves. A bud generally lasts two days. It jumps suddenly above the water almost as fully formed the first day as it appears the second.

The big leaf develops very rapidly also. The reporter saw a young leaf jump up through the water, making a loud splash like a duck. When the leaf first appeared it looked like a shallow bowl with fluted edges. The next day it had spread out like a circular tray. The third day it had flattened and was nearly as large as an old leaf. The same reporter also saw the flower make a violent move forward, rippling the water as it did so.

The Walnut.

[Written for the RURAL PRESS by B. M LELONG, Secretary State Board of Horticulture.]

Budding the Walnut.

The walnut is budded very successfully by the following method: The bud is cut (as shown in Fig. 1) about one-half inch long. The cut is made deep into the wood, the object being to give the bud as much bark as possible. The wood in the bud is then partly removed; it is gouged out with the sharp point of the budding-knife. This is done to allow the inner bark of the bud to unite with the inner bark of the stock, which union would be prevented if the wood should be allowed to remain in the bud. After the wood in the bud has been partly removed (as shown in the illustration), the

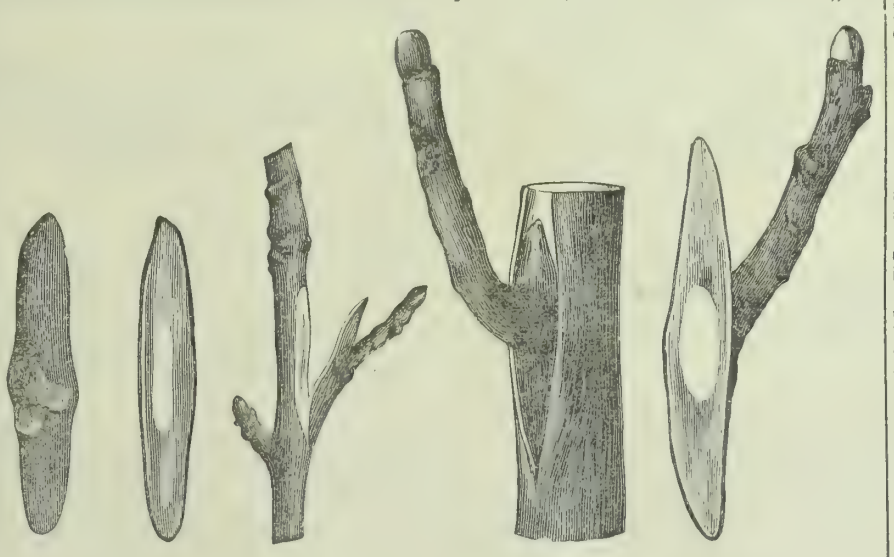


FIG. 1. FIG. 2. FIG 3. FIG. 4.

bud is inserted into the cut made in the stock, the same as ordinary budding is done. The bud must be tied tight with heavy budding twine. Three weeks after the bud has been inserted, the twine is removed and the bud allowed to lie dormant until spring. The walnut does not put forth until late in the spring, therefore the stocks are not cut back until then. As soon as the buds begin to swell, the stocks are cut back, and the bud allowed to grow. Great care must be exercised in not cutting the stocks so close to the bud as to endanger it. The buds are allowed to grow at will until they become hardy, then they are trained to the stock, the object in view being a straight tree. After the buds have made a year's growth, they can be transplanted into orchard form.

Grafting the Walnut.

Grafting walnuts is not as easily performed as budding. Great care must be exercised in the manner in which the operation be performed. The walnut cannot very well be grafted successfully by the ordinary method practiced on fruit trees. The reason is that the scions contain but very little wood, as the pith is very much larger than in other trees, and when the scion is cut (wedge-shape) very little wood is left to it, mostly bark, and if inserted cannot unite with the stock, not being held firmly in position. Side-grafting, however, can be accomplished with success. About 12 years ago I grafted many walnuts in this way very successfully, but it can only be performed in the spring, when the sap in the stock begins to rise; this is necessary, as the graft must be inserted in the same manner as a bud. The walnut does not put forth until quite late in the spring, therefore it is necessary that the scions be gathered before the trees start, and be prevented from starting by being kept in a cool place covered over with moist sand; in this way they can be kept until the stocks have made sufficient growth so as to facilitate grafting.

The most satisfactory method with me has been the "prong method" (original). In this method the prongs found at the extremity of the branches are used. Fig. 2 illustrates the scion, or prongs, used, and the method of cutting them from the branch, reduced in size for illustrating. The prong is cut as illustrated in Fig. 2, and the wood in the prong (graft) is removed with the sharp point of the budding knife, the same as in the method previously described, and as shown in Fig. 4.

The stock is then cut off with a sharp saw, and smoothed over with the knife and the graft inserted as shown in Fig. 3, and tied tight; no less than 18 ply twine should be used. The cuts are waxed over with grafting wax. After the grafts have started, they should be examined, and if the twine is found to begin to cut into the stock, it is untied and tied over again; this will prevent further injury. The object of allowing the twine to remain a longer time is to prevent the cut bark from opening by the action of the atmosphere and causing the grafts to die. I grafted, several years ago, many walnuts in this way with very good success. I also grafted the English (Madeira) walnut on the wild California walnut, found growing in the mountains, and on the black walnut, and the results were indeed very satisfactory. Many experiments have been conducted this year by growers, and with very satisfactory results, and especially by Mr. Fred. M. Buck of Vacaville, who at my suggestion, cut back last spring over 50 large black walnut trees, and into the new shoots he budded several varieties of walnut. Mr. Buck also grafted several trees in the spring by the above method, all of which he reports very successful.

220 Sutter St, S. F.

Nevada State Fair.

The Nevada State Fair, which took place at Reno the fourth week in September, proved the best they have ever held, and much praise is accorded to the managers. "The exhibition of live-stock," says the *Gazette and Stockman*, "is not so great as we would have liked to see, but it is very creditable indeed, everything taken into consideration. The severe winter last passed had its effect in nearly all branches of trade, and that the State Fair should not feel its blight could not be hoped for. The exhibits at the Pavilion prove conclusively that Nevada is by no means behind older and more pretentious States in her exhibits of cereals, fruit and all root vegetables, and goes to show what intelligent cultivation of the soil will do. If there was less attention paid to horse-racing and more to the products of the farm, dairy and live-stock departments, it would be still better; but that is a matter that will settle itself as soon as we become more populous and have a greater field to draw from."

Among the animals noticeable in the stock parade on the fourth day was T. G. Herman's beautiful Cleveland Bay stallion 'Commemoration" heading a family of three. M. Gulling was in line with his Cleveland Bay, "Philanthropy," and Wm. Wright with his English Shire, "Merrifield King." John Sparks led out a beautiful gray Percheron, the winner of the sweepstakes last year. A long string of brood mares and colts proved that the Silver State is not behind the times in poducing good horses.

J. N. Evans led the cattle with two Shorthorns, followed by Orville Sessions with four fine Holsteins and one Durham. M. Gulling took pride in showing his herd of Holsteins. Seymour Byrant showed four head of Durhams and one Galloway that will compare favorably with any in the land, J. Gault, with his herd of little Jerseys, attracted much attention. The cattle were followed by several carriage teams, roadsters and draft horses. Taking the parade as a whole, it was a decided success.

The poultry department showed many varieties of fowls, with some entries of ducks, geese and turkeys.

Pavilion Exhibits.

Mrs. Wm. Riley showed over 100 varieties of fruit; of pears, 18 varieties, among them, one little known in this State, the La Conte. Several of the specimens shown came from four-year-old trees in full bearing. A plate of flowering almond peaches were fine in appearance and are very rarely grown in this State. Strawberries, white and red, currants, blackberries, Silver, Petite and German prunes, and eight varieties of plums. A bottle of cider vinegar was only one of a thousand which might have been shown, as they have manufactured 200 gallons this year, and the few blocks of honey represent 2000 pounds ready for the market. Mr. Riley shows, as the result of an experiment, a few peanuts of good size, and he finds they yield abundantly.

Three varieties of grapes raised by M. Cohn on his Douglas county ranch, were Catawbas, Muscatels and Isabellas, on a slate hillside, and after the first year but little attention was paid to irrigation. The cuttings were set out three years ago by perforating the rocky soil with a crowbar.

Joseph Frey's exhibit was extensive. A fine collection of choice grapes was especially worthy of mention.

Some fine apples were to be seen from M. Steinberger's place in Long Valley.

Hon. Wm. Thompson had reason to be proud of the cornstalks in his collection, measuring 10 feet 10 inches in hight. He also had fifteen boxes of choice apples, three varieties of prunes, six of plums and four of pears.

The cheese from Theo. Winters' place constituted the "best and largest collection," and was noted as an indication of great things to come.

The bee interest was represented by E. A.

(*Continued on page 281.*)

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

ORCHARD NOTE.—Irvington, Oct. 25: Senator Fair has presented a valuable piece of property, near the old Mowry's Landing school, to a nephew of his, who will convert it into orchard.

Butte.

MIOCENE DITCH COMPLETED.—Oroville *Register*, Oct. 23: The Miocene ditch is completed. The work of laying the new pipe is well under way and is being put in place at the rate of 600 feet a day. All of it will be laid inside a month. Forty-three and a half miles of ditch have been fully repaired, while six miles of new pipe take the place of flumes. When all work upon the Golden Feather mine is done, the water from this great ditch will be brought across Feather river and used for irrigating purposes on the fruit lands south and east of Oroville.

Colusa.

THE CROP OUTLOOK.—Chico *Chronicle Record*, Oct. 27: I. R. Watkins made quite an extensive trip through Colusa county and Central and Southwestern Butte. In answer to the question as to what the crop prospect was for the coming year, he said that it was exceptionally fine. Throughout the sections named the wheat has nearly all been sown and the ground is in fine condition. The acreage has been increased over last year, and the outlook is very favorable to a much larger wheat crop for 1891 than the past season.

Fresno.

FRESNO RAISIN PACK.—Fresno *Republican*, Oct. 23: A careful investigation made by order of the Southern Pacific railroad, in order to ascertain the demand that would probably be made upon its shipping facilities, shows that at least 1000 carloads, or 1,000,000 boxes, will be shipped, and perhaps more. Actual shipments of nearly 650,000 boxes were made last year, while this season's crop will be very much larger, as the loss by rain has been slight by comparison with that of last season.

Kern.

IRRIGATION.—Delano, Oct. 26: The Poso irrigating district, embracing 39,000 acres in Northern Kern county, near this place, will start a force of 100 men and 200 stock this week on the construction of a canal 25 miles long, a large dam and a number of reservoirs. The district includes a very fertile tract of country. The work will be pushed to speedy completion, as improved machinery has been provided.

Lassen.

STRAWBERRIES IN THE SIERRAS.—Susanville *Advocate*, Oct. 23: We were shown some beautiful strawberries this week that were grown on Samuel Hoffman's place, part of a third crop, as rich and luscious as any we have seen this summer. Who cares about our being out of the citrus belt when we can raise strawberries in the open garden in November?

Los Angeles.

HOW AN ORCHARDIST MAKES MONEY.—Pomona *Progress*, Oct. 24: Col. Geo. E. Prentiss, an unusually successful fruit-grower, near Downey, has had a crop of English walnuts for four years from his 90 trees, and says he has never sold any crop for less than $920. He recently contracted to sell his crop of the walnuts for exactly $1050. He watches his trees as carefully as a merchant would his ledgers; he knows all about them:—in fact he makes a thorough business of fruit culture. The average income from each walnut tree on his place this season is $11.60. The crop was not a very large one, either. Then, too, the Colonel has 1000 Navel orange trees that have extraordinary care. His account-books prove that the annual crop from these trees has for four years sold for sums varying from $3290 to $4350. Last year he got the last-named price. His four acres of prune trees yielded him $975 last year, and $1,433 this year. Besides, there are three acres of alfalfa, small fruits, vegetables, the barn and the family residence.

Mendocino.

LARGE FRUIT-DRIER.—Ukiah *Express*, Oct. 23: J. D. Ball of Anderson valley is building an evaporator for fruit. The building is 20x40, finished with rustic; the drier is 8x16 and about eight feet high. It is divided into three chambers, with room for 30 trays to slide in like drawers, one above the other and 15 in a tier. The furnace is on the ground floor below, and the heated air passes through the fruit and by a hopper-shaped ventilator to the roof. The trays, 90 in number, are a frame with a bottom of galvanized wire netting and are 3x4. The capacity of the drier will be from over 1000 to 2500 pounds of green fruit per day. On the floor with the drying chambers there is sufficient room for the sulphur bath, the storage of the dried product, and for those who prepare the fruit for the drier. Mr. Ball will at once proceed to dry a large part of his own large crop of apples. The building of this fruit evaporator marks an era in the history of Anderson valley. It was long ago demonstrated that the valley was peculiarly fitted for fruit culture; but in the way of any great extension of the industry lies the cost of transportation. By the use of evaporators this difficulty is overcome. The 40 cents per 100 pounds of freight, which is an effectual bar to the shipment of fresh or canned fruit, is a small matter with evaporated fruit worth from 6 to 11 cents per pound and upward.

Monterey.

STEAM PLOWING AND BARLEY NOTES.—King City, Oct. 26: Messrs. Frisbie & Reed of King City have 4500 acres of their 9000 already plowed, the land being in good condition. They are using a steam plow. They sold 1500 tons of their crop of volunteer barley this year at $1 38½ in San Francisco. Farming paid them handsomely last year. Will it pay equally well the coming year? Those of us who were here in 1861-62, and remember the bountiful rain and succeeding floods, and then the drouth of long duration which followed, would hesitate to farm on a large scale this year.

Nevada.

FINE CORN.—Grass Valley *Tidings*, Oct. 24: B. F. Taylor of Rough and Ready has been testing some new kinds of corn, with very satisfactory results. He exhibited some samples at this office yesterday. One variety was Clark's Early Maslin. The ear shown had 24 rows and over 1000 kernels. The seed was planted about June 1st, after a crop of hay had been harvested from the same land. It matures in 90 days after planting. The other variety shown was Flour corn, which is very white, and, in addition to being an excellent corn for boiling, yields largely, one bushel making from 50 to 53 pounds of flour.

Santa Barbara.

GRAIN RECEIPTS.—Lompoc *Record*, Oct. 25: Over two thousand sacks of grain are being daily delivered at the Lompoc wharf. This has been kept up for several weeks and promises to continue for a week to come.

San Bernardino.

THE COMING ORANGE CROP.—Redlands *Citrograph*, Oct. 25: From all we can learn, the coming orange crop will be the largest ever grown in California. The seedling trees are heavily loaded, and the crop will be very fine in quality. The only fault seems to be that the oranges will run a trifle large in sizes. Budded fruit does not promise as heavy a crop in proportion as the seedlings, but there is a vastly larger area in bearing. The large plantings of 1886 and 1887 will also aid in swelling the total amount of the shipments. It is now altogether probable that the crop will amount to nearly or quite 3400 carloads, or 972,400 boxes.

Santa Clara.

VINES TO GIVE WAY TO TREES.—San Jose *Times*, Oct. 27: The last few days have held the fervent heat of midsummer, consequently the late grapes have gone up in sugar very rapidly—a fact that is very pleasing to the vineyardist, as this shortage in sugar has been taken advantage of to dock the grape-grower in prices. The majority of the vineyardists in the vicinity of Gubserville have at last come to the conclusion that the wisest course to pursue is to end the battle between themselves and the wineries by digging up their vines. This winter will see all the large vineyards ready for tree-planting. Fruit-raising for several years has been a very much more remunerative business than grape-growing. The dissatisfaction expressed by grapemen in regard to contracts demanded of them by the wineries is very great, and has culminated in this decision to remove their vines.

San Luis Obispo.

BEAN RECEIPTS.—Arroyo Grande *Herald*, Oct. 18: This has been a very lively week at the depot. The high price of beans has caused the farmers to rush them in, with the result that from 1500 to 2000 sacks daily are arriving at the depot, and notwithstanding the railroad is carting them off as rapidly as possible, the accumulation in the warehouse at closing time on Thursday evening was 15,000 sacks. We are informed that at Pismo beans are also coming in rapidly.

San Diego.

BETTER RAISIN REPORTS.—Escondido *Times*, Oct. 23: It now turns out that the loss of raisins will not be as great as was first supposed about fair-time. We have taken pains to make diligent inquiry concerning the matter, and find that the loss in this particular region will be about as follows: Twenty per cent total loss; 40 per cent slightly damaged; 40 per cent first-class raisins.

ORANGE AND STRAWBERRY PLANTING.—National City *Record*, Oct. 23: At Chula Vista, Elmer Flanders and Charles Johnson are transplanting 20,000 orange trees from the seed-beds, and planting strawberries quite extensively.

MELON PEARS FRUITED HERE.—San Diego, Oct. 25: A new fruit here is the pepino or melon pear, which has just been successfully fruited at Mrs. M. E. Blanchard's place, Twelfth and A streets. The pepino is a native of Guatemala, Central America. It is eaten the same as the peach.

SHIPMENT OF BEESWAX.—San Diego, Oct. 23: The largest single shipment of beeswax made from San Diego to the East was the three tons that E. Lovett sent off yesterday to New York with ten tons of honey. This is the twentieth car he has forwarded this season, and about 10 or 11 more are to follow. Beeswax is in demand in the East for manufacturing wax candles, for comb foundation to assist the bees, for glove-cleaning, etc.

HONEY YIELD.—*San Diegan*, Oct. 24: Inquiry among the commission merchants who have handled the bulk of the honey crop of this county elicited some interesting information. In quality, San Diego honey of 1889 maintains the high reputation gained in the past, being of good body, clear and white, and of delicious flavor. The quantity shipped and now in warehouses is given as follows:

	Pounds shipped.	In warehouse.
E. Lovett	679,800	1,000
Klauber & Levi	281,089	530
A. Wentscher	216,000	.....
J. B. Cowden	96,000	200
Harbison Grocery Co.	91,800	7,200
Lacey & Cofer	24,000	.....
Totals	1,388,689	8,930

While the figures show that 1,397,619 pounds of honey came into the hands of the commission merchants of this city, it is estimated that with the shipments made from points north the total product of the county exceeded 2,000,000 lb.

Shasta.

PRUNE AND FIG PLANTING.—Anderson *Enterprise*, Oct. 23: T. J. Geary, Democratic candidate for Congressman, owns 366 acres of the red plains land southeast of town, and will fence it all this winter and plant five acres of figs and five acres of prunes.

Solano.

FRUIT-GROWING IN NORTHERN SOLANO.—Dixon *Tribune*, Oct. 23: A large acreage will be set to fruit trees and vines in Northern Solano the coming season, especially on lands adjacent to Putah creek. The fruit belt is widening every year and promises ere many years to surround our town. There has existed a strong prejudice among wheat farmers on the subject of fruit-growing, but as they see the large profits made by their more progressive neighbors, they begin to realize their mistake. Several farmers in the immediate vicinity of Dixon have planted orchards and vineyards, more or less extensive, and in every event the results have been more than satisfactory, showing that the soil is perfectly adapted to the purpose.

Sonoma.

GRAPE-DRYING.—Healdsburg *Tribune*, Oct. 23: Cook & Langley's grape-drier at Litton Springs is being operated day and night by over 25 hands. Between 2500 and 3000 tons of grapes will be dried at that place this season. In about ten days work at this drier will be finished.

Sutter.

LATE BARLEY.—*Farmer*, Oct. 24: J. D. Phillips of Meridian is again in the field with his thrashing outfit, having thrashed, last week, barley for himself and 550 sacks on the farm of John Birks, and also on the farm of J. W. Howlett. Several others in that vicinity who had sown their barley late in the season are now having it thrashed. The yield is reported good.

Tehama.

TREE PLANTING.—Corning *Observer*: Already we have been informed of the following number of acres that are to be put in fruit trees and vines this season, but three times as much will be put in: Mr. Finnell will plant 60 acres of French prunes, in land near his dwelling house. John Finnell, Sr., will put out 200 or 300 acres in prunes and peaches. Simpson Finnell will plant 50 acres in fruit trees on his land near Tehama. G. Stone will add some more this season to what he planted last year. A. B. Altken will plant about ten acres in raisin grapes, completing the 40-acre tract he has near town. F. Houghton will plant 20 acres, and at least as much more each year after. Several other parties will plant this season, but not yet informed how much. H. C. Wilson intends to plant some hundreds of acres in his rich bottom-lands.

Tulare.

OUTDOOR WORK.—Visalia *Times*, Oct. 23: Farmers in this part of the valley are doing more "dry plowing" than is usual. Teams can be seen at work in all parts of the county to-day, plowing old and new land. It is this which is making an unprecedented demand for laborers at this season of the year. There are no idle men in our towns now, unless it is of the class who are looking for work and praying they may not find it. Then, too, a large acreage is being prepared for orchard and vineyard, and this requires men to clear land of trees and stumps, and handle the scrapers used for levelling the land.

INVESTING THEIR SAVINGS.—Visalia, Oct. 23: A number of the young men in this city are investing their savings in small tracts of land, which they purpose to cultivate to vines and trees. They are laying the foundation for an income in their old age. Only a few years hence the lands now selling at prices within the reach of every industrious young man will attain a price beyond their reach.

SEEDING GRAIN.—Visalia, Oct. 24: Most of the land in Sunflower valley, west of Tulare lake, will be seeded to grain the coming season. Already plows are turning the soil there, and people from all parts of the coast are flocking in to secure land by purchase or rent. The yield obtained last year has given the valley a wide reputation and advanced the price of property.

VOLUNTEER FIELDS OF GRAIN.—Visalia, Oct. 23: Grain that was shattered out on the ground during harvest, on many fields in the county, has taken root and sent forth spears that are now six inches high. Many fields are green with growing grain that shows as much life and vitality as that sown in the spring of the year.

PEAR NOTES.—Traver *Advocate*, Oct. 23: The pear crop has been extra good in the 76 country this year. The trees bear early and very prolific, and the fruit is large and tempting in appearance. Peddlers are in Traver every day now, selling pears that will average a pound apiece.

Ventura.

THE BEAN CROP.—Ventura *Free Press*, Oct. 24: From all present appearances—and it is a good time to judge—the bean output will be about half a crop; that is to say, of the 18,000 acres planted to beans in this county, the average yield will not exceed 600 or 700 pounds to the acre.

Yuba.

ENLARGING ORCHARDS.—Gridley *Herald*, Oct. 23: T. B. Hutchins, of Central House, is preparing to add 300 acres to his 100 acre orchard. He has already contracted for trees as follows: 13,000 peach, 25,000 pear, 4000 French prune, 1000 Silver prune, 2000 almond, and 1000 plum. The fruits are all of canning varieties, while the almonds are soft shell. Philip Hefner, of the same section, is arranging to increase his large orchard by the addition of 100 acres planted in peaches, prunes and pears, each especially selected for canning purposes. It is such improvements as these that insure the future development and prosperity of the vicinity.

IRRIGATION DITCH.—Marysville, Oct. 24: The capacity of the Brown's Valley ditch is about 9000 inches. When first arranging for the ditch they had planned to supply water for 45,000 acres of land, and the ditch as it is being constructed will at least furnish water for 80,000 acres.

NEVADA.

BEEF SHIPMENTS.—Reno, Oct. 23: Sparks & Tinnin shipped 20 cars of beef steers to Reno the other day to be fed for Grayson, Owen & Co., the Oakland butchers. They also shipped nine cars at the same time, which are being fed on the Meadows. From the present outlook there will be nearly as many cattle fed here this winter as last.

CROPS WITHOUT IRRIGATION.—Reno *Gazette*, Oct. 23: George Crum of Battle Mountain yesterday informed a *Gazette* reporter that he had clearly demonstrated that crops sown in the fall would mature and yield abundantly without irrigation. He said that he raised alfalfa on land without water, this summer, which grew rank and fully three feet high, and that a first-class second crop was gathered from the land. He sent the Board of Trade a sample of rye raised on land without water that was as fine as any one could wish to see; it was fully five feet tall. Mr. Crum stated that off the land that produced this sample a volunteer second crop came up and matured that would have produced at least ten bushels to the acre.

ALFILERIA OR PIN CLOVER.—*Silver State*: T. D. Parkinson, agent and manager of the Nevada Land and Cattle Company, sends to the *Silver State* two plants and some seeds of alfilleria or pin clover. One of the plants was irrigated, and the other, the larger of the two, grew upon dry soil without water. The stalks of some plants of clover grown upon dry soil attained a length of 30 inches. It resembles a vine and spreads over the ground, making a mat. It is almost a perpetual bloomer, flowering early in the season, and the specimens sent to this office, though covered with seed-pods, have many buds almost ready to bloom. The roots are long and extend downward into the soil, somewhat resembling alfalfa and indicating its adaptability to a climate in which summer rains are the exception to the rule. Mr. Parkinson thinks it an easy plant to propagate, as the pods are numerous and each pod contains several seeds. Though indigenous to California, it is very hardy, the freezing nights of two weeks ago not affecting it on the high lands on which the company's home ranch is situated. Last spring Mr. Parkinson was fortunate enough to secure ten pounds of the seed, and now, having learned the nature of the plant, he will give it a fair trial next season by sowing the seed on different kinds of soil. The value of alfilleria as a forage plant is well known. It is eaten with avidity by stock, and possibly it may grow on sagebrush land without irrigation.

ARIZONA.

FRUIT SECTION.—Yuma *Times*, Oct. 15: W. M. Ward, the nurseryman of Phœnix, says that in his opinion the valleys of this county possess all the capabilities for successful fruit-raising. Orange trees he thinks will flourish if they receive the right treatment. Deciduous fruits and grapes undoubtedly will succeed well. He thinks this is sure to be a great raisin-producing section in time, having the right climate to cure the grape. Figs will also do well. Mr. Ward is thoroughly of the belief that Arizona is bound to be a great fruit country in time. He is showing his faith by planting largely himself and encouraging others to do the same. With the questions of irrigation and transportation solved, the future of the fruit business will be assured. As to irrigation, he has great confidence in surface wells with water lifted by steam or wind power. Mr. Ward says large plantings of trees are being made around Phœnix, one man of his acquaintance intending to plant out 160 acres.

Nevada State Fair.

(*Concluded from page 379.*)

Moore, who showed a large case of extracted honey clear as crystal, some in the comb and some in crates ready for shipment, as fine in appearance as any ever seen.

The display of roses made by Mrs. Leitch, Reno, was a surprising one for the season. The exquisitely perfumed La France were the greater in number and size, then the Jacqueminot, Ocquette d'Alps, Catherine Mermet, La Phœnix, Niphetos, Douglas and the climber Alfred Carrier. A collection of Dahlias and China Asters completed this creditable showing. Mrs. A. H. Manning had the greatest variety of mixed flowers, and the largest specimens of dahlias and marigolds were in the collection next, and some fine nasturtiums, honeysuckles, Canterbury bells and guillardias, owned by Mr. Geisse.

First premium for the best and largest display made by any county, Washoe excepted, was awarded to Douglas county; second premium, $50, to Humboldt county.

Echoes from the District Fairs.

Rohnerville—9th District.

The eleventh annual fair of the 9th District Agricultural Association opened at Rohnerville, Sept. 22d, with a good attendance. The local *Herald* says: "We had thought that the display of vegetables last year could not be improved upon, but there are some features now in that line which excel any previous showing. ....The display of stock is indeed a credit to the county."

A representative of the Eureka *Times* who visited the fair reports the display of potatoes and vegetables "such as might be expected in Humboldt, *i. e.*, much ahead of anything that could be seen elsewhere, but not remarkable for us. Cereals were well represented. The display of peas was better than could be found anywhere outside of Humboldt.

"The fruit display was fine, especially that of apples, peaches and prunes. The apples from up Eel river were above the medium size, and all lacked somewhat in color; but there were some fine specimens from Camp Grant as well as from Lower Eel River valley. The Lawyer, Alexander, King of Tompkins County and Bellflower were there in force and made a decided impression. Peaches from Camp Grant, different sections of the Eel River section and from Trinity made a fine display. The dried fruit exhibit by Messrs. Barber and Campton we look upon as the most important of any at the fair. This exhibit consisted mainly of prunes and apples. Mr. Barber's fruit had been bleached in drying, while Mr. Campton's were unbleached. There were prunes of almost every size, color and quality, and all of them looked much more inviting than the imported article. There was a finer display of jellies and preserved fruits this year than were ever before exhibited in the county.

"Among novelties we noticed a sheaf of wheat and Alsike clover from the farm of Jas. Smith of Ferndale. The clover was sown April 20th just as the wheat was coming up. The sheaf was cut Aug. 24th, and the clover was in full bloom and as high as the grain—in fact, some stalks were four and five feet long, a phenomenal growth for the first year. The dairies of the county were not represented as they should have been. Instead of half a dozen exhibits of butter, there should have been ten times that number."

Among the prize-winners were a goodly number of Durham, Jersey and Alderney, Ayrshire, Holstein and Hereford, besides graded cattle. The entries of horses were numerous, especially in the all-work, draft and roadster classes. The premium sheep included Spanish Merinos, Shropshires and Cotswolds; the swine, Jersey Red, Essex, Berkshire and Poland China; and there was a considerable showing of poultry, embracing chickens of popular breeds as well as ducks, geese and turkeys.

The bicycle race, in which F. W. Fawcett tired out three competitors, left the fourth nearly half a mile behind and made his five miles in 19 minutes and 28 seconds, excited more interest than any other single event.

Visalia—15th District.

Of the fair for the 15th District, which took place at Visalia Oct. 7–11, the *Delta* remarks: As a race meet, the fair was a success; as an agricultural show, we are disappointed, and that disappointment is shared by all who attended.....The stock exhibits were not numerous, but the animals (horses, cattle and swine) entered for prizes were fine looking, and well worthy of exhibition. The display of farming machinery was meager.....The exhibits of fruit in Armory hall were excellent, but there was room for a number of large displays, if the right spirit had been evinced.....The attendance at the pavilion improved as the fair drew to a close, and on Saturday evening the crowd was quite large.

The Visalia fruit exhibit was splendid in quality and large in quantity. The following were the exhibitors: Visalia cheese factory, cheese; Jasper Harrell, watermelons; Mrs. A. J. Lafever, canned fruit, quinces and egg plants; C. A. Wilber, chestnuts hulled and in burr; Joseph Potter, pomegranates and quinces; J. B. Smith, a beet 30 inches in length, and five kinds of grapes; ——— Bliss, pomegranates; A. J. Lafever, Indian and Egyptian corn and squashes; Seth Smith, pears; J. Spier & Son, fruit and plants of various kinds.

J. P. Onstott of Yuba City had a number of bunches of Thompson's seedless grapes on exhibition, which attracted a great deal of attention. Jos. Patton of Farmersville exhibited quinces and pomegranates, and James Barton of Three Rivers, some fine apples. Chas. King & Co. of Hanford had a case of fine dried fruit. Erwin Bros. of Tulare exhibited two boxes of peaches. Samuel Halstead, who lives up the Kaweah, had a splendid display of mountain apples, comprising a number of varieties.

Mrs. John G. Knox's floral booth revealed a wealth of colors that fairly bewildered the strolling spectator. A basket depended from the top, in which were 15 varieties of dahlias. Potted plants, variegated bamboo grass and evergreens made a splendid background for the beautiful flowers in the fore.

From the *Times* notes for fair week we gather these:

Lucerne valley occupies two booths where are displayed fruits put up in jars, their form and color preserved by a solution of alum. The display would be a credit to any county or section of the State, and "California on Wheels" never carried anything surpassing it. The exhibitors in this department are: Hanford factory, cheese; N. W. Rafailovich, silkworms and cocoons; M. Meisenheimer, quinces; C. Railsback, pomegranates; N. W. Motheral, Late Free-stone peaches; J. H. Dopkins, large nectarines in jars; J. B. Newport, Orange Cling peaches; A. Leoni, Heath Cling peaches; Peter Van Valer, pears and apples in jars; John Sullivan, Solway peaches, quinces and French prunes; J hn Toner, Kelsey Japanese prunes; Edward Cordara, polished horseshoes; John Chambers, pomegranates and Japanese persimmons.

Joseph Spier & Son of the Visalia nursery have a most attractive display, using two booths neatly trimmed with vines, palms and numerous branches of the "States" persimmons full of their fruit. The interior of the booths has a circular stand, filled with flowering plants, intermixed with which are numerous jars of preserved fruit, jams and jellies. In front stands a young orange tree full of bloom and fruit. A bunch of Chinese cucumbers is a fruitful source of questions.

Josiah Gregg, who has an apiary in the southern limits of this city, occupies a booth with fine-looking honey.

Miller & Frasier, real estate dealers, have wheat, oats, barley, alfalfa seed, rye and corn, and egg-plants as large as a quart measure. There is a beautiful exhibit of gypsum from Kern county on the table, chestnuts and other products from Tulare. The gentlemen are entitled to the thanks of the whole community for the effort made to have a display that does credit to Tulare county.

Santa Cruz—14th District.

The Santa Cruz Fair opened at the pavilion Wednesday evening, Oct. 15th. The *Surf* reports that "the main floor is almost wholly devoted to the fruits that in themselves make a magnificent display. The visitor soon finds that the cereals and vegetables make, in their modest way, quite as fine a show as the grapes, apples and other fine fruits.

"The exhibit in the stock and poultry-yards is far in excess of any previous year. There are more horses and cattle, pigs and poultry than ever before, although some of the stock is not in the best condition. Martin Kirby alone has 11 coops of fowls, and there are many other creditable displays of poultry. All the pens and stalls provided for stock are taken, and eight more were being erected. The fine Jerseys of D. B. Woolf and Dr. Gordon and other exhibitors are supplemented this year with some very fine Holstein and Durham cattle."

Thursday evening Prof. W. H. Galbraith spoke for 20 minutes of the good accomplished by annual displays of agricultural, horticultural and viticultural products, praised the splendid exhibits, the energy and industry of the ladies, and waxed enthusiastic over the county's possibilities. The *Sentinel* remarks that the address was eloquent as well as to the point, and was received with much applause.

Hollister—San Benito County.

In addition to the brief notes on the Hollister fair given last week, we cull the following from local papers:

One of the most noticeable features of the pavilion was the floral exhibit under the direction of Miss Susie Moore and Mrs. R. P. Lathrop. The display of flowers for this season of the year was wonderful, and the ladies were the recipients of unbounded praise.

No prettier display is to be found than that of apples, peaches, pears, plums, dried and preserved fruits, jellies, grapes, etc., from the farm of Mrs. J. A. McCroskey.

The exhibit of fruit and vegetables under the direction of Mr. Winn, astonished and delighted all. The exhibit of grain prepared by Mr. B. F. Thomas was also pleasing.

Santa Ana—Orange County.

The new county of Orange held its first agricultural fair at Santa Ana, Oct. 7–10, with a creditable display of products and large entries of horses and live-stock.

The opening exercises at the Opera-house embraced remarks by S. Smith, president of the association, and S. M. Craddick, superintendent of the pavilion, an address by Prof. M. Manly, and music, vocal and instrumental.

The Olive Milling Co. (whose plant is at Olive Hights, seven miles northeast of Santa Ana), had a flour "palace" 12 stories high.

Adjoining the flour exhibit was an incubator in full blast, from the Santa Ana Incubator Co.

Smart & Collins displayed excellent dried prunes, figs, apricots, peaches, raisins, apples, grapes and nectarines. In green fruits they had lemons, quinces, apples of many varieties, oranges, etc., besides peanuts, potatoes, beans, onions and cabbages.

Four cases of butterflies, mounted by Bernhard Ziegler, were called "beautiful, unique and wonderful."

W. H. Smalley of Orange displayed about 60 varieties of wood, all but three or four of them native to Orange county, ingeniously manufactured into brackets, canes, napkin rings, etc.

The "Garden Grove Farmers' Club" showed farm products in vast variety—there were watermelons weighing nearly 100 pounds apiece; pumpkins, 200 pounds; corn of all sorts, simply superb; sunflower heads 15 inches across; fine great potatoes, both sweet and "Irish;" apples of almost every known variety, grapes, figs, lemons, canned fruits and dried, and all first class.

Next came Westminster's great display, including 25 varieties of apples, large and handsome, quinces, blackberries, squashes, onions, corn, melons, potatoes and pretty "peach" tomatoes.

San Juan had a fine little output of fruits, nuts and general farm products, chestnuts in the burr; bottles of preserved fruits put up by the new San Juan Canning Co. being noticeable features.

The collection of nursery stock, shrubs and flowers exhibited by Geo. W. Ford was one of the chief attractions.

Tustin made a great show of fruits, flowers and nuts.

Two young ladies from Buena Park, representing the condensed milk and coffee company of that place, were kept busy dispensing free samples; and there were mercantile exhibits, curios, pictures and specimens of needle-work in great variety and abundance.

The races drew well, the ladies' tournament proved especially attractive, and Miss Irene Savage of Whittier, the famed equestrienne, also gave a fine exhibition of fancy riding, for which the directors tendered her a vote of thanks. The showing of horses, cattle and poultry was quite large and creditable, and a few swine and Angoras were awarded premiums. The baby-show on Friday brought out about three dozen of the little darlings, and the fair (which closed that night) was "conceded to be a glorious success."

Lakeport—12th District.

The Eighth Annual Fair of the 12th District Agricultural Association began at Lakeport Sept. 23d. The pavilion was well filled with an excellent exhibition of grain, fruits, vegetables, paintings and fancy goods. The fruits were considered far above the average Lake county exhibits.

The show of horses was extensive, trotters, all-work animals and roadsters predominating, with a sprinkling of thoroughbreds, draft, carriage and saddle horses. Jacks, jennets and mules, Jerseys and Holsteins were represented, and there were some Bronze turkeys, Pekin ducks and Light Brahma fowls.

The fair was a success, so far as exhibits go, and was pronounced one of the best ever held in the district.

(*Continued on page 393.*)

A LEVEL HEAD.

The Advantage of Presence of Mind in an Emergency.

During the late strike on the New York Central railroad, the militia were ordered to be in readiness in case of a riot, but they were not called out.

In an interview, Gov. Hill said the troops were not to be called upon except in case of an emergency. The emergency had not arisen, therefore they would not be ordered out. He remarked that this was the first great strike with which he had had experience, and he did not propose to lose his head; the only point at which there had then been serious trouble was at Syracuse, and there a deputy-sheriff had lost his head and precipitated an encounter.

The strike continued several weeks, and there was riotous action at various points along the road, but the civil authorities were able to cope with it without calling on the militia.

The test of a man's real ability comes when an emergency arises which makes a hasty call on his good judgment and discretion. The man who retains his presence of mind, maintains his equipoise and exercises sound discretion at such critical junctures, is to be relied on and will be put to the front.

Men with level heads have the staying qualities which do not falter in the face of danger. Otis A. Cole, of Kinsman, O., June 10, 1890, writes: "In the fall of 1888 I was feeling very ill. I consulted a doctor and he said I had Bright's disease of the kidneys and that he would not stand in my shoes for the State of Ohio." But he did not lose courage or give up; he says: "I saw the testimonial of Mr. John Coleman, 100 Gregory St., New Haven, Conn., and I wrote to him. In due time I received an answer, stating that the testimonial that he gave was genuine and not overdrawn in any particular, I took a good many bottles of Warner's Safe Cure; have not taken any for one year."

Gov. Hill is accounted a very successful man; he is cool and calculating and belongs to the class that do not lose their heads when emergencies arise.

WANTED. A healthy lady, a worker, over 25, residing in a country town, to operate a branch for a wholesale house. Must be able to furnish a satisfactory voucher for goods consigned and moneys handled; also references for character, honesty and business ability. State business experience, if any. Address No. 8, 220 Sansome St., S. F.

AYER'S PILLS

Excel all others as a family medicine. They are suited to every constitution, old and young, and, being sugar-coated, are agreeable to take. Purely vegetable, they leave no ill effects, but strengthen and regulate the stomach, liver, and bowels, and restore every organ to its normal function. For use either at home or abroad, on land or sea, these Pills

Are the Best.

"Ayer's Pills have been used in my family for over thirty years. We find them an excellent medicine in fevers, eruptive diseases, and all bilious troubles, and seldom call a physician. They are almost the only pill used in our neighborhood."—Redmon C. Comly, Row Landing P. O., W. Feliciana Parish, La.

"I have been in this country eight years, and, during all this time, neither I, nor any member of my family have used any other kind of medicine than Ayer's Pills, but these we always keep at hand, and I should not know how to get along without them."—A. W. Soderberg, Lowell, Mass.

"I have used Ayer's Cathartic Pills as a

Family Medicine

for 35 years, and they have always given the utmost satisfaction."—James A. Thornton, Bloomington, Ind.

"Two boxes of Ayer's Pills cured me of severe headache, from which I was long a sufferer."—Emma Keyes, Hubbardstown, Mass.

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Improved Ranch

FOR SALE.

Artesian, Raisin and Fruit Lands.

Located seven miles southwest of Tulare City and three miles from Tokay Switch on the Southern Pacific Railroad. It is centrally located in the artesian belt of Tulare county, and has one flowing well, capable of irrigating 100 acres, the depth to the main flow being only 308 feet. The water is soft for washing, healthful to drink and contains no substance injurious to vegetation. A reservoir of one acre, surrounded with handsome trees, receives the water from the well. Several ditches carry it in different directions on to the land.

The whole 160 acres (quarter-section) is unusually level, is entirely enclosed with fencing, and cross-fences partition the land into several enclosures for pasturage purposes.

The improvements consist of a modern styled, two-story, hard finished house, containing seven rooms, with walled cellar, kitchen and porches additional, surrounded with elegant shade trees, etc.; a large barn, storehouse, blacksmith shop, windmill, sheds, stables, etc.

In front of the place is a row of about 40 well-grown elm and Carolina trees. There are eight acres of orchard and vineyard, mostly in bearing, 30 acres of alfalfa, several miles of ditches and 40 acres of land checked and leveled.

The soil is dark Tulare lake bottom land, very productive, grows all kinds of tropical and semi-tropical fruits, except apples, and is especially adapted to the growth of alfalfa and for stock range. Water of good quality is found at ten feet from the surface. There are three surface wells on the place.

The climate is as healthful as any part of the Sacramento or San Joaquin valleys. Adjoining lands are supplied with water for irrigation from Elk Bayou, a never-dry stream, lying one mile from these lands, and water can be had on the land from the same source.

The simple fact that abundance of artesian water can be had so cheaply on this land will soon make the water alone worth more than the land is now offered for.

The owner (not being a farmer) is determined to sell at the best price offered soon. The land is under cultivation, except necessary pastures. Terms easy.

Three hundred and twenty acres of improved land adjoining will also be sold cheap and on easy terms, in tracts of 40 acres or upward, to suit.

Also 160 acres just outside of Tulare City limits, surveyed out in five-acre lots. The whole will be sold for cash for much less than its real value if applied for soon.

Call on or address E. M. DEWEY, Porterville, or A. T. DEWEY, 220 Market Street, San Francisco.

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WHAT TO USE.

For a blister to use on live-stock,

COMBAULT'S

CAUSTIC BALSAM

Has NO EQUAL. Why?

Because it is a perfectly **safe remedy** for any one to use. After applying as directed it needs no attention, **acts quickly** and is **effective**. Removes all bunches or enlargements and **guaranteed not to leave scar or blemish. Supersedes all cautery or firing.** Every bottle sold is warranted to give satisfaction. Price **$1.50** per bottle. Sold by all druggists, or sent by express, **charges paid**, with full directions for its use. Send for descriptive circulars. Address **LAWRENCE, WILLIAMS & CO., Cleveland, O.**

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THE GREATEST DISCOVERY OF THE NINTEENTH CENTURY.

Silver Medal Awarded by the State Fair of 1890.

This preparation is a Sure Destroyer of the SCALE, WOOLLY APHIS and INSECT PESTS of any and all descriptions. It may be as freely used in the conservatory, garden or greenhouse as in the orchard or vineyard. It is non-poisonous and harmless to vegetation when diluted and used according to directions. It mixes instantly with cold water in any proportions. It is SAFE SURE and CHEAP. No Fruit grower or Florist should be without it. Send for Circulars and Price List.

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Indispensable for Every City and Country Household, for Farm and Dairy.



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FRANK'S AMERICAN WONDER MACHINE.

Awarded Highest Medals Paris World Exposition, &c. Always produces

First-Class Granular Butter

(the very gilt edge) from sweet milk, sweet or sour cream,

In Two Minutes.

The same whether in winter or summer. (Party not keeping cows can buy one or more quarts of milk or cream and make his own pure butter daily, costing less than even such of inferior quality if bought.) No experience needed; any child can successfully manage it. Works from **one pint up. Makes more butter.** Buttermilk remains perfectly sweet for Coffee, &c. Recommended by physicians as best **Baby Food.** Machine also makes finest **Ice Cream in four minutes** and delicious **Cream Souffle in two minutes.** Is also excellent for cooling off new milk. Prices: 5 qts., $5.50; for Dairies: 14 qts., $10.00; 24 qts., $15.00; 40 qts., $23.00 (packing 10 per cent). Active Agents wanted. 25 per cent on samples. **Machines guaranteed as presented.**

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INDIAN TOO-RE!
Cures Stomach, Liver, Kidney Troubles, Rheumatism, Etc.

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For all Aches and Pains. Relieves Pain in One Minute.

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Every Remedy guaranteed to do the work or money refunded.

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We POSITIVELY CURE all kinds of Rupture and Rectal Diseases, no matter of how long standing, in from 30 to 60 days, without the use of KNIFE, DRAWING BLOOD, or DETENTION FROM BUSINESS. Terms **No Cure, no Pay; and no Pay until Cured.** If afflicted, come and see us or send stamp for pamphlet. Address:

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The Texas and Pacific Land Grant.

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APIARIAN SUPPLIES.

Italian Queens, $2.50 each; Black Queens, $1 each. Swarms from $2.50 each; Smoker, $1. Comb Foundation, $1.25 per pound; V-groove Sections, $4 per 1000. Comb Honey wholesale and retail; Hives etc. W. STRYAN & SON, The Homestead Apiary, San Mateo, Cal.



THE BEST FENCE YET!

Cheap, Durable, Portable and Safe.

THE SPALDING HUMANE WIRE FENCE is composed of eight No 12½ galvanized steel wires, woven into four cables of two wires each; interwoven every five feet is a corrugated iron stay or guard, and kept in place by the cables thereby holding the cables firmly in place, preventing them being pressed apart and letting stock through. The stay or guards are corrugated and an inch and three-quarters in width, making it impossible for horses to break fence, which is **a very essential point.** Write for circulars and prices. Address **BIRD-TURNBULL MFG. CO.,**
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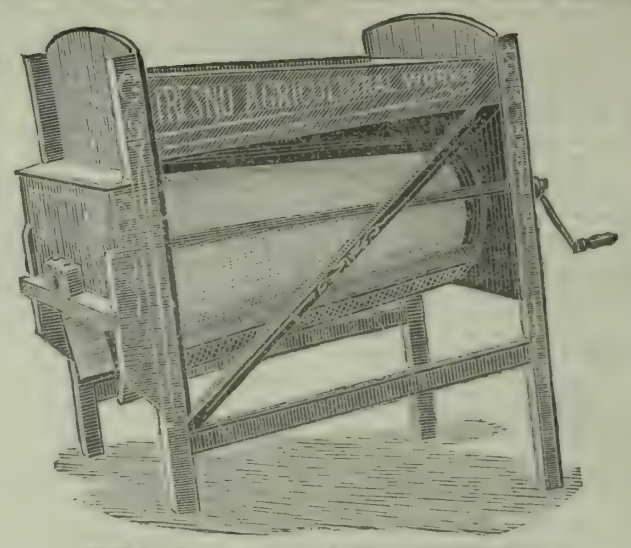


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Size No. 1, $13.50.

THE CELEBRATED

CHAPMAN-CLIMAX SPRAY PUMP

Is still ahead of all competitors, and is the most popular spraying machine in the market. The CLIMAX NO. 1, represented by this cut, is the cheapest reliable sprayer made, and its economy in the amount of wash required for a given amount of work will save its cost in a few days' operation.

IMPROVED CLIMAX NO. 2

Is a large double pump, made entirely of brass, and equipped complete with two lines of hose, four improved Pacific Cyclone Spray Tips, extensions, shut-off valves, etc. Guaranteed the safest, most satisfactory, and, in the end, the cheapest large spraying outfit in existence. Correspondence solicited. Address all communications to

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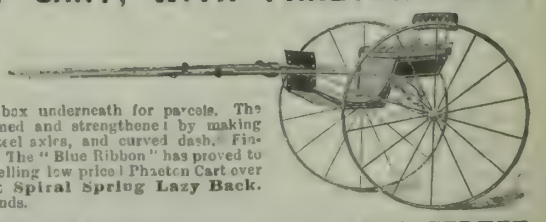


S. W. Corner Kearny and Montgomery Avenue, San Francisco.

Free Coach to and from the House. J. W. BECKER, Proprietor.

THE BLUE RIBBON CART, WITH PHAETON BODY.

$35



Has a seat wide enough for two, with box underneath for parcels. The body has been lengthened, is securely framed and strengthened by making the panels in one piece. Sarven wheels, steel axles, and curved dash. Finished in scarlet lake or brewster green. The "Blue Ribbon" has proved to be the best built, most popular and best selling low priced Phaeton Cart ever brought to this market. **With Patent Spiral Spring Lazy Back.** Shipped securely crated. Weight, 175 pounds.

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CLARK'S CUTAWAY HARROW



SUPERSEDES THE PLOW
Makes a PERFECT SEED BED.
Send for SPECIAL CIRCULAR.

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DEWEY & CO. { 220 MARKET ST., S. F. / Elevator, 12 Front. } PATENT AGENTS.

Notes From The Fairs.

(*Continued from page 381.*)

Concord—23d District.

The Contra Costa Agricultural Association's annual fair opened at Concord Sept. 23d. The Martinez *Gazette* says in its issue for that week: Taken altogether, the exhibition is a good one and worthy of more extensive patronage. It is strong in horses, some of the stock on the ground being as fine as any county show can boast. The races have been of unusual interest, and were conducted in a manner to win general approbation. There is not a large display of cattle. The pavilion exhibition is unusually commended. The fruit display is exceptionally fine. Grapes from the vineyards of Glen Terry, from the Orinda Park vineyard of Gen. Wagner, from M. R. Barber and others, were generally admired. The wine interests were also well represented. A fine display of flowers from the gardens of Mr. Hall of Concord and others shed a halo of beauty and fragrance around. Of the department of needlework and fancy articles, there are only words of praise to be heard. In addition to paintings of decided merit by local artists, there was a fine view of Mt. Diablo by Norton Bush, and other pictures from the same brush. So far as the general features of the fair are concerned, it may be set down as a success. The most perfect order has been preserved throughout.

Yreka—10th District.

We learn from the Ashland, Or., *Tidings*, that the opening of the 10th District Fair, which was to have taken place Oct. 1st, was postponed a day on account of rain, and the 2d proved cold, windy and altogether uncomfortable. Yet the attendance at the track, two miles south of Yreka, was good and the racing spirited. The weather was fine after the first day and the attendance much larger than last year. The races were well contested and the general impression is that they were fairly won on the merit of the horses entered.

The pavilion was decorated with flags and bunting, and a gorgeous display of cut flowers and blooming plants. The large collection of fruit, ripened to a roseate tint, was one of the charming features. Dairy and farm products were abundant and of the same excellent quality that has always attracted attention. In domestic exhibits the variety and quality were a study for the most experienced housewife. The bread, cake, preserves, jellies, pickles, jams and canned fruit utterly precluded enumeration.

At the stock parade Saturday, it was gratifying to note much better stock on exhibition than last year. Some very fine Norman horses and horses of all work were in line. McDonough's fine mares, Susie H. and Georgia Woodthorp, with colts by their side, were in the trotting class. President Vance's $2000 carriage team, Effie V. and Little Mack, with a record of 2:55 in double harness, were driven round the track; and there were many others to whom the reporter could not give the mention to which they were evidently entitled. In cattle there were Holsteins, Herefords, Polled Angus, Galloways and Jerseys—a very fine display.

A Stump-Puller.

There is in operation at Judge Thos. P. Stoney's ranch in the Redwoods a newly-invented stump-puller which is said to be giving the most perfect satisfaction. Of course all stump-pullers are supposed to be worked in the winter season when the ground is soft, but this machine, known as the "California Stump-Puller," even now accomplishes the work with ease, trees two feet in diameter being taken out, roots and all, without any trouble. The machine is worked by horse-power, and, having a sweep of 15 feet, the power imparted to each horse is 36 times the ordinary strength of the animal, and by the aid of a block this power can be increased to 72 times the animal's strength. The machine is capable of pulling several hundred stumps in a single day, and at one setting will clear two acres. The work so far done has been simply experimental, but the Judge is so well pleased with the operation of the machine that he has purchased it, and expects during the coming winter to clear his entire place. Quite a number of persons have witnessed the machine at work and all pronounce it the most perfect that has yet been put upon the market.—*Napa Daily Journal.*

Garrett Fence Machine.

By an advertisement in another column our readers will see that an economical and improved method of constructing a farm or vineyard fence has been brought to the front and is entitled to public patronage in an eminent degree. The time has come when a substantial fence for many valuable properties is very necessary and in many cases is indispensable.

The Garrett fence is a simple and complete combination or mechanical device by which wire, pickets and posts are firmly bound together. The post-holes are dug by an improved spade that is worked in couples or single.

In our judgment the Garrett fence will supply a need long felt for a better and more humane method of building fences. The appliance by means of which this fence is constructed is light to handle and does its work in the most simple and substantial way. Whether pickets and posts are cheap or dear, it does its work economically and well, requiring only two men (or a man and a boy) to put up from 40 to 60 rods, of fence per day. The wire generally used is annealed steel wire, which costs from 11 to 25 cents per rod, varying with the number of cables. Any picket, old or new, made of split rails or old boards, will answer the purpose desired.

Those Shropshire Premiums.

After the RURAL had gone to press last week the following letter from the Secretary of the State Board of Agriculture came to hand:

EDITORS PRESS:—Mr. Andrew Smith received every *first* premium in the Shropshire class proper.

In the sweepstakes, Mr. J. H. Glide was awarded the premium for "best ram and five lambs," but this award was protested by Mr. Smith, under the rule requiring sheep to trace to recorded animals or the furnishing by exhibitor of equally satisfactory evidence as to purity of breeding. Upon this protest the committee have not made any report.

Mr. Andrew Smith received all the premiums offered by *Shropshire* Association for animals exhibited at the State Fair of California, 1890, given for registered Shropshires. EDWARD F. SMITH,
Sacramento, Cal., Oct. 22, 1890. Secretary.

The Certificate of the Shropshire Association.

Mr. Mortimer Levering, Secretary Shropshire Association, Lafayette, Ind.—SIR: This is to certify that Andrew Smith is entitled to the association award for the "best flock of registered Shropshires, viz.: Two shearling ewes, two ram lambs; two ewe lambs and a flock of five (5) lambs, the get of one ram, and bred by the exhibitor," he having made entry and received the necessary recommendation at the California State Fair of 1890. Very truly,
EDWIN F. SMITH, Sec'y.

Mr. Andrew Smith has also written us as follows:

EDITORS PRESS:—Referring to the Shropshire awards at the last State Fair at Sacramento, I wish to say that I made one entry in each class, and received every first premium. The directors proposed that each exhibitor name one judge, and the directors would name one (there were only two exhibitors), which proposition I accepted, and knew only one of the judges out of the three.

The sweepstakes prizes on sheep were reserved, the directors stating that they would make the awards themselves, and naming Thursday of the last week of the Fair as the time they would decide who were entitled to these prizes. This arrangement was entirely satisfactory to me, as I knew some of the directors to be large breeders who understand their business. They, however, failed to appear on Thursday. Friday I remained on the grounds all day and fully expected them to be on hand; still they did not come. Having to return home early Saturday morning, I made it my business to see several of the directors on Friday evening, when they pleaded pressure of business for their failure to attend to the matter earlier, and promised to give it their attention Saturday and award the premiums themselves. This was a sufficient guarantee to me that all would have fair treatment, and I left for home on the first train Saturday morning. What was my surprise when I learned, the following week, that on Saturday afternoon the directors made their appearance and finding considerable of a contest with the Merinos, as well as Shropshires, flinched from doing their duty, failed to make the awards and enforce their own rules without fear or favor, declined to act, and at that late hour selected from such material as could be found, parties who made the sweepstakes awards on Shropshires to which I have protested.

I have a flock of Shropshires which I imported direct from England. These with their produce, bred by me, every one of which is recorded in the American Shropshire Registry Association, I don't hesitate to enter against any thoroughbred Shropshires in the United States, but I do want competition worthy and entitled to enter in same classes with them.

When I left my stock on the fair-grounds they were under the control of the directors, and I expected to have fair treatment and protection. I ask no favors of directors or committees. I make my entries of sheep and swine with their record numbers, as recorded in respective herd-books, and the certificates are open for inspection by the committee. I ask no one to take my assertion that "the stock are pure blood or trace to stock that are eligible for record." The herd-books are for the protection of breeders and purchasers, and it is time something was done to prevent stock being exhibited for premiums, unless their certificates are produced.

The State Fair is intended to stimulate breeders to honorable competition and encourage the improvement of fine stock by awarding premiums to the *best of all kinds* and to *thoroughbreds only*, but a repetition of such treatment as I have received would soon have the opposite effect. Yours truly,
ANDREW SMITH.
218 California St., S. F., Oct. 29, 1890.

ARTESIAN WATER has been found on the Rickley place, about 1¼ miles west of Sheridan, Placer county. At a depth of 55 feet, while boring with a five-inch auger, a vein was struck and water came to the surface with a rush. The well will flow in the neighborhood of 20,000 gallons per day.

"Battle of Gettysburg."

The celebrated Panorama of the Battle of Gettysburg and Museum, corner Market and Tenth Streets, San Francisco, is a wonderful production. It has captured the entire State, doing a great deal of good. There is no better way of passing an hour or so, and in studying American history, than by visiting this Grand War Panorama. If any of our readers have not seen it, it will pay them well to do so.

Farnham's Patent Stovepipe Drum.

This is a device which is attached to stovepipes for the purpose of arresting sparks and saving fuel. It is made to fit on any stove and takes the place of the lowest joint of pipe. When the damper is turned on, no sparks will ascend the stovepipe, while much heat is thereby kept back.

In Colusa county, the home of the inventor, it is used extensively and has the highest indorsement from the leading citizens. Mr. Farnham wants agents everywhere. Address M. Farnham, Germantown, Colusa county, Cal.

Prizes at Mechanics' Fair.

Among the premiums awarded at the Mechanics' Fair, which closed in this city last Saturday evening, the following will be of special interest to RURAL readers:

Best display of agricultural implements, gold medal, Baker & Hamilton.

Best potato-digger, silver medal; best riding cultivator, bronze medal; best plow for general purposes, diploma, and best sulky plow, "the Gilpin," diploma, Deere Implement Co.

Best side-hill plow, diploma, R. J. Knapp.

Best fruit and orange grader, silver medal, and stump extractor, diploma, Mosher, Chandler & Co.

Best gang-plow, "Bradley," diploma; best mower, diploma, and best hay-stacker, diploma, Truman, Hooker & Co.

Best lawn-mower, diploma, Pacific Manufacturing Co.

Cream-separator, silver medal, and fruit-pitting machine, diploma, G. D. Sharpless.

The consciousness of having a remedy at hand for croup, pneumonia, sore throat, and sudden colds, is very consoling to a parent. With a bottle of Ayer's Cherry Pectoral in the house, one feels, in such cases, a sense of security nothing else can give.

BIG REDUCTION in prices of stock and rabbit-proof fence. See Judson Manufacturing Co. advertisement, page 387.

GOOD LAND TO RENT.

Terms Unequaled.

SEVEN ACRES OF BEARING ORCHARD, FOR CASH OR ON SHARES, SEVEN MILES FROM TULARE.

IMPROVED LAND.—160 acres within two miles of Tulare City; 160 acres seven miles from Tulare; 320 acres adjoining the last named.

FOR LOW CASH RENT, or Reasonable Share, the above will be let.

UNPLOWED LAND.—Very level and easily tilled. 160 acres 1½ miles from the last named; good soil; water at small cost if desired. Rent free first year and preference given for second. Also, one section (640 acres) of similar land three miles S. W. of Pixley on the same terms as last named, but without irrigation. Will rent in subdivisions if necessary.

Inquire of E. M. DEWEY, Porterville, Tulare Co., or at the office of this paper.

VINE AND FRUIT LANDS

NEAR TULARE CITY.

City Homestead Lots Cheap.

1½ MILES FROM TULARE R. R. DEPOT.

AVENUE TO OAKLAND HOMESTEAD TRACT AND ELK BAYOU.

1	2	3	4	5	6	7	8
16	15	14	13	12	11	10	9

TOKAY AVENUE.

17	18	19	20	21	22	23	24
32	31	30	29	28	27	26	25

SMALL TRACTS OF LAND FOR HOMES

In 5, 10, 20 or 40 acre tracts, one mile from city limits of Tulare, one of the most prominent-growing towns in the State, at prices ranging from $40 to $60 per acre.

The land lies in the northerly limit of the Artesian Belt, and is also easily supplied with ditch water. Soil, sandy loam. Good surface water at 10 to 12 feet.

Liberal terms of payment to those who build or plant at once.

Apply to E. M. DEWEY, Porterville, Tulare Co., or A. T. DEWEY, 220 Market St., S. F.

THE GARRETT FENCE MACHINE

—IS FOR CONSTRUCTING—

A New and Durable Fence

By weaving Pickets and Wire to Posts set in the field. It is not excelled by any other machine for Ease, Speed, and Perfect Work; 40 to 60 rods per day can be put up. The wire for a 3 or 5 (2) strand cable can be bought for from 11 to 25 cents per rod. The Garrett Fence is noted for simplicity of construction, durability of all its parts, perfect tension device, and great saving of labor and money in its construction. The machines are manufactured in Ohio, and thousands are now in use in the United States. The Fences made by them are the best, cheapest and most desirable Farm, Orchard and Vineyard Fences that can be made. The best galvanized annealed Steel Wire can be furnished at the lowest market price. The machine, with the Little Giant Post Hole Digger, Wire Stretcher and Wire Cutter, etc., complete, costs about $25, with a discount where we have no local agent. Two men (or man and boy) can dig the holes, weave the wire to the pickets and posts, and easily complete the construction of the fence. Send for circulars and testimonials. Address K. C. DUSSENBERG, 430 Fine Street, San Francisco, General Agent Pacific States.

Let Us Know

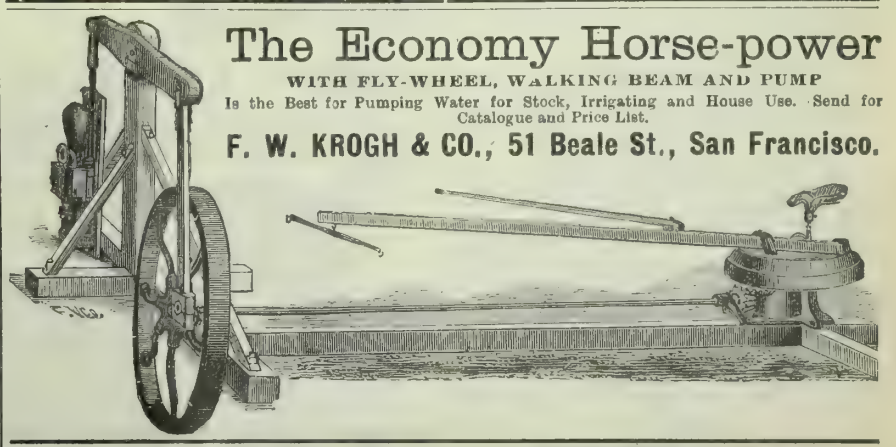
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The Economy Horse-power

WITH FLY-WHEEL, WALKING BEAM AND PUMP

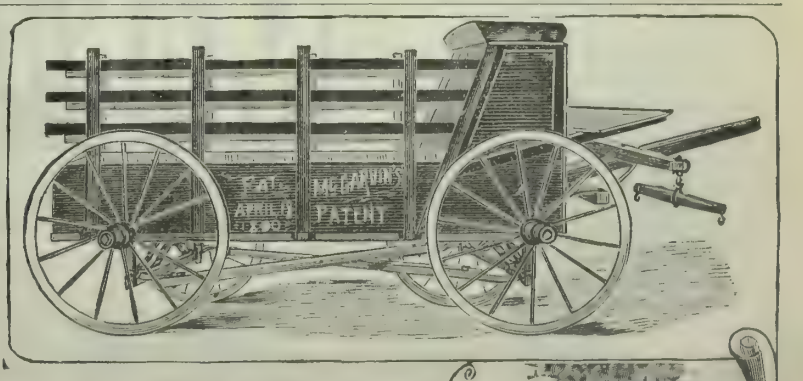
Is the Best for Pumping Water for Stock, Irrigating and House Use. Send for Catalogue and Price List.

F. W. KROGH & CO., 51 Beale St., San Francisco.



PRICE, $80 —TO— $145.

Received First Premium State Fair 1890.

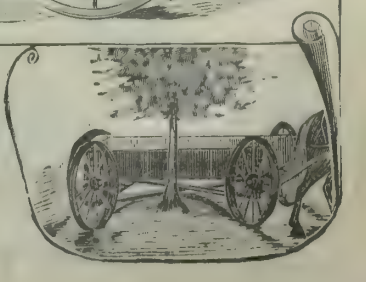


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PATENT FRUIT TRUCK

MANUFACTURED AND FOR SALE BY

SMITH McGARVIN, San Jose, Cal.



Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. None better.

REGISTERED HOLSTEIN CATTLE. Also best thoroughbred Poultry and Eggs. Address Hibbard & Ellis, Santa Rosa Breeding Association, Cal.

P. H. MURPHY, Perkins, Sac. Co., Cal., Breeder of Recorded Shorthorn Cattle and Poland China Hogs.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

PURE-BRED HOLSTEIN FRIESIAN Cattle for Sale. Bonnie Brae Cattle Co., Hollister, Cal.

P. PETERSEN, Sites, Colusa Co., Importer & Breeder of registered Shorthorn Cattle. Young bulls for sale.

JOHN LYNCH, Petaluma, breeder of thoroughbred Shorthorns. Young stock for sale.

JERSEYS—The Best Herd, all A. J. C. Registered, is owned by Henry Pierce, San Francisco.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

M. D. HOPKINS, Petaluma, importer and dealer in Eastern registered Shorthorns, Red Polled Cattle, Holsteins, Devons and Shropshire Sheep.

GEO. B. POLHEMUS, Coyote, Cal. Holstein-Friesian cattle, comprising males and females on advanced register. First premium in great milking test at State Fair, 1889, was won by a member of this herd.

PETER SAXE & SON, Lick House, San Francisco, Cal Importers and Breeders, for past 18 years, of every variety of Cattle, Horses, Sheep and Hogs.

HENRY HAMILTON, Westley, Cal., breeder of Kentucky Jacks and Jennies, Draft Horses and Holstein Cattle. Jacks, Horses and Mules for sale.

JERSEY BULL No. 468 P. C. J. C. C. for sale cheap. A fine four-year-old animal. Address Dellwood Poultry Yards, Napa, Cal.

IMPORTED REGISTERED CLYDESDALE Horses and Holstein Friesian Cattle from the most noted families. H. P. Mohr, Mt. Eden, Alameda Co., Cal. Visitors welcome. Correspondence solicited.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

CHARLES E HUMBERT, Cloverdale, Cal., Importer and Breeder of Recorded Holstein-Friesian Cattle. Catalogues on application.

WILD FLOWER STOCK FARM, Fresno Co. A. Heilbron & Bro., Props., Sac. Breeders of thoroughbred strains and Cruikshank Shorthorns; also Registered Hereford; a fine lot of young bulls in each herd for sale.

PERCHERON HORSES.—Pure bred horses and mares, all ages, and guaranteed breeders, for sale at my ranch near Lakeport, Lake Co., Cal. New catalogue now ready. Wm. B. Collier.

POULTRY.

CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

DELLWOOD POULTRY YARDS, Napa, Cal. Large lot of fine young birds for sale. Eleven Breeds.

THOROUGHBRED Light Brahmas, Black Minorcas, Barred Plymouth Rocks and Brown Leghorns. All settings guaranteed. Madison H. Critcher, 1851 Santa Clara Avenue, near Walnut St., Alameda, Cal.

GALT POULTRY YARDS. Galt, Sac Co., Cal., Breeds Most Popular Varieties of Thoroughbred Fowls. Choice Imperial Pekin Ducks, $2 each, $5 per trio.

R. G. HEAD, Napa, Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

JOHN McFARLING, 706 Twelfth St., Oakland, Cal., Importer and Breeder of Choice Poultry. Send for Circular. Thoroughbred Berkshire Pigs.

IF YOU KEEP ANY KIND OF FOWLS, Pet Stock, Dogs, &c., it will pay you to send your address at once to C. R. Harker, Santa Clara, Cal. You cannot afford not to do it. It will cost you but one cent and you will receive something worth ten times that.

PURE PEKIN DUCKS for sale cheap at Dellwood Poultry Yards, Napa, California.

W. C. DAMON, Napa. Fowls and Eggs, $2.00.

O. J. ALBEE, Lawrence, Cal. Pure bred poultry.

SHEEP AND GOATS.

E. W. WOOLSEY & SON, Fulton, Cal., importers & breeders Spanish Merino Sheep; ewes & rams for sale.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Cross-bred Merino and Shropshire Sheep Rams for sale.

E. H. CRANE, Petaluma, Cal., breeder and importer, South Down Sheep from Illinois and England for sale.

KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

L. U. SHIPPEE, Stockton, Cal., importer and breeder of Spanish Merino Sheep, Durham Cattle, Jacks and Jennys & Berkshire Swine high graded rams for sale

ANDREW SMITH, Redwood City, Cal.; see adv't.

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JOSEPH MELVIN, Davisville, Cal., Breeder of Poland-China Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

TYLER BEACH, San Jose, Cal., breeder of thoroughbred Berkshire and Essex Hogs

ANDREW SMITH, Redwood City, Cal.; see adv't.

BEES.

APIARIAN SUPPLIES for sale by Mrs. J. D. Enas, Napa City, Cal.

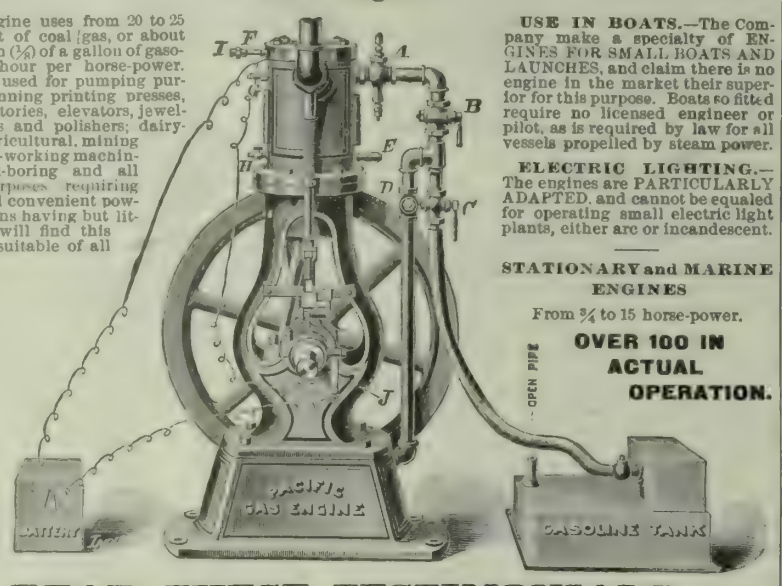
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PACIFIC GAS OR GASOLINE ENGINE.

PATENTED JUNE 17, 1890—NOS. 430,504, 430,505, 430,506.
Also in Great Britain and other foreign countries.

Starts Instantly Without the Necessity of Boiler, Fire or Experienced Engineer.

The engine uses from 20 to 25 cubic feet of coal gas, or about one-eighth (⅛) of a gallon of gasoline per hour per horse-power. It can be used for pumping purposes, running printing presses, small factories, elevators, jewelers' lathes and polishers; dairymen's, agricultural, mining and wood-working machinery; well-boring and all other purposes requiring cheap and convenient power. Persons having but little space will find this the most suitable of all motors.



USE IN BOATS.—The Company make a specialty of ENGINES FOR SMALL BOATS AND LAUNCHES, and claim there is no engine in the market their superior for this purpose. Boats so fitted require no licensed engineer or pilot, as is required by law for all vessels propelled by steam power.

ELECTRIC LIGHTING.—The engines are PARTICULARLY ADAPTED, and cannot be equaled for operating small electric light plants, either arc or incandescent.

STATIONARY and MARINE ENGINES

From ¾ to 15 horse-power.

OVER 100 IN ACTUAL OPERATION.

READ THESE TESTIMONIALS.

ALAMEDA, April 8, 1890.

PACIFIC GAS ENGINE CO.—GENTLEMEN: Permit me to add my testimonial to the many you have received indorsing your engine. As you are aware, mine was a Regan engine which gave me considerable trouble. I had to remove the head and raise the tappet valve every time I wanted to start the engine. I sent you the engine; you removed all the Regan appliance except the cylinder and stand. You put in your appliances, head, sparking device, inlet valve, and, in fact, changed it to the Pacific Gas Engine, which now works splendidly. I have not had to remove the head for any cause since you made the change (over two months). It gives me no trouble; my boy, 14 years old, attends to it.

The change from the Regan to the Pacific is a decided improvement. I can also get a third more power since the change, and I cheerfully recommend your engine as being simple, effective, and cheap. Respectfully yours,

B. S. HILL, S. W. Cor. Encinal Ave. and Morton St.

MAYFIELD, March 26, 1890.

PACIFIC GAS ENGINE CO.—We have given your little 1-H. P. engine a splendid advertisement. A fire broke out at 2:30 o'clock this morning, in a tenement house on my premises. I started the engine, connected the hose, and by its use saved at least $3000 worth of my property. I saved my blacksmith shop, lying 12 feet from the burning building, my barn and my dwelling. Three times the fire started in these buildings, and I extinguished it every time. The engine never faltered, and threw water between 50 and 60 feet high. The whole town was astonished, and they acknowledged that I saved at least $20,000 worth of property.

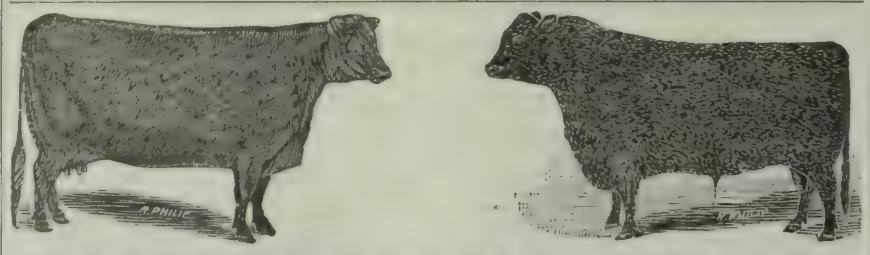
A fire department is being organized here, and I think they will have one of the engines on a truck for fire purposes *They cannot be beaten*

Hoping that all of your customers will be as well pleased with the engine as I am, I remain, Yours truly,

JOS. P. PONCE.

PACIFIC GAS ENGINE CO.,

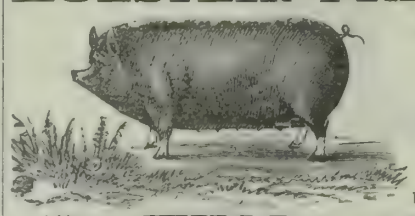
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Horses bought and sold. Auction Sales every Wednesday and Saturday at 11 A. M. A full line of Draught, Driving, Saddle and Business Horses. Particular attention paid to country sales. Special inducements to parties having sale horses. Stock sold on commission and boarded at low rates.

Will be Sold Very Reasonable,

TWO PERCHERON STALLIONS,

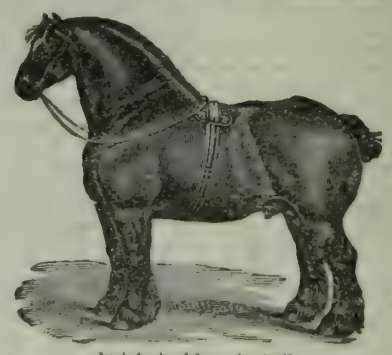
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Consignment of Three Clydesdale Stallions and Three Mares.



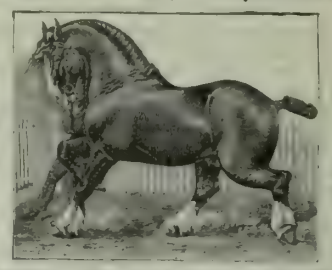
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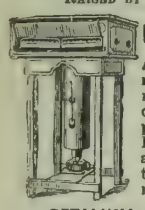
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CHEAPER THAN SHINGLES OR METAL
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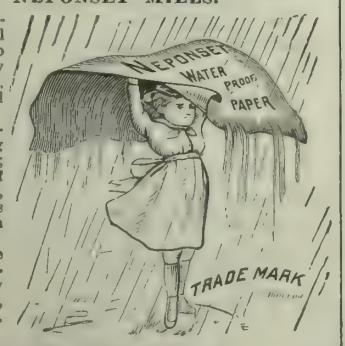
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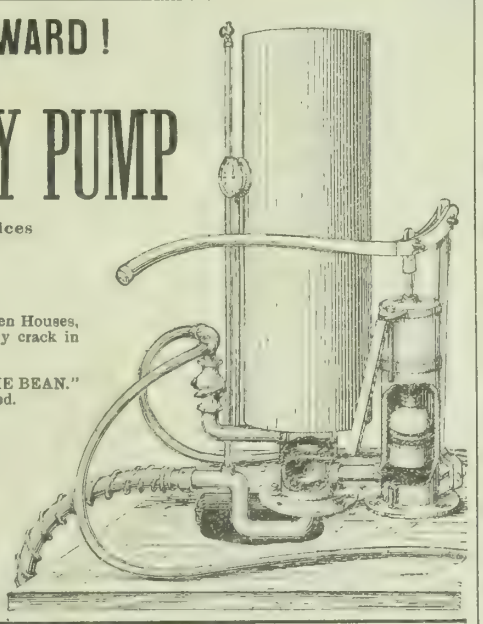
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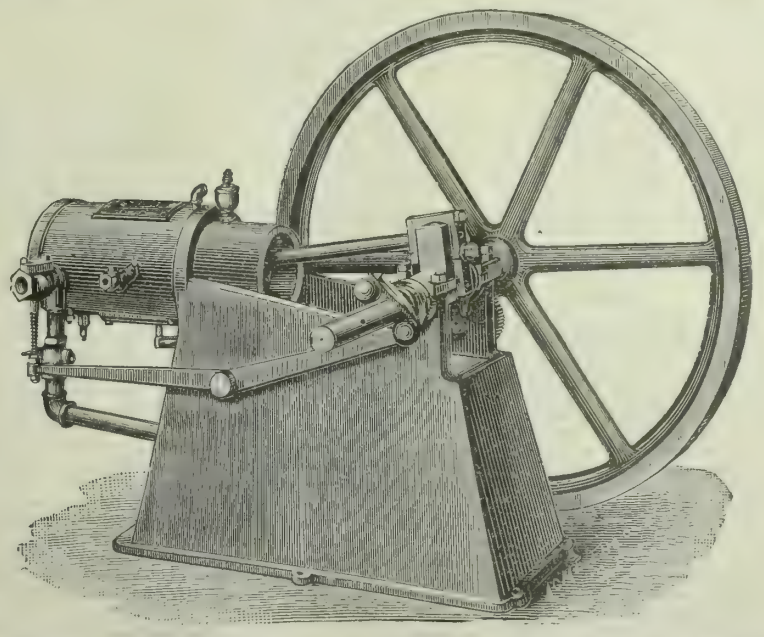
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Upright and Horizontal, Stationary and Marine Engines from ¾ to 60 Horse Power.

OUR STATIONARY ENGINES are especially adapted for PUMPING and IRRIGATING.

OVER 150 IN USE.

POPE & TALBOT, LUMBER, Office, 204 California Street. P. O. Box 2215.
SAN FRANCISCO, Feb. 25th, 1890.

REGAN VAPOR ENGINE CO.—Gentlemen: The 4 H. P. Vapor Engine I bought of you last May has been in constant use ever since, and has given me entire satisfaction. I have found the engine to be all that you claimed for it, and more too. You can use my name for reference if you so desire. I am, yours truly, H. TALBOT.

We carry a full line of Thos. Kane & Co's Famous Racine Launches, fitted with our New Compound Engines. SEND FOR CIRCULAR.

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INCORPORATED APRIL, 1874

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Capital paid up and Reserve Fund	**800,000**
Dividends paid to Stockholders	**627,500**

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General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on Wheat and country produce a specialty.

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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Oct. 29, 1890.

General trade in farm products is restricted by light offerings of grains and lessening supplies of other stuff. The close, sultry weather is, as a rule, beneficial to fruit-driers. The money market is reported easy. Heavy receipts of gold from Australasia have created an easier feeling. In wheat the foreign and Eastern markets after receding are closing stronger. The following is to-day's cablegram:

LIVERPOOL, Oct. 29.—Wheat—Firmly held and higher. California spot lots, 7s 4d to 7s 7d; cargoes off coast, 38s; just shipped, 37s 9d; nearly due, 37s 9d; cargoes off coast and on passage, quiet but steady; Mark Lane wheat, firm; French country markets, tone is steady; weather in England, wet.

Foreign Grain Review.

LONDON, Oct. 27.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: There is an increased demand for English wheats. Sound samples are 3d dearer; foreign wheats recovered 6d. Flour was dull, heavy home supplies, together with large consignments of Californian, checking any tendency to rise. Corn and beans were rather dearer. Barley was firm. At today's market English wheat was dull; California and other American flours are in good demand and prices improved 6d.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Thursday	7s6½d	7s6¾d	7s7d	7s6¾d	7s6¾d	7s6½d
Friday	7s5½d	7s6¼d	7s6¼d	7s6d	7s5¾d	7s5½d
Saturday	7s5½d	7s6d	7s6d	7s6d	7s5½d	7s5¾d
Monday	7s5½d	7s6d	7s6d	7s6½d	7s6½d	7s6¾d
Tuesday	7s6¼d	7s6½d	7s7¼d	7s7¼d	7s7d	7s7d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	38s0d	37s9d	37s9d	Strong.
Friday	38s0d	37s8d	37s6d	Steady.
Saturday	38s0d	37s9d	37s9d	Quiet.
Monday	38s0d	37s9d	37s9d	Firm.
Tuesday	38s0d	37s8d	37s9d	Advancing.

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per bushel:

Day.	Oct.	Nov.	Dec.	Jan.	May.	June.
Thursday	107⅝	108½	109½	110⅝	112⅝	...
Friday	107½	107¼	108⅝	109¼	111½	...
Saturday	107½	107⅝	108¼	....	111⅝	...
Monday	106⅞	....	107⅞	110⅛	110⅛	...
Tuesday	108⅛	108½	109	109⅝	112	...

The closing prices for wheat have been as follows at Chicago for the past week, per bushel:

Day.	Oct	Dec.	May.	June.
Thursday	102½	104	108	...
Friday	101	102⅜	107¼	....
Saturday	100⅞	102⅝	107	....
Monday	100	102	106⅝	....
Tuesday	101½	103⅜	108¼	....

NEW YORK, Oct. 29.—Wheat—$1.04¾ for cash, $1.08¾ for November, $1.09¼@1.09⅜ for December, $1.10 for January, and $1.12¾@1.12½ for May.

CHICAGO, Oct. 29.—Wheat—$1.03⅜ for December and $1.08⅞ for May.

Visible Supply of Grain.

NEW YORK, Oct. 27.—The visible supply of wheat is 19,715,000 bushels, an increase of 1,107,000; Corn, 7,206,000, a decrease of 1,053,000; barley, 4,809,000, an increase of 331,100; oats, 4,123,000, a decrease of 199,000; rye, 639,000, an increase of 24,000.

Wool.

NEW YORK, Oct. 24.—*Bradstreet's* says: With the prices remaining firm, the sales of all grades of wool are fair, especially to the dress goods and worsted manufacturers. The market in Melbourne has just opened with every indication of high prices, and this is expected to stimulate the American market and strengthen values. The Australian clip is reported large and of unusually fine quality. Fine combing wools are the best selling wools in the market. Fine delaines and half bloods, unwashed, are scarce. A slight pressure on them will advance prices. The demand for Territory wools has weakened, but quotations remain unchanged. Increased activity in California wool was only temporary, and rapidly fell off the first part of the week. The uncertainty as to the way the Custom-house officials would interpret the "sorting" clause affected carpet wools, and as a consequence business in them has been light. The demand for Ohio and Michigan wools is strong, and everything that is offered is easily disposed of.

NEW YORK, Oct. 25.—Wool retains its recent improved tone and the stocks here are light. Long lines of fleeces are evidently yet wanted. Interior owners, particularly Ohio, ask prices above seaboard bids. There were sales in New York of 130,000 pounds. Spring and fall California, 458,000 pounds. Other domestic, largely Texas, and 314,000 pounds of foreign, mostly carpet grades, at private terms.

In Boston the wool market throughout was firm. Sales, 4,264,000 pounds, including 500,000 pounds foreign and 375,000 pounds spring California, at 17 @25c; fall, 16@19½c.

In Philadelphia there was a moderate trade and prices were well supported.

Miscellaneous.

NEW YORK, Oct. 27.—Local trading in hops in Boston was moderate; State was firm. The last figures of Pacific quote new at 38@42c, with rather a better classification given.

Raisins were in good supply for previous orders and present wants. Rain damage reports from the coast were not a stimulant nor purchasing factor. California Sultanas were quoted at 10c.

Prunes continue in the buyer's favor and good small are not plenty. Four sizes were quoted at 11½@12c. Some badly cured lots that have appeared cause a closer inspection than has been customary.

Dried apricots are steady at 17½c in sacks and 18@18½c in boxes. Unpeeled peaches, 16½@17½c were the full selling prices.

Local Markets.

BARLEY

	Buyer Season. H.	L.	Seller 1891. H.	L.	Buyer 1890. H.	L.
Thursday	153⅞	153	111	111	148½	147½
Friday	156¼	153½	..	..	150	148
Saturday	154½	153	..	..	147⅞	147⅞
Monday	154½	153½	....	....	149½	148
Tuesday	154⅞	154⅞	111⅝	110⅞	149⅛	149⅜

WHEAT

		S. S.	Nov.	B. '90.	B S.	S. '90.
Thursday	h.	....	....	135½	144½	....
	l.	....	....	135	144	....
Friday	h.	....	....	135½	143⅞	....
	l.	....	....	135½	143⅝	....
Saturday	h.	....	....	135⅝	144	....
	l.	....	....	135⅜	142½	....
Monday	h.	....	....	135⅞	144⅛	....
	l.	....	....	135½	143⅝	....
Tuesday	h.	....	....	136⅜	145¼	....
	l.	....	....	136⅛	144⅜	....

BAGS—The market is dull at 6¾c for May-June delivery.

BARLEY—The sample market has made another up move. When prices were below $1 per cental the RURAL PRESS predicted the advance, and those of our patrons who benefited by the advice are to be congratulated. In futures, trading on Call has been fairly active at slightly higher prices. The following are to-day's reported sales on Call:

Morning Session: Buyer 1890—100 tons, $1.50¾; 300, $1.50⅛. Buyer May—100 tons, $1.49; 200, $1.49½ ₩ ctl. Afternoon Session: Buyer 1890—200 tons, $1.50. Buyer season—600 tons, $1.55⅜; 100, $1.55¾. No. 1 Brewing, buyer season—200 tons, $1.61½ ₩ ctl.

BUTTER—The market for pickled is strong at higher prices. Some sales have been made at 25c. Fresh butter is easy; this is due to more new crop butter coming in, and owing to its reported poorer keeping quality is forced on the market.

CHEESE—The market shows a stronger tone, with a slight advance obtainable for the more choice grades.

EGGS — Heavy receipts of Eastern, with the quality fair to choice, cause a weaker tone, with some shading for the more choice Californian.

FLOUR—The market is steady, with a firmer tone reported.

WHEAT — The sample market, after shading off slightly, closes the week stronger, with buyers more anxious. In futures, trading has been only fair. The following are to-day's reported sales on Call:

Morning Session: Buyer 1890—600 tons, $1.36¾. Buyer season—200 tons, $1.45¾; 100, $1.45⅝. Buyer 1891—100 tons, $1.50½; 100, $1.50 ₩ ctl. Afternoon Session: Buyer 1890—200 tons, $1.36¾; 400, $1.36⅜. Buyer season—100 tons, $1.44⅞. November, season's storage paid— 100 tons, $1.36; 200, $1.36¼ ₩ ctl.

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Oct. 28th, were as follows:

Flour, qr. sks	91,711	Middlings, sks	4,480
Wheat, ctls	325,345	Alfalfa, "	141
Barley, "	30,107	Chicory, bbls	155
Rye, "	453	Broomcorn, bdls	535
Oats, "	19,574	Hops, bls	1,020
Corn, "	10,005	Wool, "	3,790
*Butter, "	621	Hay, tons	2,102
do bxs	293	Straw, "	126
do bbls	1	Wine, gals	314,120
do kegs	201	Brandy, "	26,230
do ½ do	....	Raisins, bxs	16,450
†Cheese, ctls	757	Honey, cs	193
do bxs	6	Walnuts, sks	1,235
Eggs, doz	37,633	Flaxseed, sks	5,409
do " Eastern	156,110	Mustard, sks	2,008
Beans, ctls	23,668	Almonds, sks	1,100
Potatoes, sks	40,938	Peanuts, sks	429
Onions, "	1,849	Popcorn, sks	481
Bran, sks	15,244	Beet sugar, bbls	1,021
Buckwheat, sks	218	do do sks	3,822

*Overland....ctls. †Overland....ctls.

Cereals.

Mark Lane Express, Oct. 6, says: The extremely low rates at which steamers are bringing grain from New York and Odessa, and even from India, have a good deal to do with the existing depression of the foreign wheat market. An excellent authority on the cargo trade calls these rates "unhealthy," and there is little doubt that the profits of some of the big lines will fall to vanishing point if present freight charges are of long continuance. The matter unfortunately is one which lies largely beyond the control of persons interested in the corn trade, for the vessels which bring corn from distant foreign ports at nominal charges are enabled to do so principally by reason of the demand for English goods abroad, the inquiry for which depends often upon the most recondite causes, quite outside the range of agricultural interests. The total quantity of wheat and flour now in sight is 12,601,030 qrs., as compared with 10,754,027 qrs. a twelvemonth since. The excess is about half in stocks and half in grain afloat. London is computed to hold no more foreign wheat and less foreign flour than at midsummer, but Liverpool has raised its wheat stocks from 246,421 qrs. to 485,902 qrs., and a large increase is reported from Bristol, Gloucester and Dublin. Hull seems to have curiously low stocks, which with a good Indian and Russian trade appears particularly strange.

The local wheat market continues surprisingly stagnant, considering the dry weather and light stocks held in this State. The tonnage at this port under engagement has a carrying capacity of over 110,000 tons, while the quantity (flour reduced to wheat) exported to date this season is about equal to the like time in 1889. The coal strike in Australia is off, and consequently vessels there will soon be able to load coal for San Francisco. This has been the chief factor used by bears in depressing wheat. The decline in silver the past week, falling as low as $1.03 an ounce, has been against wheat. Farmers should by all means vote only for Congressmen in favor of free coinage of silver. With silver raised to a gold standard, then Indian and Russian wheat cannot compete so successfully against American wheat.

Barley has held strong, with still higher prices reached. The stock in the State is very light, while the consumption is quite large. The more orchards and vineyards, the more horses used, and consequently more barley fed. Black oats for seed have made quite a jump; other kinds are higher, but the advance is not so marked.

Notwithstanding oats are coming to hand quite freely, the demand is quite active, which keeps the market strong at full prices. Oregon is our chief source of supply.

Corn shows considerable strength. Receipts are fair. The higher prices asked for other feedstuff is largely in favor of corn and its product.

Rye is steady. Receipts are light, so is the demand.

Warehoused Grain

The Salinas *Index* says: Following is a statement of wheat and barley (tons) reported on hand in the Salinas valley warehouses Oct. 1, 1890:

Warehouse.	Wheat.	Barley.
Moss Landing	600	2,481
Castroville	71	171
Morocojo	263	983
Cooper's	391	2,389
Salinas (Ball's)	1,768	1,927
Spence's	1 123	837
Chualar	1,629	754
Chualar (Jacks)	500	377
Gonzales	1,211	2,228
Gonzales Bros	250	200
Soledad	842	1,178
Cholone	2,871	1,408
Kings City	4 668	875
San Lucas	7,140	77
San Ardo	796	42
Bradley	2,432	86
San Miguel	2 644	40
Paso Robles	5,077	86
Well's Siding	25	.....
Templeton	766	7
Totals	35,067	16,146
COMPARATIVE STOCKS.		
June 1, 1890	8 999	6,466
March 1, 1890	16,844	18 241
Dec. 1, 1889	28,568	26,669
Oct. 1, 1889	37,068	30,508
June 1, 1889	3.064	19 427
March 4, 1889	8,825	23,795
Dec. 1, 1888	15,126	31,850

Feedstuff.

Ground feed is higher and strong at the advance. Continued dry weather necessitates more feeding, and as the supply grows smaller, particularly in barley, it is but natural that values tend up.

Hay continues to rule strong at full prices. Although quotations remain unchanged, yet there is a disposition to force buyers to pay slight advances for the more choice grades. The supply in the State is running short, and as the weather continues dry, fears are expressed in some quarters that there may be a famine before the next crop season opens. This we give without expressing an opinion; let each reader be his own judge.

Fruits.

As peaches and other tree fruits go out and consumers become surfeited with grapes, apples command more attention. There still are complaints of wormy and defective apples, and to effect sales low prices are still in order. Choice good-keeping apples are wanted, with an advance paid for some varieties. The hot weather is forcing all kinds of late fruits into rapid maturity. Strawberries are firm at a slight advance. Pears are slightly higher.

For next season oranges there is a good inquiry. Regarding crop prospects, see "Agricultural Notes."

The dried-fruit market shows a better tone. The "odds and ends" are about cleaned up and consequently buyers, to secure supplies, are compelled to pay full prices, with at times an advance. The large bulk of Chinese dried peaches has been placed, as have the outside parcels of dried prunes. Apricots, pitted plums, pears and nectarines are in light supply. The more choice packed figs are said to be meeting with better sales than last year. The pack this year is larger. Dried apples are doing slightly better.

Many early sellers of dried fruits on future delivery find that, to make deliveries of some kinds, they have to bid higher prices.

The weather has been extremely favorable for drying grapes. The market for the latter is firm at full prices. In fresh grapes, the market, after being glutted, is showing signs of recovery under lessened receipts. There is a better local and shipping demand for better keepers. The warm weather is favorable to the crop. It allows more sugaring for wine grapes. Raisins show continued activity under free inquiries from the East. Heavy shipments continue the order of the day. Receipts at this port have been quite free, as have been the exports by sea. The shipments to Australasia show a decided increase over those made in October, 1889. Choice to gilt-edged raisins are, if anything, fetching a slight advance. The shipments of "off" raisins in sacks to the East will be quite free, much of which will be of fair quality.

Vegetables.

Continued sultry weather is against gardening, consequently garden truck is growing scarcer.

Cabbage and root vegetables do not have the quick demand noted some time since; yet the general tenor of the market is to steady prices. The dry weather causes feed carrots to be more asked for.

Onions, while in lighter receipt, are firmly held at full prices. The demand continues fair.

The receipts of potatoes are very heavy, causing some shading in prices. Many dealers are well stocked and are only tempted into buying by concessions. Several large purchases are reported in the interior, which naturally are against this market.

Live-stock.

Nevada and Arizona continue to send us liberal supplies of beef cattle. The condition of those coming from Nevada is "A1" in every respect. The consumption is not as large as at this time in 1889. Mutton sheep are weaker under free offerings, Hogs continue to hold to full prices. The weather is against any extended packing. Fresh milch cows are wanted for dairies. The better prices for butter and cheese are the incentive for buying. Medium work horses are in buyer's favor; other kinds are unchanged.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4½@4¾c ₩ lb; dressed, 7@8c ₩ lb.; heavy, 4@4¾c ₩ lb.; dressed, 6½@7½c ₩ lb. Stock hogs, 3¼@3½c ₩ lb.

BEEF—Stall fed, 6¼@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¼@5¾c ₩ lb.; second quality 4¾@5c ₩ lb.; third quality, 4c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6@8c ₩ lb.; large, 4@6c.

MUTTON—Wethers, 7c ₩ lb.; ewes, 6½c ₩ lb.; lamb, spring, 8@9c.

Miscellaneous.

Poultry does not show any material change outside of turkeys, which are lower under fairly free receipts and a light demand.

The hot weather has been against game keeping, which has been against the market.

The receipts of beans have been quite free, as have shipments out of the State. The market does not show any material change.

Honey shows a fairly firm tone, as does beeswax.

Hops are held at higher quotations. Oregon and Washington are sending us more than they did last season.

Wool is without any material change. The grades suitable for luster goods find a quick market.

Exports by sea the past week aggregate as follows: Flour, bbls, Liverpool, 6300; Central America, 4232; Panama, 379; South America, 1548; Manilla, 1000. Wheat, ctls, Hull, 150,805; London, 7288; Cork, 127,442; Falmouth, 56,154; Central America, 1201. Barley, ctls, Hilo, 261; Liverpool, 6672; London, 11,620. Rolled barley, sks, Hilo, 1820. Beans, lbs, Victoria, 12,924; Boston, 55,158; Hilo, 9769; New York, 50,582; Central America, 9522; Panama, 1556. Corn, ctls, Central America, 952. Canned fruits, cs, Victoria, 551; Liverpool, 1205; Central America, 226; London, 8586. Champagne, cs, New York, 350. Mustard seed, lbs, New York, 27,127. Dried fruits, lbs, Mexico, 1162; Hilo, 300; New York, 2000; Victoria, 2800. Bran, sks, Hilo, 2030. Hay, bls, Hilo, 985. Raisins, bxs, Mexico, 243. Beeswax, lbs, Liverpool, 415. Brandy, gals, London, 197. Honey, cs, Liverpool, 631. Wine, gals, Mexico, 2379; New York, 60,000; Central America, 1535; London, 7711. Potatoes, sks, Mexico, 715.

From the *Commercial News* of Oct. 29th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	242,415	213,230
On the way to neighboring ports	20,318	10,419
In port, disengaged	7,683	29,805
In port, engaged for wheat	66,968	74,143
Totals	337,384	327,597

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Oct. 22, 1890, the following are the exports from this port: 1890. 1889.

Wheat, ctls	3,117,489	3,744,677
Flour, bbls	378,679	352,867
Barley	133,338	599,033

Dried Fruits, Etc.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices named, unless otherwise specified, are for fruit in sacks. Add for 50-lb. boxes ¼c per lb., and for 25-lb boxes ½c to 1c per lb.

Apples, sun-dried, quarters, common	7	@ —
" " " prime	7½	@ —
" " " choice	8½	@ —
" " sliced, common	8	@ —
" " " prime	8½	@ —
" " " choice	9	@ —
" Evap. bleached, ring, 50-lb boxes	11	@ 13½
Apricots, sun-dried, unbleached, common	10½	@ —
" " " prime	12½	@ —
" " " choice	13½	@ —
" " bleached, prime	16	@ —
" " " choice	17	@ —
" " " fancy	18	@ —
" Evap. choice, in boxes	18	@ —
" " fancy, "	19	@ —
Figs, sun-dried, black	2½	@ 3½
" " white	—	@ —
" " " washed	—	@ —
" " " fancy	8	@ 10
" " " pressed	4	@ 6
" " " unpressed	2½	@ 3½
" Smyrna boxes	12	@ 14
" do sacks	10	@ 12
Grapes, sun-dried, stemless	3½	@ 4½
" " unstemmed	2	@ 3½
Nectarines, Red, sun-dried	10	@ 13
" evaporated, in boxes	13½	@ 14½
" white, sun-dried	12	@ 15
" evaporated	16	@ 17
Peaches, sun-dried, unpeeled, common, bleached	10	@ —
" " " prime, "	13	@ —
" " " choice, "	15	@ —
" " " fancy	17	@ —
" evaporated " choice	18	@ —
" " " fancy	19	@ —
" sun-dried, peeled, prime, bleached	16	@ —
" " " choice	19	@ —
" " " fancy	21	@ —
" evaporated, " in boxes, choice	20	@ —
" " " fancy	22½	@ —
Pears, sun-dried, quarters	8½	@ 9½
" " sliced	9½	@ 10½
" evaporated, " in boxes	10½	@ 10½
" " ring "	—	@ —
Plums, pitted, sun-dried	9½	@ 11
" " evap. in boxes, choice	11	@ 12
" " " fancy	13	@ 14
" unpitted	5	@ 8
Prunes, Cal. French, ungraded sizes	9	@ 9½
" " " graded " 90 to 100	8½	@ —
" " " " " 80 to 90	9	@ —
" " " " " 70 to 80	9½	@
" " " " " 60 to 70	9½	@
" " " " " 50 to 60	10½	@ —
" " " " " 40 to 50	11½	@ —

Fancy sell for more money.

RAISINS.

Halves, quarters and eighths, 25, 50 and 75 cents higher respectively than whole box prices.

London Layers, choice ₩ bx	$1 80	@ 2 10
" fancy, "	2 25	@ 2 50
Layers, ₩ bx	1 50	@ 2 00
Loose Muscatels, common, ₩ bx	1 15	@ 1 35
" choice, "	1 50	@ 1 75
" fancy, "	1 80	@ 1 90
Unstemmed " in sacks, ₩ lb	4	@ 6
Stemmed " " "	4	@ 7
Seedless " " "	6	@ 7
" ₩ 20-lb bx	1 15	@ 1 25
" Sultanas, unbleached, in bxs	1 15	@ 1 25
" " bleached "	1 25	@ 1 30

CALIFORNIA HONEY.

Comb, dark, 2-lb. frames, 60-lb. cases, ₩ lb	4	@ 5
" amber, " " cs. new "	4½	@ 5½
" white " " " "	9	@ 12
Extracted, dark, 5-gal. cans, 2 cans to case, ₩ lb.	4	@ 4½
" amber, " " "	4½	@ 5½
" white, " " "	5½	@ 6
Comb, 2-tins, 2 doz. to case, ₩ doz	—	@ —
Extracted, " " "	—	@ —
" 4-lb. tins, 1 doz. "	—	@ —
Beeswax, per pound	21	@ 24

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Oct. 29, 1890.

BEANS AND PEAS.				**NUTS—JOBBING.**			
Bayo, ctl	3 50	@	3 90	Walnuts, Cal. lb	9	@	10
Butter	2 00	@	2 75	do Ch'ce	10	@	12
Pea	2 50	@	2 90	Almonds, hd shl.	6	@	7
Red	2 50	@	2 75	Softshell	14	@	15
Pink	2 10	@	2 35	Paper shell	15	@	16½
Large White	—	@	—	Brazil, s	16	@	18
Small White	2 60	@	2 90	Pecans mall	11	@	14
Lima	4 00	@	4 50	do large	17	@	18
Fld Peas,blk eye	1 50	@	1 70	Peanuts	4½	@	5½
do green	2 00	@	2 25	Filberts	11	@	13
do Nies	1 35	@	1 55	Hickory	6	@	8
Split	6	@	—	Chestnuts	12	@	15
BROOM CORN.				Pine nuts	7	@	8
Choice to Extra	60 00	@	75 00	**POTATOES.**			
Fair to Good	45 00	@	55 00	Early Rose, sks.	60	@	75
Poor	40 00	@	—	Chile	90	@	1 10
CHICORY				Peerless	70	@	1 00
California	5½	@	6	River Reds	75	@	90
German	6	@	6½	Humboldt	—	@	—
DAIRY PRODUCE, ETC.				Petaluma	—	@	—
BUTTER.				Burbanks	80	@	1 30
Cal. Poor to fair, lb	15	@	22½	Sweet	1 00	@	1 25
do good to choice	25	@	32½	**POULTRY AND GAME.**			
do Giltedged	35	@	—	Hens, doz	5 00	@	6 50
do pickled	21	@	25	Roosters, old	5 00	@	6 00
do in kegs	17	@	21	do young	4 50	@	6 50
do Creamery in rolls	36	@	—	Broilers, small	2 50	@	3 50
Eastern do	—	@	—	do large	4 00	@	—
do do, in tubs	17	@	25	Fryers	4 50	@	—
CHEESE.				Ducks, tame	4 00	@	5 50
Cal. choice mild	10	@	11	do large	6 00	@	7 00
do fair to good	7	@	9	Geese, pair	1 50	@	2 00
do gilt edged	—	@	12½	Turkeys, Gobl'r	15	@	17
Young America	11	@	12½	Turkeys, Hens	15	@	17
N. York Cream	10	@	12½	Pigeons	1 75	@	2 50
Western	9	@	10½	Rabbits, doz	1 00	@	1 25
EGGS.				Hare	1 25	@	2 00
Cal. ranch, doz	42½	@	—	Venison	6	@	8
do do sel'cted	45	@	—	Dove	50	@	75
do. store	37½	@	—	Quail	50	@	1 00
Est'n, old st'rage	—	@	—	Snipe, English	1 00	@	1 75
do fresh	25	@	30	do Jack	50	@	60
do selected	32½	@	—	Ducks, Mallard	4 00	@	5 00
do to arrive	—	@	—	do Sprigs	2 00	@	2 50
FEED.				do Teal	1 50	@	1 75
Bran, ton	20 00	@	22 00	do Widgeon	1 25	@	1 50
Feedmeal	28 00	@	29 00	do Small	1 00	@	1 25
Gr'd Barley	31 00	@	32 50	Geese, Gray	2 25	@	3 00
Middlings	25 00	@	28 00	do white	1 00	@	1 50
Oil Cake Meal	25 00	@	27 00	Brant	1 00	@	1 50
Manhattan Food Per 100 lbs	7 50	@	—	**EGG FOOD.**			
HAY.				Manhattan, ⅌ lb	12	@	—
Compressed	14 00	@	19 00	**PROVISIONS.**			
Wheat, per ton	12 00	@	17 00	Cal. Bacon.			
do choice	18 00	@	19 00	Heavy, lb	10½	@	11
Wheat and Oats	12 00	@	16 00	Medium	12	@	—
Wild Oats	12 00	@	15 00	Light	13	@	13½
Tame do	12 00	@	15 00	Lard	9	@	11
Barley	9 00	@	13 00	Cal. Sm'k'd Beef	11	@	12
Barley and Oats	10 00	@	14 00	Hams, Cal	13	@	14
Alfalfa	12 00	@	13 00	do Eastern	14	@	15
Straw bale	70	@	80	**SEEDS.**			
FLOUR.				Alfalfa	8	@	8½
Extra, City Mills	4 25	@	4 50	Canary	3½	@	4
do Co'try Mills	4 20	@	4 50	Clover, Red	11½	@	11½
Superfine	3 25	@	4 00	White	17½	@	20
GRAIN, ETC.				Cotton	20	@	—
Barley, feed, ctl	1 40	@	1 47½	Flaxseed	2	@	3
do Choice	1 48½	@	1 50	Hemp	4	@	5
do Brewing	1 50	@	—	Italian Rye Grass	10	@	11
do do Choice	1 55	@	—	Perennial	7	@	9
do do giltedg'd	1 60	@	—	Millet, German	5	@	6½
Chevalier once	1 55	@	1 58½	do Common	5	@	6
do com to good	1 40	@	1 50	Mustard, yellow	1 90	@	2 25
Buckwheat	1 90	@	2 20	do Brown	2½	@	3
Corn, White	1 27½	@	1 33½	Rape	1½	@	2
Yellow, large	1 25	@	1 27½	Ky. Blue Grass	14	@	16
do, small	1 22½	@	1 25	2d quality	13	@	14
Oats, milling	1 70	@	1 75	Sweet V. Grass	75	@	—
Surprise	1 75	@	1 80	Orchard	12	@	14
Choice feed, ch'c	1 70	@	—	Hungarian	7½	@	8
do good	1 65	@	—	Lawn	27½	@	40
do fair	1 60	@	—	Mesquit	6	@	7
do Gray	1 60	@	1 65	Timothy	6	@	7
do Black	1 65	@	1 80	**TALLOW.**			
do do for seed	2 00	@	2 05	Crude, lb	3	@	5
Rye	1 22½	@	1 32½	Refined	6	@	
Wheat, milling.				**WOOL, ETC.**			
Gilt edged	1 43½	@	—	**SPRING—1890**			
do Choice	1 41½	@	—	Humboldt and Mendocino	19	@	24
do fair to good	1 38½	@	—	Sac'to valley	15	@	22
Shipping, cho'ce	1 37½	@	—	Free Mountain	18	@	24
do good	1 35	@	—	S Joaquin valley	12½	@	17
do fair	1 31½	@	—	do mountain	17	@	22
Sonora	1 30	@	1 35	Cala'v & F'th'll	15	@	24
HIDES.				Oregon Eastern	13	@	22
Dry Ight to h'vy	10	@	11	do valley	20	@	25
Salted	5	@	8½	So'n Coast, def	10	@	14
HOPS.				So'n Coast, free	12½	@	19
				FALL—1890.			
Oregon, 1890	32½	@	40	North'n, choice	16	@	18½
Cal 1890 Choice	37½	@	40	do defective	14	@	16
do Fair to G'd	32½	@	35	Mountain Free	13	@	15½
ONIONS.				San Jo quin defective	9	@	11½
Silver Skin	2 50	@	3 00	Southern do	9	@	11½

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Oct. 29, 1890.

Bananas, bunch	1 25	@	2 50	do other wine			
Cranberries	9 00	@	12 00	black kinds	10 00	@	13 00
Limes, Mex	4 00	@	5 50	Crabapples, box	75	@	1 00
Lemons, Cal., bx.	2 00	@	4 00	Quinces, box	50	@	65
do Sicily, bx	7 00	@	8 50	**VEGETABLES.**			
do Malaga	7 00	@	8 50	Okra, dry, lb	6	@	10
Pineapples, doz.	3 00	@	5 00	do green bx.	1 00	@	1 25
Strawberries chest	5 00	@	12 00	Parsnips, ctl	1 25	@	—
Pears, bx	75	@	1 25	Peppers, dry, lb	12	@	—
Apples com box	75	@	60	do green, bx	25	@	40
do good	90	@	1 15	do Bell	40	@	50
do cho'ce	1 25	@	1 50	Turnips, ctl	75	@	—
Grapes, box	10	@	40	Beets, sk	—	@	1 00
do Muscats	20	@	50	Cabbage, 100 lbs	50	@	60
do Rose of Peru	20	@	40	Carrots, sk	30	@	45
do Tokay	25	@	60	Tomatoes, bx	40	@	65
do Blk Hamb'rg	25	@	40	Lima do	3	@	
do Isabella	40	@	50	Marrowfat, ton	10 00	@	12 00
do Queen	75	@	1 00	Hubbard	15 00	@	20 00
do Malvoise	20	@	40	Garlic, lb	8	@	10
do Cornichon	50	@	75	Egg Plant, bx	35	@	50
do wine Zinfandel	10 00	@	15 00	Cauliflower doz	50	@	70

Rope.

Baling, Duplex, lb	11
" Manilla, lb	14
Twine, for hops, balls, tarred, lb, Manilla	15
" " grape vine, balls, lb "	15½
" " " coils, lb "	15½
" spring, lb	17
" binder (65) ft. to lb), lb	15

Duplex twine 3c per lb less.

No Stopping Him!

J. G. McC. writes: "I wish most sincerely that every rancher in this fair land of ours could but see the immense benefit that could be derived from a year's subscription to the RURAL PRESS, and to my notion a *year's* subscription means a *life* subscription—for who can take it a year and then stop?"

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE. Oct. 22-28.	Olympia. Rain	Temp.	Wind	Weather.	Portland. Rain	Temp.	Wind	Weather.	Eureka. Rain	Temp.	Wind	Weather.	Red Bluff. Rain	Temp.	Wind	Weather.	Sacramento. Rain	Temp	Wind	Weather.	S. Francisco. Rain	Temp	Wind	Weather.	Fresno. Rain	Temp.	Wind	Weather.	Keeler. Rain	Temp.	Wind	Weather.	Los Angeles. Rain	Temp	Wind	Weather.	San Diego. Rain	Temp	Wind	Weather.
W.	.24	52	S	Ry.	.04	64	SW	Fr.	.00	56	Nw	Cl.	.00	76	Nw	Fr.	.00	72	0	Cy.	.00	62	W	Cy	.00	82	W	Cy.	.00	66	0	Cy.	.00	78	Nw	Cl.	.00	80	0	Cl.
T.	.04	56	S	Fr.	.00	58	S	Fr.	.00	56	N	Fy.	.00	82	W	Cl.	.00	76	Nw	Cl.	.00	60	W	Cl.	.00	82	Nw	Cl.	.00	66	SW	Cl	.00	72	W	Cl.	.00	68	Nw	Cl.
F.	.00	54	N E	Fr.	.00	58	W	Fr.	..	....	....	....	.00	86	Nw	Cl.	.00	80	E	Cl.	.00	70	W	Cl.	.00	80	W	Cl.	.00	66	0	Cl.	00	64	Nw	Cl	.00	66	W	Cl.
S.	.00	60	0	Fr.	.00	60	S	Cy.	.00	50	N	Fy.	.00	80	N	Fr.	.00	74	Nw	Cy.	.00	72	W	Fr.	.00	82	S	Fr.	.03	70	E	Cl.	.00	64	W	Cl.	.00	64	Nw	Cl
S.	.00	60	Nw	Fr.	.00	62	SW	Fr.	.00	50	N	Fy.	.00	84	0	Cl.	.00	76	N	Cl.	.00	76	W	Cl.	.00	80	W	Fr.	.00	70	E	Cl	.00	70	SW	Cl.	.00	68	Nw	Cl.
M.	.00	54	N	Cl.	.00	64	Nw	Cl.	.00	54	Nw	Cl.	.00	86	S E	Cl.	.00	76	N	Cl.	.00	82	W	Cl.	.00	82	Nw	Cl.	.00	66	0	Cl.	.00	78	Nw	Cl	.00	64	0	Fr.
T.	.00	56	N	Cy.	.00	62	N	Cl.	.00	58	W	Cl.	.00	86	S	Cl.	.00	76	N	Cl.	.00	82	Nw	Cl.	.00	84	Nw	Cl.	.00	78	N E	Cl.	.00	62	W	Cl.	.00	66	W	Cl.
	.28	....	....	....	.04	....	....	....	.00	....	....	....	.00	....	....	....	.00	..	....	....	.00	....	....	....	.00	....	....	....	.00	....	....	....	.00	....	....	....	.00	....	....	....

EXPLANATION. Cl. for clear; Cy., cloudy; Fr., fair; Cm., calm; — indicates too small to measure. Temperature wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

California Fruits East.

CHICAGO, Oct. 23.—Porter Bros. Co. sold to-day four cars of California fruit at the following prices: Quinces, $1.45 for full crates; Tokay grapes, $1.55@2.30 for full crates; Tokay grapes, 60c@1.05 for half crates; Rose de Peru grapes, $1.15@1.35 for full crates; Cornichon grapes, $2.10@2.15 for half crates.

CHICAGO, Oct. 24.—Porter Bros. Co. sold to-day four carloads of California fruit. Vicar pears brought $2@2.50. Winter Nelis, $2.15@2.40; Beurre Clairgeau, $3.10; quinces, $1.25; Tokay grapes, full crates, $1.80@2.15, one car in very bad order, $1@1.35; Cornichons, full crates, $2.05@2.20, half crates, $1.05; Emperor, full crates, $1.85@2.10; Cornichon, half crates, $1.45; Coe's Late Red plums, $4.

CHICAGO, Oct. 25.—Porter Bros. Co. sold to-day three carloads of California fruit at auction. Tokay grapes, full crates, brought $1.55@3.35; Cornichons, full crates, $2.30; Muscats, full crates, $1.25@1.85; Verdelle, full crates, $1.45@1.75; Coe's Late Red plums, half crates, $2.15.

NEW YORK, Oct. 25.—E. L. Goodsell auctioned five cars of California fruits at the following prices: Fancy Tokay grapes, double crates, $4.15@4.80, single crates, $2@2.20; choice Tokay, double crates, $2.35@3.10, single crates, $1.30@1.65; Muscat, double crates, $1.60@2 20; single crates, 60@95c; Ferrera, double crates, $1.85@3, single crates, 80c@$1.25; Cornichon, double crates, $2.70@4.20, single crates, $1.45@2.30; Emperor, double crates, $2.65@3, single crates, $1.30@1.35; Morocco, single crates, $1.90; quinces, $2.75; Fall pears, $1.75@3.10.

CHICAGO, Oct. 27.—Porter Bros. Co. sold at auction to-day five carloads of California fruits as follows: Muscat grapes, $1.25@2.20 per full crate; Tokay grapes, $1.30@3.05 per full crate, 80c@$1.30 per half crate; Emperor grapes, $1.15 per half crate; Coe's Late Red plums, $2.15 per half crate; Cornichon grapes, $2.20 per full crate.

NEW YORK, Oct. 27.—No canned fruits to hand. Thirty-three cars of fresh fruit were sold the past week, and although rainy, prices held up well. The auction ranges were: Winter Nelis pears, 85c@$3.75 per box, others, $1@4.60, including one car of Beurre Clairgeaus at $2 95@3.50. Peaches, 25c@$1.10; quinces, $1.50@3 25; Tokay grapes, double, $2.50@3.75; single, $1.10@2.65; Cornichon, $1.45@2.30, double, $3.30@4.20; Muscat, $1.35@2.25, single, 45c@$2.25; Morocco, $2.10, double, $1.90@4.40, others, 65c@$3.

CHICAGO, Oct. 28.—Porter Bros. sold to-day three carloads of California fruit. Peaches, $2.25; full crates Cornichon grapes, $2.25@2.35; Muscats, full crates, $1.40@2.15; Tokays, full crates, $1.95@2.25; Emperor, full crates, $2.20@2.35; half crates, $1.10@1.25.

NEW YORK, Oct. 28.—California apricots and plums crystallized in granulated sugar are meeting with good success in this market. The *Commercial Bulletin* notes that California raisin shipments are backward. The Fresno districts are relatively better than the other sections. Riverside is the most unsatisfactory. Local jobbers generally claim, however, to have enough raisins to supply the orders.

CHICAGO, Oct. 29.—The California dried fruit market is quiet. Raisins are of moderate sale and dried grapes are salable though quiet. Stocks are not large of any line. Muscatel raisins are bringing $1.80@2 ⅌ box; London Layers, $2.15@2.50; prunes, in boxes, according to grade, ranging at 10½@13c ⅌ lb; peaches, unpeeled, 18@20c; peeled, 30c; apricots, 16@18c for off goods, to 19@20c for choice. The demand for green fruits has not improved any; peaches are selling at $2@2.25 ⅌ box; Winter Nelis, $1.50@2 for small and $2.25@2 75 for choice; Vicar, $1.75@2; Easter Beurre, $2@2.50; Glout Morceau, $3.75@4; Muscat and Tokay grapes, hf crates, 75c@$1.25; Cornichons, $1@1.25.

CHICAGO, Oct. 29.—Porter Bros. sold two cars of California fruit to-day at the following prices: Grapes, Tokay, full crates, $2.10@2.60; Cornichon, $2.60@3.20; Muscat, $1.15@2; Emperor, $1.90; Coe's late red plums, hf crates, $2.35; Winter Nelis pears, $2.25; Bartlett, $3.40.

THE San Diego, Phœnix & Galveston R. R. has incorporated with a capital stock of $1,900,000 of which $190,000 has been subscribed. The immediate purpose of the company is to build a road to the Camul Cement Works, 25 miles east of San Diego, taking the route of the old Texas & Pacific R. R. under the Scott survey.

"One touch of Nature makes the whole world kin." Diseases common to the race compel the search for a common remedy. It is found in Ayer's Sarsaparilla, the reputation of which is world-wide, having largely superseded every other blood medicine in use.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING OCT. 21, 1890.

438,761.—CABLE GRIP—J. W. Gentry, Oakland, Cal.

438,808.—STENCILING BRUSH—J. I. Hansen, Portland, Or.

439,081.—SAFETY DEVICE FOR ELEVATORS—John Hatch, S. F.

439,067.—CHURN—W. J. Hersom, Stockton, Cal.

438,926.—SOLDERING MACHINE—M. Jensen, Astoria, Or.

439,072.—FRUIT-DIPPING APPARATUS—D. D. Jones, San Jose, Cal.

438,689.—STATION INDICATOR — J. Kueffer, S. F.

438,690.—SEWING MACHINE — M. Lachman, S. F.

438,752.—PIPE-COUPLING—E. Lawson, S. F.

439,082.—TOY TARGET—E. E. Lommatzsch, S. F.

439,083.—CHILD'S BED LOUNGE—A. Morris, S. F.

439,084.—WINE-COOLER—A. S. Morton, Suisun, Cal.

439,085.—RAILWAY CAR—C. W. M. Smith, S. F.

438,649.—RAZOR-STROP—G. Spiess, S. F.

438,784.—TELEPHONE—J. C. H. Stut, S. F.

The following brief list by telegraph for Oct. 28, will appear more complete on receipt of mail advices:

California—Henry S. Brink, Biggs, cultivator; James B. Burrell, Wrights, machine for cutting boards; Elswood Chaffey, Santa Monica, mechanism for transmitting power; Leopold Dahlstrom, assignee of one-half to R. Menzel, Santa Clara, valve mechanism for double-acting pump; James C. Gibson, S. F., clutch pulley; John J. Griffith, San Bernardino, burglar-alarm; Stephen C. Houghton, assignee of one-half to L. C. Branch, S. F., adjustable seat-back; Augustus A. Lamont, Santa Rosa, cuff-holder; Perham W. Rahl, S F., navigable air ship; D. F. Oliver, Oakland, assignee to Hooker & Co., S. F., vehicle seat; James E. Pellow, Sierra City, leaf-turner; Daniel W. Williams, Fortuna, shingle-shaping machine.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

SPUDS.—The Chicago *Farmers' Review* estimates the grand total of the potato crop of this country for 1890 at about 122 731,000 bushels, as against 233,701,000 in 1889, and 216,646,000 in 1888.

DEMOCRATIC STATE TICKET.

For Governor,
EDWARD B. POND of San Francisco.

For Lieutenant-Governor,
R. F. DEL VALLE of Los Angeles.

For Chief Justice,
JOHN A. STANLEY of Alameda.

For Associate Justices,
JACKSON HATCH of Santa Clara (Short Term).
JAMES V. COFFEY of San Francisco.
GEORGE H. SMITH of Los Angeles.

For Secretary of State,
W. C. HENDRICKS of Butte.

For Controller,
JOHN P. DUNN of San Francisco.

For Treasurer,
ADAM HEROLD of Placer.

For Attorney-General,
WALKER C. GRAVES of San Francisco.

For Surveyor-General,
STANLEY C. BOOM of Humboldt.

For Superintendent of Public Instruction,
H. C. HALL of San Mateo.

For Clerk of Supreme Court,
J. D. SPENCER of Stanislaus.

Congressmen,
First District—THOMAS J. GEARY of Sonoma.
Second District—A. CAMINETTI of Amador.
Third District—JOHN P. IRISH of Alameda.
Fourth District—.....
Fifth District—THOMAS J. CLUNIE of San Francisco
Sixth District—W. J. CURTIS of San Bernardino.

Board of Equalization,
First District—.....
Second District—HENRY DUSTERBERRY of Alameda.
Third District—RICHARD H. BEAMER of Yolo.
Fourth District—JOHN T. GAFFEY of Los Angeles.

Railroad Commission,
First District—ARCHIBALD YELL of Mendocino.
Second District—C. H. HASWELL, JR., of San Francisco.
Third District—LAWRENCE ARCHER of Santa Clara.

NOTICE.—"The polls must be opened at sunrise of the morning of the day of election, and must be kept open until five o'clock on the afternoon of the same day, when the polls shall be closed."—(Section 1160 Political Code, Statutes 1889, page 209.)

Political Announcements.

[Notices admitted in this department are not necessarily endorsed by the editors or publishers of this paper.]

We wish you to notice J. R. Hebbron's candidacy (elsewhere announced) for member of the State Board of Equalization in the Fourth District. As he has practiced farming in California for more than a generation, taking premiums season after season at the 7th Agricultural District Fair, and has been a member of Salinas Grange for 16 years, it seems that he should command the confidence and votes of his fellow-farmers, as one likely to do them justice in the office for which he is the Republican nominee.

Among the legislative candidates, Hon. D. A. Ostrom, the Democratic nominee for joint Senator for Sutter and Yuba counties, deserves special commendation. Mr. Ostrom has been tried and not found wanting. He is a farmer, a member of Wheatland Grange, and is thoroughly alive to the farming interests.

Among the important measures which he introduced in the last Legislature may be mentioned the Reassessment bill, the National Grange Appropriation bill, the Jute bill, the Australian Ballot bill, and others tending to better the condition of the farmer and to purify our Government.

Mr. Ostrom's record is unimpeachable, and he certainly deserves the support of the Patrons of Husbandry.

— FOR —
MEMBER OF STATE BOARD OF EQUALIZATION
—OF THE—
FOURTH DISTRICT.
J. R. HEBBRON,
SALINAS, - - CALIFORNIA.

— FOR —
JUDGE OF THE SUPERIOR COURT,
E. M. GIBSON,
OAKLAND, - - CALIFORNIA.

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OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

H. KELLEY—Modoc and Lassen Cos.
T. B. LESIEUR—Humboldt Co.
GEO. WILSON—Sacramento Co.
J. P. QUINETTE—San Francisco.
J. C. HOAG—San Francisco.
SAMUEL CLIFF—San Luis Obispo Co.
W. W. THROBALDS—Los Angeles Co.
J. H. CROSSMAN—San Bernardino Co.
JOHN B. HILL—El Dorado, Cal.
W. B. FROST—Marin and Sonoma Cos.
GEORGE EVANS—Santa Clara Co.
MRS. M. E. DUDLEY—Ventura Co.
A. [illegible]—Monterey Co.
B. F. BELT—Shasta Co.
FRANK S. CHAPIN—Colusa Co.
HENRY SCHEA—Oregon.
WM. M. HILLEBARY—Oregon.
JOHN SIMPSON—Oregon.
WM. HOLDER—Oregon.
R. G. HUNTON—Montana.

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The Whole Country Needs Fertilization

ADMONITION TO FARMERS!

GUAYMAS, MEXICO, September 9, 1890.

R. B. CUNNINGHAM, ESQ., Agent Mexican Phosphate and Sulphur Company—DEAR SIR: In answer to your inquiries as to the value of phosphates for worn-out lands, I will state that it is my opinion the lands of the older settled portions of California afford a good field for the use of phosphates. These lands have been cropped for years without any restoration of the chemical constituents necessary for an abundant crop. They therefore show plainly that they need assistance artificially to produce crops good in quantity and quality, let the crop be whatever it may.

Take, for instance, San Joaquin and Santa Clara valleys, and what do you see? Many crops that are so imperfect in quantity and quality that the eye at once detects the defect. The only relief that can be resorted to must be infused into the soil to replace the chemical properties that have been extracted by previous crops, and the writer is of the opinion that a liberal supply of phosphates will accomplish this.

The attention of the cultivators of the soil is sharply turned to rotation of crops, hoping thereby to get wealth out of their lands without fertilization. Some have turned their attention to beet cultivation in soil worn out by other crops. Beet or other seeds will not grow successfully unless the soil will nourish them.

This summer I saw several crops of beets on excessively cropped lands, the majority of which showed that there was something wanting to complete the plants to ample size and in quantity that should be expected of sugar beets under favorable circumstances. If a good crop is not obtained, there is deficiency in profit. It costs as much to cultivate soil deficient in chemical properties as it does if ample nutrition was in the soil. Under the former condition a deficient crop is certain, while under the latter condition he may reasonably expect an ample crop with profit.

Fields often are allowed to go to weeds, supposing thereby to enrich the soil. This is an uncertain method and not profitable. Your weeds have grown up and seeded: the dead stems can only add a limited addition to fertilize the soil, while the seeds of the same will cause much expense to exterminate them from the future crops. Besides, while thus only weeds as a crop, no profit was realized, while if a supply of phosphates had been applied to the soil, a profitable crop of beets or corn would be had. Besides, the weeds would have been exterminated during the cultivation of the said crop. I am, Sir, your obedient servant,

EDWARD PALMER, M. D.

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Potash	9 to 10 "	2 "	5 to 6 "
Ammonia	3 to 4 "	2 "	3 to 4 "

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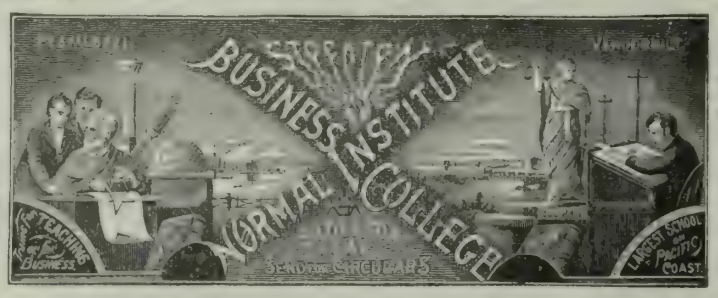
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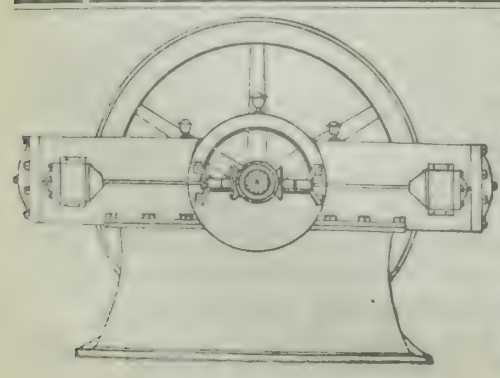
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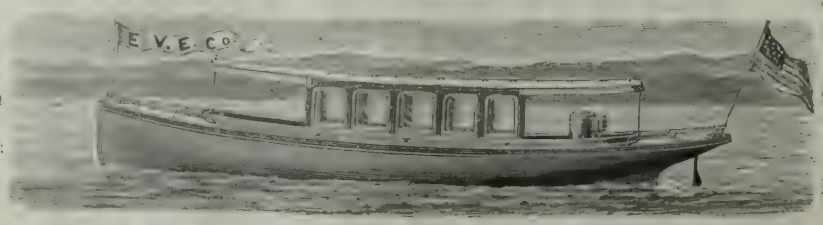


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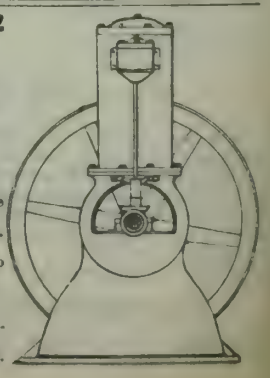
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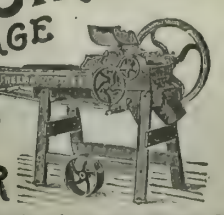
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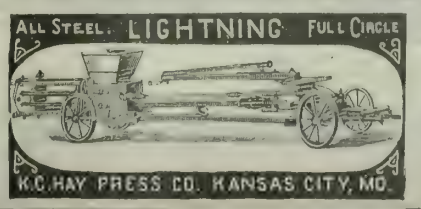
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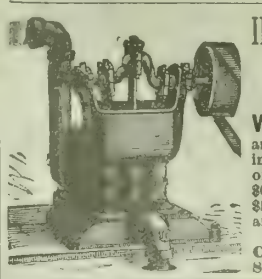
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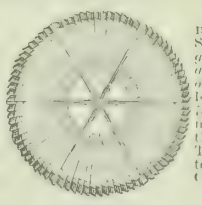
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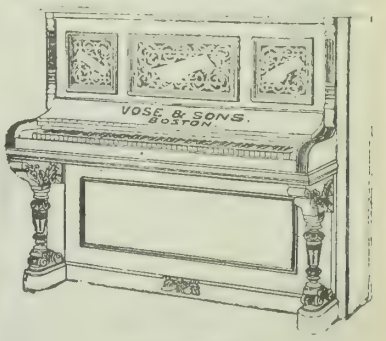
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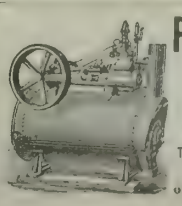
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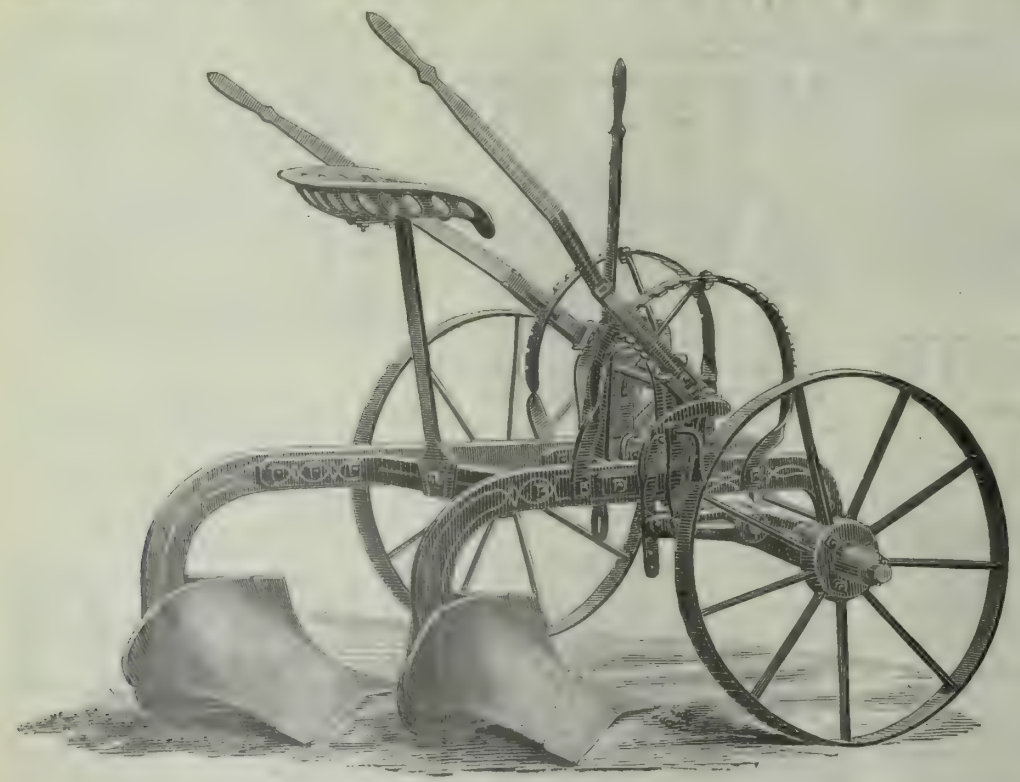
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PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XL.—No. 19. SAN FRANCISCO, SATURDAY, NOVEMBER 8, 1890. DEWEY & CO., Publishers, Office, 220 Market St.



FAIRLAWN 7277, BY NUTWOOD; DAM STREAMLET, BY ALMONT. OWNED BY JOHN W. WHITE, MT. STERLING, KY.

A Young Nutwood Stallion.

We give a portrait of a fine young trotting sire Fairlawn 7277, son of Nutwood, dam Streamlet by Almont. Nutwood is of course well known to RURAL readers, but he has this year added notably to his honors as a trotting sire, and now has not less than 42 in the 2:30 list.

Fairlawn's dam Streamlet by Almont, dam Old Sophy by Edwin Forrest, is a fine individual and a worthy representative of the great family to which she belongs. The blood of Fairlawn's sire and dam duplicates several of the greatest lines ever known. Through both sire and dam he gets a cross to Alexander's Abdallah, Mambrino Chief and Pilot, Jr. The Abdallah crosses come through his best sons, Belmont and Almont; the Mambrino Chief, through the dams of these great stallions, and the Pilot, Jr., through the dam of Maud S. and Kate, the granddam of Almont, who was also the great-granddam of Sultan.

Fairlawn is a bay horse, 16 hands high, strongly built at all points, and of handsome appearance, as is shown by the engraving. Being four years old, he has as yet no colts old enough to train, but they are a fine-looking lot and show excellent trotting action.

Spencer Stock Farm, the home of Fairlawn and property of Mr. John W. White of Mt. Sterling, Ky., is situated about three miles east of Mt. Sterling, near the Spencer turnpike. It consists of 465 acres of beautiful blue-grass land, and will be entirely devoted to trotting horses. Mr. White is as yet a young breeder, but is collecting a fine lot of trotting stock.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

From Humboldt County.

NUMBER IV.

EDITORS PRESS:—From Briceland we returned on the Garberville & Shelter Cove road to its junction with the Coast Thoroughfare at F. H. McKee's, where we spent the evening and were feasted on some very choice grapes of the Isabel variety, and thence proceeded northward through a lonely and almost uninhabited region for a distance of 22 miles to the Mattole valleys. After leaving the junction of roads at the summit above Shelter Cove, the Coast road follows, for a few miles along the summit of the range, through occasional groups of tan-bark oak and a magnificent view of the old ocean and the Shelter Cove ranch is afforded on one side, while upon the other is several thousand square miles of grand and picturesque mountain scenery, embracing large stock ranges and many thousand acres of heavily timbered lands. The scene suddenly changes as we reach the base of King's peak at Asa Harrow's cabin, and soon find ourselves winding around the eastern base of this grand old peak, which is one of the highest against which the Pacific ocean rolls, and is quite inaccessible from the beach side. Several hundred feet below us is a roaring mountain stream; here a cascade fringed with ferns dashes across the roadway, there a deer takes a hasty glance at our outfit and bounds away, and in many places a little variation from the track would precipitate horse, buggy and driver to the bottom of the stream below, which we ultimately cross on a well-constructed but somewhat ancient bridge and wend our way over the crookedest of crooked roads up the side to the summit of Wilder ridge, where we find a very desirable cattle range composed of a series of prairies with groups of tan-bark oak between, and extending down the eastern side of this ridge to the Mattole river is one of the finest bodies of tan-bark timber on this coast, and will at some future time be the site of an extracting plant, as it is only about 20 miles from this ridge to Shelter Cove and the lands nearer the coast are fast being denuded of bark. From Wilder ridge we descend into the Upper Mattole valley, finding the road equally as "curly" as at the other end of the ridge, and nightfall found us at ex Supervisor Hindley's.

The Upper Mattole valley contains about a dozen excellent farms which produce fruit of an unexcelled quality, and flour is manufactured from the wheat grown here, which is fully equal in quality to the leading brands of the State. Potatoes, vegetables, corn and all small grains yield abundantly, the surrounding hills afford excellent pasturage for stock, and there are several good sheep ranges near the valley. Twelve miles below is the Lower Mattole valley, and between are several fine farms of a greater or less acreage. At one of these farms (Mr. Shinn's) we found both black and English walnuts bearing abundantly, and at Mr. Shield's place we sampled apples that cannot be excelled either in flavor or size. Mr. Boyd has apples 16 inches in circumference, and Mr. Shinn produced peaches 13½ inches in circumference and of delicious flavor. About midway between the upper and lower valleys is Mr. M. R. Dudley's new roller flouring-mills which furnish the larger portion of the flour used in this vicinity. Mr. Dudley has a saw-mill also; both mills are run by water-power.

The town of Petrolia is situated in the lower valley in the midst of a prosperous dairying, farming and cattle-raising community. This valley also produces excellent fruits, grain, etc., and its pretentious buildings and well-kept fields denote thrift and industry.

Mr. Chas. Johnston has a field of corn fully equal to the corn-fields of the Mississippi valley. Some attention is paid to breeding fine horses, but cattle-raising seems to be the leading industry. Fruit-growing and farming, notwithstanding the excellence of such products, are not considered profitable, as the market is limited to the local demand, freight rates and distance being such that farmers are unable to ship their products, as they must be taken by wagons a distance of 30 miles before a shipping-point is reached. However, it is not unlikely that a chute or wharf will be constructed near Petrolia. It is said here that there is a good place of anchorage and a chance for an enterprising party to make a paying investment. Besides the large quantity of stock, dairy and farm products and general supplies from San Francisco, there is a large quantity of tan-bark which might be shipped by a chute at this place.

A company represented by Mr. Burris of Ventura has leased a large acreage of land and purposes to resume operations toward development of the petroleum deposits in this vicinity, and there can be no doubt that intelligent prospecting will result in a very satisfactory development, and in the event of success, Petrolia will become a flourishing business center. The town now boasts of about 100 inhabitants, two general merchandise stores, a hotel, blacksmith shop, livery and feed stable, a saloon, etc., and is connected by telegraph with Ferndale and has a daily mail to Ferndale and Eureka. This mail-route should be extended by the coast road to connect with the mail and stage route from Kinney, in Mendocino county, to Garberville, and form a continuous coast daily mail-route from Humboldt to San Francisco, which is quite a necessity, as people living on this route are from 15 to 20 miles from a postoffice. A post-office should be established at F. H. McKee's to accommodate the people of Shelter Cove and vicinity, as now their most convenient offices are at Briceland and Garberville, 20 and 28 miles distant. Mr. T. J. Newland, near Petrolia, has a pear tree of the Bartlett variety now loaded with pears, which is the third crop this season, two crops having fully matured, the quality being excellent. T. B. L.

Petrolia, Oct. 20, 1890.

Lake Tulare for a Water Park.

EDITORS PRESS:—In discussing the problems presented by Lake Tulare, it has been usually assumed that, because the water is alkaline and because it is shallow, therefore the best disposition to be made of the lake is to drain it and annihilate it; but I wish to present and urge a different solution.

A few years ago it was thought that the only use that could be made of our Big Trees was to cut them down. Now a wiser day is dawning, and it begins to be felt that possibly the next generation may like to have a peep at these things and that we really do not own this world but have only a temporary possession.

In the great valley of the Pacific Coast the combined San Joaquin and Sacramento, which will hereafter be the seat of a great population, there is nothing like a lake. Can there be too many attractions, too many sources of pleasure, varied recreation and healthful sport?

A trip through forest land affords pleasures peculiar to itself; so also with water. There is no substitute; sailing, rowing, fishing, swimming, each has its fascinations.

Tulare lake exercises a large influence on the climate of all the upper end of San Joaquin valley and it has an important part to play as a reservoir for the irrigating ditches taken and to be taken out below.

The lake should be preserved at a size of about 10 or 12 miles wide by 15 or 18 miles long. This can be reserved now without interfering with anybody, but after a few years claims of more or less force will hinder. The lake is quite shallow at the edge, and in order to make it accessible, and with a pleasant and permanent shore, it will be necessary for the State to take it in hand. Let the State Engineer lay out a shore line agreeably diversified with inlets, bays and capes. Let a dredger follow this line and throw up a levee—a moderate sized dredger kept constantly at work would in a few years make a lake which would be one of the many boasts of California. I venture to say that never was an equal opportunity offered to any landscape engineer such as created Central Park. Where can equal scene of beauty, winding shores, covered with grass and waving trees, sheltered coves filled with gayly-colored yachts and boats; the placid surface of the wide water, here and there broken by islands covered with trees, semi-tropic and temperate, here an isle of palms, here of oaks, there a picnic-ground of grass and umbrella tree, and so on.

The dredger would in a month build up a large island and deep water all around it. Of course it would take several seasons, for the mud must be allowed to solidify and then other mud thrown on top. The levee around the shore should be wide and solid and reserved as a magnificent driveway, wide, and bordered on both sides by fine shade and fruit trees. A strip of land three or four miles wide should be reserved all around the lake by the State, for a long time, say 25 or 30 years, till all these things are accomplished, renting the land meantime, perhaps. Then the sale would repay all outlay. The outlet should be deepened and guarded with a stone dam and gate, so as to afford means for draining off the alkaline water at proper times. By watching chances the water could be easily freshened. By draining the lake a certain amount of land could certainly be added to the area of production, but this same acreage of water is valuable for food fishes as well as for beauty and recreation.

Altogether the State cannot afford to lose this grand opportunity to create one of the most beautiful spots on the continent. It is easy, practicable, desirable, and in the end, costless. Let the farmers of the Upper San Joaquin work for it. Cities demand parks, but when have farmers ever before asked for a pleasure park or a pleasure lake? Let us *all* work for it as a new jewel in the crown of California. W. S. PROSSER.

Auburn, Oct. 30, '90

AN ARIZONA NATURAL BRIDGE.—There is said to be in the northern part of Gila county, Arizona, a natural bridge which spans Pine creek by a single arch of 200 feet, with walls on either side rising to a hight of 700 to 800 feet. The bridge is 600 feet wide and the thickness of the arch is 40 feet, rise not stated. The account says that the rock is limestone, worn very smooth by the action of water. One part near the corner of the arch is only 6 feet thick and is pierced by an opening.

HORSEFLESH AS FOOD.—It is said some 14,000 horses are annually consumed as food in the city of Paris. About one-half that number are consumed in Berlin and in Vienna each.

HORTICULTURE.

Prunes and Prune Curing.

EDITORS PRESS:—In your last issue I read with much surprise a long tirade from the pen of Leonard Coates, ostensibly on the Robe de Sergent prune, but in reality on "Gillet," who is yet to learn what he has done to so arouse the ire of the Napa horticulturist. It is true that I have taken quite a hand in the discussion of the prune question and the straightening up of our prune nomenclature, which is admitted by every one, Mr. Coates himself included, to be in a rather confused condition. But in discussing questions of that kind I do not believe in personalities, and I say that it is wrong to let one's passions subdue his own judgment. Six years ago, when this discussion was first started, Mr. Coates tried to choke me up for having had the audacity and bad taste to undertake the correction and straightening up of our prune nomenclature without having first asked permission from the State Horticultural Society (see Mr. Coates' communication in RURAL PRESS issue of Nov. 1, 1884). That, of course, didn't affect me a bit and I kept on my investigations of that prune question in my own quiet way. But as soon as I came to something definite about it, I did every time give the public the results of my patient researches. In this way I settled the question as to the identity of the Grosse and Petite Prune d'Agen, the Grosse Prune d'Agen having been ever since dropped off from all nurserymen's catalogues in California, that prune going now under the name of Hungarian.

Six years have elapsed since Mr. Coates claimed that the straightening up of the prune nomenclature did belong not to any private person or persons, but to the State Horticultural Society. Well, what has the latter society done toward solving that vexed question? I pause for a reply; and now when we are threatened by members of the said society to have a prune shown not to be the Robe de Sergent called by that name, and I rise to a question of privilege to be given a hearing before the society takes any action on the naming of that prune, the same Mr. Coates steps forward and for a second time tries to choke me up while endeavoring to save our prune nomenclature from being made more confused yet, and does not want to hear me unless I be present at what he is pleased to call "our" meeting, as if the society was the property of a dozen members around the Bay.

Now whether Mr. Coates likes it or not, I will, with your permission, through the columns of the PRESS, address myself to the members of the society in particular and the public in general, and show them why the name Robe de Sergent should not be given to a prune that is not the Robe de Sergent, and that that name be not sanctioned by the society itself.

This discussion about the wrong naming of the prune under consideration was not started by me at all, but by Dr. John A. Stewart of Santa Cruz—a well-informed gentleman, I must say, on all branches of horticulture. In the issue of the PRESS of Feb. 1, 1890, Dr. Stewart put the query to the public as follows: "What Robe de Sergent is this which Mr. Coates and some others are recommending to us just now? I don't know of any Robe de Sergent which is not d'Ente or Prune d'Agen; I did not know that there was another Robe de Sergent—a false one. I have not a word," added Dr. Stewart, "to say against this so-called Robe de Sergent except that it is not the Robe de Sergent and should no longer go abroad as such."

Was not that plain enough on the part of a man who had procured from Mr. Coates and fruited that very prune? But it is hard, it seems, to pound facts into the heads of some people.

Mr. Coates states that he never claimed that this prune of his had any analogy with the d'Ente or Petite prune. Well, we suppose he didn't; but what he obstinately refuses to admit is that Robe de Sergent, d'Ente, d'Agen, Datte, Petite and French prune are all synonyms—all meaning the same prune; consequently that it is wrong to name Robe de Sergent, a prune that has no analogy whatever, to use Mr. Coates' own words, with the true Robe de Sergent or d'Ente. As I have stated in former articles to the PRESS on the prune, the name Robe de Sergent was given to the prune called in Bordeaux d'Ente, and here, French prune, almost two centuries ago; and in its home, in the Valley of the Lot, that prune goes more under that very name, Robe de Sergent, than that of any of its other synonyms, as I could show from numerous letters from prune-growers of that district. Elsewhere in France, that prune goes as much under the names of d'Ente and d'Agen as under that of Robe de Sergent; but in Bordeaux, where the most of the prune crop is packed to be shipped away all over the world in millions of jars, canisters and boxes, no other name than that of d'Ente is used. To satisfy Mr. Coates and the other members of the Prune Nomenclature Committee as to the truth of my statement, I send you, with the present, half a dozen catalogues from leading nurseries in France.

On that from Agen, in the very prune district of the Lot, only two names are used, viz: "d'Ente or Robe de Sergent."

Jacquemet Bonnefont of Amonay has that prune in his catalogue as follows: "d'Agen (d'Ente, Datte Violette, Robe de Sergent)."

F. Jamin, in the northwest of France, mentions it on his catalogue as "d'Agen, d'Ente or Robe de Sergent."

The Doue nurseries, in the valley of the Loire, the home of that False Robe de Sergent, have it called on their catalogues "d'Agen or Robe de Sergent, the genuine kind." The words "the genuine kind" have been inserted in their catalogue but lately since they replaced their false type, that one generally propagated for years in the Loire district from Angers to Orleans by the true type from the Lot. The Doue nurseries admitted frankly that they had been propagating for years, like "everybody else in the Loire valley," the False Robe de Sergent for the true one.

I hope that these quotations from those catalogues of leading nurseries in France will satisfy every one that Robe de Sergent is a synonym of d'Ente, Datte Violette and d'Agen, called here Petite or French prune.

With Dr. Stewart, I say I have not a word precisely to say against this so-called Robe de Sergent except that it is not the Robe de Sergent and should no longer go abroad as such. It does not matter, either, whether that prune has been going for several years in the Santa Clara valley under that wrong name. Did not the Hungarian prune go for 25 years in California under the false name of Grosse d'Agen? How is it now with that prune? If Mr. Coates wishes to retain the words Robe de Sergent as a name to a prune that is not such, let him call it False Robe de Sergent, then we will know how we stand. Call it Loire Robe if you prefer, since it is only found in the valley of that name. In fact, give it *any name;* that is immaterial—but do not give it a name that already belongs to another kind, and a kind so extensively propagated here and in France.

In his communication, Mr. Coates states that "the vast valleys and plains of California did not all stand still while Mr. Gillet continued his very laudable researches." Who claimed that they did? I never claimed either that I knew it all myself, and never, in any manner, have I tried to monopolize knowledge on this prune question, though I believe that I have given to it more thought and more of my time than anybody else in California.

Speaking of the large horticultural establishment from which he obtained the prune under discussion, Mr. Coates says that that firm does an immense business in this country, and that the men that run it are as competent as myself in judging of the best varieties of prunes grown in their own country. I admit that, though I do not think that the amount of business done by a man gives precisely an idea of the amount of brains owned by him. If that firm in Orleans called Robe de Sergent that False Robe de Sergent, it does not tell much, I will say, in favor of their horticultural science.

Now here is another question about that prune. Mr. Coates says that it is no more a type of French or Petite d'Agen than Sonoma seedling apple is a type of Skinner's pippin. I claim that the prune is a parent, though a distant one, perhaps, of the French prune, as the stone conclusively shows. Look first at the stone of a prune or plum when trying to find out to what species it belongs. I have in my possession stones of the prune introduced by Mr. Coates, Mr. W. H. Aiken having sent to me specimens of the prune, a year or two ago, and it is like the stone of my False Robe de Sergent introduced from the same valley of the Loire by me, but not from the same place as Mr. Coates got his.

This discussion, adds Mr. Coates, is without profit. I guess Mr. Coates is mistaken, for anything that will throw light on a vexed question, and a question of much importance to prune-growers in this State, may turn out to be of great profit to all, even if its only result be to compel nurserymen, fruit-growers and packers to call things by their true names.

While having this prune question under discussion again, it would be well to call the attention of prune-growers and packers to the way they cure and pack that product, and not rely altogether on the protective tariff to find a market for their prunes at the East. I presume that most of your readers have read about as many as 20 carloads of prunes, sold for Eastern account, having been rejected; and 10 more carloads of Santa Clara prunes rejected, too, at the East, and *returned* to the shipper at San Jose. Would it not be well to ventilate that matter and find out what was the matter with those rejected prunes, so that such a thing wouldn't occur again, having tons of our prunes returned to us?

I have heretofore claimed that a large portion of our prune crop was not cured with enough care, and called attention of prune-growers to that fact. Much improvement has been going on these late years on the curing of prunes, it is true, but much has to be done yet. Many samples of cured prunes have been sent to me from all parts of the State, but I must say that the largest and finest ones came from San Luis Obispo (from Baron Schroeder's place), Calistoga, in Napa county, and Vacaville (Solano county). They all were, you may say, identical in all respects—same size, same color, same flavor; no difference whatever among them. They all made a very good sauce, but were too hard to be eaten out of hand. It showed me, too, that the prune area of the State is much larger than some people have any idea of, these three counties being so far apart. Now such prunes would never be returned from the East; they would be more

likely to be exported abroad than sent back. Let me tell our prune growers and packers, even if they call me rhapsodical for so doing, that they cannot bring too much care in the curing and packing of that fruit, if they want to have a ready sale for it and also enlarge the scope of the prune market. FELIX GILLET.

Nevada City, Cal. Oct 27, 1890.

Mr. Roeding's Experience with the Smyrna Fig.

F. Roeding of the Fancher Creek nursery sent W. C. West to Smyrna some three years ago to study the process of the Orientals in growing, curing and packing figs, and to procure, if possible, scions of the true Smyrna varieties. The mission was performed with considerable difficulty and at great expense, but the needed information was obtained, and cuttings of the trees were obtained. The cuttings were brought to Fresno county and planted at the Fancher Creek nursery, where they have since been carefully cultivated. Last year the trees formed fruit but it fell before maturity.

This year the trees again fruited. George C. Roeding, the manager of the nursery, by examination found that there were two varieties—the fruiting Smyrna fig and the wild Capri fig.

Mr. Roeding sought a method of transferring the fructifying powder. Taking some of the wild figs, he opened them, secured the pollen on the end of a toothpick and then introduced this implement as far as he could without injury to the fruit into some of the figs on a Smyrna tree, and then waited the results. Subsequent examination showed that every fig fertilized matured in the orthodox way they are said to do in Smyrna—shriveled up and fell from the tree—good, fully matured Smyrna figs, full of developed seed and richly flavored.

The figs on the tree which were not thus fertilized failed to mature. From this experiment it seems evident that the pollen producing wild figs and the *blastophaga* are necessary to produce figs of the Smyrna variety. Now, it remains for Mr. Roeding, he having secured the wild fig and the true Smyrna variety, to import the *blastophaga*, and California will be in shape to snatch from the dwellers in the Orient the profitable business of supplying the United States with dried figs. This factor to success is sure to be soon supplied—either by importation or by natural development.—*Fresno Expositor.*

THE VINEYARD.

Viticulture in the Sonoma District.

I. De Turk, President of the Viticultural Commissioners and Commissioner for the Sonoma District, has filed his annual report regarding viticulture in his district. The document is a remarkably complete one. It is as follows:

I beg leave to submit the following viticultural report for the Sonoma district as required by the blanks furnished by the State Board, together with other matters coming under my personal observation that may be of interest to the board.

The work of collecting the statistics for the new directory has been laborious and has taken considerable time, as every section has been visited and nearly every vineyard in the district has been visited.

Fully three-fourths of the vineyards of the district are located on the hills and mountainsides, which has made the labor of gathering statistics more arduous and difficult.

I have found in the district 925 vine-growers who cultivate five acres and upward. Of these 842 are located in Sonoma county.

The following statement shows the number of owners, acres in vines and product of each county:

SONOMA COUNTY.

No. of vine-growers, 5 acres or more	842
Total acreage in vines	22,683
" " " bearing vines	21,053
" amount of grapes in tons for '89	41,013

LAKE COUNTY.

No. of vine-growers, 5 acres and upward	48
Acreage in vines	1,061
" " bearing vines	1,008
Tons of grapes, product of 1889	2,148

MENDOCINO COUNTY.

No. of vine-growers, 5 acres or more	20
Acreage in vines	204
" " bearing vines	183
Tons of grapes, product of '89	343

MARIN COUNTY.

No. of vine-growers, 5 acres or more	15
Acreage in vines	502
" " bearing vines	441
Tons of grapes, product of '89	637
Total number of vineyards in district	925
" " " acres in vines in district	24,450
" " " " " bearing in district	22,685
" " tons, product of '89, in dist't	44,141

To the total acreage in vines for the district might be added at least 500 acres of small vineyards of less than five acres, planted merely for family use. This will increase the total acreage of the district to at least 25,000 acres in round numbers.

The total number of acres planted to table grapes exclusively is 485, the varieties being Muscat and Tokay.

From personal observation, and from conversation with the vineyardists and wine men of the district, I have obtained the following information on subjects pertaining to the grape and wine interests:

The great body of vines in the district are planted on rolling hills or on the mountain sides, exposure to the sun being observed in the location of the vineyard.

The soil upon which vines appear to produce the best quality of grapes, especially for wine purposes, is either a red gravel or clay or white volcanic ash in which there is more or less properties of iron. This character of soil is confined almost exclusively to the hill and mountain lands, hence the greater number of vineyards are located on the higher lands.

The valley lands produce a greater growth of vine and larger yield of berry, but at the expense of quality.

The product of the year 1889 has been somewhat difficult to arrive at, as many vineyardists lost a great part of their crop by the early rains, yet by a careful approximation the result of the report has been arrived at.

The vineyards all over the district are looking exceedingly well, and I find no failure except in the Sonoma valley. There the ravages of the phylloxera have decimated many vineyards, the pest slowly but surely creeping along the whole extent of the valley. So far no remedy against this insidious enemy of the vine has been discovered. The only recourse the vine man has is to replant with resistant vines and this is being generally done, although many vineyardists have become discouraged, dug up their vines and planted their grounds to other crops.

But little additional acreage has been set to vines in the past two years. Those planted will about equal the number torn out and killed by phylloxera.

In a few localities the effect of the low prices obtained for grapes last year is apparent, the vineyards having been neglected and not properly cultivated; the result is that a poor crop will be gathered on these lands.

The great body of vinelands and vineyards are to be found in Sonoma county. The counties of Marin and Mendocino, with a long fog belt extending inland 15 or 20 miles, leave but little land favorably situated for vine-growing. Late frosts prevent the realization of a crop of grapes in the valleys of Northern Lake and Mendocino counties.

The southern portion of Lake county is admirably situated for vine-growing, the climate and soil being all that could be required, yet the great distance to market and absence of transportation facilities has made vine-growing unprofitable, so far, in this section.

Many vineyardists contemplate setting out more of their lands or reset dead vines with the table varieties, Muscats, Tokays, etc., as they appear to be longer lived and resist the ravages of the phylloxera better than other vines. At the same time they command a better price in the markets.

But little loss has been sustained from mildew or sunburn the present season. What loss has been incurred from these causes is due to carelessness and injudicious pruning.

The grape crop of 1890 will average about that of 1889.

There are many thousands of acres of good vineyard lands, as yet unimproved, not only in Sonoma but in Lake and Mendocino counties. In the two counties last named the hill lands, where thermal qualifications are favorable, appear to be especially adapted to growing a good quality of the grape, the soil being almost wholly the red gravelly clay or volcanic ash, considered the best for the grape. At the same time these lands are as yet comparatively cheap.

The low prices obtained for grapes the past few years, as well as the stagnation ruling in the wine market, added to absence of transportation facilities, has kept these valuable vine lands from being improved. With a better market and more favorable conditions, these sections will become heavy vine-growing districts.

By far the largest variety of grape grown in the district is the Zinfandel, this being peculiarly the wine grape; the Golden Chasselas, Burger and Black Malvoisie come next; while some vineyardists affect a mixture of all the foreign varieties. At present the most of the wine-cellars of the district are empty or nearly so, the vintage having been shipped to market or stored.

A large amount of the present season's grape crop in the northern part of Sonoma and southern part of Lake counties, has been contracted to parties for drying purposes.

It has been impossible to obtain an estimate of the wine manufactured in the district during the past year, as the cellarmen have been inclined to be reticent on that point for fear the information might have an unfavorable effect on the wine market.

A considerable quantity of the wine product has been and is being manufactured into brandy.

In conclusion, I will say that I have used every endeavor to obtain a complete and exact report as required by the State Board, and nothing has been omitted that careful attention could accomplish. I. DE TURK.

Santa Rosa.

Almeria Grapes.

The famous Almeria grapes are now coming into market in large quantities. A recent letter from Almeria to the New York *Tribune* says that the quality has never been finer than it is this year. The truth of this statement is borne out by what have arrived already. The bunches have averaged large, the flavor is fine and sweet, and the appearance perfect. So far about 50,000 barrels have been disposed of and at good prices. These receipts are widely distributed, being sold by the jobbing houses throughout the United States, Manitoba, New Zealand, Cuba, and some being even sent to China and Japan. Last year there were 140,000 barrels sent to New York, which is the chief distributing market of the United States. It is probable that about 150,000 barrels will come here this season. The new tariff advanced the duty from about 29 cents per barrel to 60 cents per barrel. A cable received this week says that the estimate of the crop places it at about 500,000, last year's being 450,000. The same cable which brings this news says that shipments will finish from Almeria in October. Usually the last do not leave that port till November 15th. There are now on the way several steamers bringing a total supply of 60,000 barrels. One cargo is the largest ever loaded at Almeria for the United States. The steamer Pocasset left Almeria October 3d with a total cargo of 24,000 barrels, valued at about $120 000.—*Boston Cultivator.*

THE FIELD.

The Beet-Sugar Industry.

FOURTH PAPER.

Diffusion Process (Continued).

EDITORS PRESS:—Tank No. 4 is now filled and closed; the three times sweetened water is turned into No. 4; the twice sweetened water enters No. 3; the once sweetened water enters No. 2 and hot water enters No. 1. This process continues until the eleventh tank is filled and closed; then the ten times sweetened water is run off through the juice pipes into the measuring tank. The nine times sweetened water is passed to tank No. 10 and thence to tank No. 11; the eight times sweetened water into tank No. 9 and tank No. 10 and so on down to tank No. 2, which now receives hot water and becomes tank No. 1, while the first tank, which has been washed ten times, is discharged of its now exhausted pulp and becomes tank No. 12. From this point on there will be one tank full of juice sent to the measuring tank and one tank of exhausted pulp discharged. During this process the attendant must see that the proper temperature is maintained, which must not exceed 196° F.

The exhausted pulp as discharged from the tanks is either conveyed away from the factory into the field or is run through the drying press, which prepares it for cattle feed.

Composition of the Juice.

The juice of the beet rapidly undergoes a change which confers a dark-brown color. The composition of this liquor by diffusion is approximately as follows: Sugar, 16.5; potash and soda, 0.5; silica, lime and magnesi, 1.113; organic substances, 1.25; water, 81.637; total, 100 parts.

Defecation by Lime and Carbonic Acid Gas.

The impure juice as fast as it fills the measuring tank is now drawn off into the carbonating tanks to be treated until purified. The process adopted is termed double carbonation and has come almost universally in use, and is as follows: As soon as the first carbonating tank has been filled with juice from the measuring tank, milk of lime is added, the juice having first been heated to about 186° F. This temperature is maintained until the albuminous constituents coagulate and the lime and mineral salts unite, forming insoluble compounds with the various acids. As soon as this is accomplished, the excess of lime must be neutralized by the introduction of carbonic acid gas. As soon as the tests show that not more than two thousandths of lime remains, the gas should be shut off; turn on the steam until the temperature rises to 194° F. When this point has been reached, the steam should be turned off and the liquor be sent to the filter presses No. 1 by the pump.

Filter Presses.

These are heavy iron machines containing 30 open and 30 screen frames. The screen frames are covered with heavy sacking suitable for filtering the juice. When the machine is closed and ready for use, the liquor from the carbonating tank is pumped into the open frames and through the sack into the screen frame, where it finds an outlet through a faucet in the bottom of each screen frame. Into the open frame collects all solid matter, lime and all precipitates that have been formed. The partially clear juice is now run into the second carbonators, where it is again treated with lime and carbonic acid gas. It is now pumped from carbonators No. 2 to filter presses No. 2, where it is filtered the second time. The liquor is now run to No. 3 carbonators, where it is treated with carbonic acid gas alone, or when necessary with sulphuric acid gas, for the purpose of eliminating any remaining lime that may still be in the liquor and thence to filter press No. 3. The liquor should now be in almost a pure state, and the experienced eye of the manager can here detect the result of any imperfect operation.

The double carbonation process, simple in practice and easily applied in all cases, is now everywhere general in the beet-sugar industry, though a few adhere to Rousseau's plan. The purification of the juice is effected in two ways. The carbonic acid gas, in uniting with the lime in the midst of the juice, forms carbonate of lime, which on precipitating carries with it a large quantity of organic matter; in fact, the scums of the first carbonation are very dark. The supply of carbonic acid gas is stopped when its further action would redissolve the coloring matters. In the second carbonation the lime boiling destroys the matters which resist the first carbonation. The excess of lime is finally removed by carbonic acid gas or sulphuric acid gas. The carbonic acid gas is obtained from the limekiln. In this way the limekiln serves two purposes, one of burning the lime from which the milk of lime is made, and the other is to furnish carbonic acid gas with which to precipitate the lime as soon as it has served its purpose. The gas is drawn from the top of the limekiln by means of an air-pump, and on its way it is washed and purified by passing through the gas-washer, thence through the pump to the gas-receiver. Care must be taken that too much air is not admitted in and adulterate the gas. To prevent this, the gas should be frequently tested.

B. B. CHANDLER,
Alameda, Cal. Mechanical Engineer.

(To be Continued.)

Field Measuring by Wagon Wheel.

A Dakota correspondent of the *Country Gentleman* gives a record of his practice, which may be useful to some reader:

Having charge of over 4000 acres of land, of which about two-fifths are under plow, I am necessarily obliged each year to do considerable measuring for the different cultivators which are changing more or less annually.

I have a large scrap memorandum book which I always take with me when starting out to measure. My buggy wheel measures exactly 12½ feet in circumference. I tie a white rag on the outer end of a spoke, so I can readily count the wheel's revolutions, driving slowly where the ground is rough and on a trot where the ground is smooth. When another party is interested in my measuring, I take him in and let him do the counting *out loud* while I drive as straight as possible. I usually go through the middle of a piece of ground each way. If the land has irregular sides, I make it, or measure it, in two or more parcels. After getting the number of wheel revolutions, I note them down, as I finish each distance, *immediately* on a rough sketch of a diagram, put right on a leaf in the scrap book with date. Then come home and make the calculations by reducing the 12½ feet to rods, which is quickly and correctly done by multiplying the whole number of wheel revolutions in each distance by 25, then dividing by 33. Having the rods, then multiply lengths by breadths, and I have the square rods which, divided by 160, gives the acres.

HOW TO PILE HARDWOOD.—To know exactly how to pile hardwoods to secure quick results and prevent checks, stains and mold is more of a science, says the *Timberman*, than most people imagine. For instance, oak, ash, hickory and other tough woods must dry very slowly, and therefore when piled must be crossed with very thin sticks, placed closely together, in order to get it to dry as slowly as possible. The softwoods, like basswood, pine and poplar, dry more rapidly, and there is not so much danger of checking. No hardwood pile should be more than six or eight feet wide. The front part of the foundation should be at least two feet from the ground, the back about 18 inches. A space of at least two feet should be left between the piles. Begin the pile by leaving a space between each board, and continue to do so until the top is reached. Place the cross-sticks about four feet apart and directly over each other. Put the sap-boards with the sap down, and on the outside of the pile. Cross-sticks should never be more than three inches wide and thoroughly dry, and the front stick should be placed so as to project about an inch beyond the ends of the lumber. This allows just enough moisture to collect to prevent the stock drying too rapidly on the ends, or faster than other portions of the pile. When a pile is completed, the top should be covered in a substantial manner to protect the lumber from the rain and sun. This covering should project beyond each end of the pile and also over each side.

A MACHINE FOR LAND CLEARING has been devised, which, without the expenditure of great force, accomplishes a vast amount of work in a short space of time, and with a degree of thoroughness hitherto unattained by mechanism for such a purpose, this being due to the peculiar construction of the device, which is in the form of a capstan. Around the drum of the capstan a heavy cable winds, the other end being attached by means of a heavy chain to the object to be removed. This cable is 160 feet in length and by means of a block of special adaptation, any part of it can be hitched, as desired. The shaft which turns the drum is 15 feet in length, and is drawn with entire ease by one horse. Dividing the length of the shaft by half the diameter of the drum, five inches, it gives the multiplying power of the machine as 36, and by means of another block the power of the machine is increased to 72 times that of the horse which turns the shaft.

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

The Grange as an Educator.

Of the many beauties of the Grange, there is none more worthy of mention than is its educating influence. It opens its doors alike to men and women, and extends a special invitation to the young. Many sons and daughters have not the opportunities of their more favored companions, and what education they get must be got at the district school or by the fireside. Whatever influence can be brought to bear, to encourage and strengthen them should be availed of. The Grange offers such assistance. Here the young can mingle with their elders, learn habits of precision, thoroughness and perseverance, and inculcate ideas of the nobility of their calling. The bashful, uncouth manners can in a great measure be overcome by simple association in the Grange hall. The passing through the official chairs of the Grange will give them a training which will prove invaluable in later life, for many of our legislators, Congressmen and other high officials have been promoted from the farmers' private ranks.

The Grange is not simply a listening exercise, but it is a place for work, a talking school where all are free to have their say upon all questions. Unlike in many other Orders, refinement and culture are not the criterions so much as true worth, and the staid farmer is as quick as his city brother to discover those qualities which stand the test of time and the vicissitudes of life. The true rule or aim of a Granger is to learn the higher cultivation of the soil, perfection in all farm work and operations, as well as the advancement of agriculture, and to furnish the safe foundation for a wise and happy people.

In the Grange experiences may be exchanged and debated, progress advanced and the mental caliber of the members enlarged. Here we carefully develop our highest gifts, and our best qualities will be brought to the surface and utilized for the benefit of the world. Every year the struggle for supremacy among men grows greater. It requires our best energies and capabilities to successfully cope with men schooled in the arts of self-aggrandizement and money-making. The farmer, the most free and independent of men, is being ground under the wheels of oppression because he does not assert his rights. Dark clouds are hanging upon the horizon of his prosperity. His more wily brethren sit like eagles watching their prey, ready to reap the results of his labor and grow fat upon his toil.

Why is this? Simply because he does not think. He must read, study and develop his mind. If knowledge is power, he must have it. Nature, with whom the farmer has to deal, will assist him much; but in order that he may best utilize her assistance he must understand her methods and work in harmony.

The tendency of our popular education is to create a dislike for agriculture and to lead the young to believe that the only place where their education can be of service is in the city—behind the counter or desk, or by following some pursuit where the profits may be large but the means questionable. This is all wrong, and every effort of the Grange and the home circle should be brought to bear to correct the error. Agriculture is the noblest pursuit which man can follow, and we should exert every effort to create a love and respect for the farm.

Stockton Grange.

In spite of the prevailing election excitement Stockton Grange held an interesting meeting last Saturday afternoon, Worthy Master McIntosh presiding. Quite a number of pioneer and leading members of the Grange were present; also Bros. Norton, Assistant Steward of the State Grange, Huffman, Sec'y of the San Joaquin Co. Pomona Grange, Dewey, Sec'y State Grange, Carlisle of Lodi, Sister Huffman, and a number of other visiting Patrons.

The subject of a visitation by Bro. J. H. Hale, Past Master of Connecticut State Grange, was considered, and it was finally voted to hold an open meeting at 1 o'clock in the Grange hall, on Thursday, Nov. 6th, to which all interested in agriculture, farming and horticulture were invited.

Among old pioneers and active members present were Sisters Overhiser, West, Ashley, Root, Beecher, Alling, Merrill, Fairchild, Myers, Bros. Ketchum, Root, Alling and others.

It was a pleasure to see the interest both the old and newer members took in the welfare of the Grange and the Order, and we shall soon look for a large increase in membership of this substantial old Grange.

A SPLENDID SPEAKER.—Past Master Hale of Connecticut is one of the most lively, entertaining and instructive of Grange speakers that has visited our coast. He has a good deal of information in regard to horticulture and other farming interests at his tongue's end, and that our farmers ought to know. Give him a hearty greeting wherever he goes, and when he speaks, use every effort to give him a large attendance.

Yuba City Grange.

Yuba City Grange met at 10 A. M. last Saturday. The first and second degrees were conferred on one young lady, after which the Grange adjourned to the adjoining banquet-room, where a bounteous repast was served. We have heard the praises of Southern California sung till lulled to sleep; of the hospitality of the people and the productiveness of the soil, but we have yet to see a more social, fraternal body than Yuba City Grange, or better fruits than those which loaded these banquet tables. If the principles of our Order are not sufficient attractions, certainly such influences which appeal to the inner man ought to have some effect in increasing the fraternity within our ranks.

After the repast was over, a pleasant program was rendered and we were then favored with a good old-fashioned Connecticut *Hale* storm. Bro. J. H. Hale was there, and we have never seen him in better humor, nor heard him speak more earnest, sensible and encouraging words.

He reviewed his travels during the last month over the Pacific States, and told of the royal reception and the earnestness and zeal he met on every hand. The Grange is one grand brotherhood, and "I am a Granger" is the "open sesame" to the hearts and homes of the tillers of the soil throughout the Union. The Grange has increased more in membership and strength during the last year than in the 12 preceding years. It has become recognized as a powerful factor in our Government. Politicians in the East are catering to the wishes of the Grange for fear the Grange will enter politics, and are willing to indorse whatever candidates that body may name. We must not forget, however, that offices are what we need so much as legislation, and still legislation is not all. It is the farmers themselves that must be improved. Nature has been too kind in the past. She has caused the rich fruits and grains to spring forth, and without care or attention to yield abundantly.

The times are changing. The acreage is but slowly increasing, while the population is doubling itself. Men in other vocations are combining against their fellow-men. Systematic training is everywhere the order of the day, but the farmer, unaccustomed to thoughtful investigation and experiment, is being pushed aside to make room for his brighter brethren.

If the farmer is oppressed and down-trodden, it is his own fault. He must give more attention to systematic, intelligent thought; he must apply himself closer; must discuss more, and must take more papers, for good agricultural papers are as necessary as good teams or good implements. The stock broker, the wheat speculator, and men in business are ever on the alert to learn, and work on strictly business principles. No bank or mercantile establishment could live at all if conducted in the loose, shiftless manner peculiar to the farmer.

The Grange is doing a good work in bettering the condition of the farmer. The best and most prosperous farmers are found within its ranks, and their influence is shed abroad to enlighten their fellow-workers and teach them that advancement can come only through intelligence. The time is coming when the farmer *must* understand his business, and why not learn now?

Let us pay more attention to the social features of the Grange. Our boys and girls are prone to leave the farm for the city, because there is more society there. Make the Grange more attractive; show that it stands head and shoulders above other Orders, because it combines business with fraternity. Let them see that the most perfect home is on the farm.

Bro. Hale then referred to his own humble home. No wealth was there; no beauty or grandeur but that of Nature's own, yet to him it was the loveliest spot on earth. It was home! Beneath the large elm tree was the green lawn, relieved here and there by beds of flowers. Nature's handiwork was everywhere visible, and no one could gaze upon the picture without feeling a reverence for the painter. The costly works of art which decorate the walls of millionaires cannot equal those found on the farm. The one is but an imitation, while the other is Nature herself.

Representatives were present from Wheatland, North Butte and March Granges, and all seemed to enjoy themselves thoroughly. Yuba City Grange will confer the third and fourth degrees upon a class the 15th.

Farmers' Institute.

The idea of Farm Institutes was thoroughly discussed at the recent meeting of the State Grange at Watsonville, and approved. At the meeting of the local Grange last Saturday, a committee was appointed to take the necessary steps to form a Farmers' Institute at Tulare.

The Institute is to be an open organization under the auspices of the Patrons of Husbandry, for the purpose of considering everything of interest in horticulture, viticulture and agriculture in general. It is proposed to form a lecture bureau and have lectures by the best talent procurable. In view of the increasing interest in vineyards and orchards in the neighborhood, and the need of instruction in everything relating thereto, the suggestion is certainly opportune. It is hoped that other organizations and individuals will assist in making successful so praiseworthy an undertaking.

We are not yet fully advised as to all that is contained in the project, but we presume it will be very much what we make it, and we can make it one of the most interesting associations ever formed in Tulare. We are awaiting advices from the State Secretary as to what we should do to start right.

Association is in the air and is feeling its way among the farmers with an interest and inspiration never felt so keenly before. This fact makes the farmer hopeful. The news comes from Georgia of the political success of the Alliance in that State there having elected 163 Alliance members of the next Legislature out of a joint ballot of 219. It is perhaps not the best policy for the Alliance to take a hand in direct politics and put up a ticket of their own, but circumstances may sometimes render such a course necessary. It was deemed advisable in Georgia, and the farmers won. It is time California farmers proved themselves a power. Let Tulare farmers set the example. But, to be successful, association is necessary, and the association need not be essentially political. Whatever is of interest to farmers in the conduct of their business, in the discovery of the best means to accomplish the best results in every department of farming, should be the study of the proposed Farmers' Institute.

Civilization is derived from a word meaning the city. The words pagan and heathen originally meant people in the country, dwellers on the heath, showing that the association of the city gave that polish which received the name of civilization, while the manners of the country, by its necessary isolation, were of course more of a rustic character, or pagan and heathenish. All this is changing. By association, farmers are being brightened, and as associations increase they will command the respect of the present civilization of the city, and put a stop to its laugh at "old hayseeds." Iron sharpeneth iron, so a man sharpeneth the countenance of his friend. So do not let farmers be afraid to meet as often as possible, for every meeting produces a good result, in sharpening our intellect and elevating our manhood.—*Tulare Register, Oct. 24.*

Harvest Feast at Waterloo.

Last Saturday evening, through the kindness of Sister Overhiser, we had the pleasure of attending Waterloo Grange. Meeting evenings, it is probably the most numerously attended Grange in the State, with the exception of Watsonville. A class of some ten brothers and sisters were well instructed in the third and fourth degrees by Worthy Master Keiver. Worthy Masters Shaw of Lodi and Williams of Woodbridge and the Secretary of the State Grange were among the well-cared-for visitors on the occasion.

We never saw more bountifully supplied Harvest Feast tables set in any of our old Granges, and tasteful floral decorations were not wanting. Everything about the meeting passed off in good order and in a manner that would have been creditable to veterans. There were about 200 Patrons and friends who partook of the Harvest Feast.

Past Master Overhiser, the fatherly founder of this remarkable Grange, arrived late in the evening from Tracy, where he had attended a small gathering of West San Joaquin Grange members during the day. His presence and services are highly appreciated by Waterloo Grange. Past Master O. has much cause to be proud of Waterloo Grange, which evidently holds him in good esteem. Nine out of ten of the Patrons of this Grange may be termed young people. They take a great interest in the work and perform their parts in remarkably good taste.

Our able and well-known sister, Mary Merrill of Stockton, often enlivens Waterloo by her presence and inspiring voice. She has an extra interest there, we found, in fact—Bro. Merrill being Secretary. His minutes were faultless and worthy of special commendation.

The Grange now numbers nearly 100 members, and there are hopes of making it 150 strong during the coming year.

We have never seen so young a Grange with so good a start and favorable prospects. We urge close co-operation on the part of its large membership. Stand so close together, brothers and sisters, that no disturbing element will ever enter your ranks, and we believe you will have the satisfaction of claiming the banner Grange for 1891.

Over 550 New and Revived Granges.

EDITORS PRESS:—During the Grange year which ended Sept. 30th, dispensations were issued for new Granges to the number of 377. These were distributed as follows:

California	7	New York	104
Connecticut	12	Ohio	30
Colorado	20	Oregon	10
Indiana	9	Pennsylvania	86
Illinois	26	Rhode Island	3
Michigan	1	Vermont	3
Maine	4	Washington	12
Massachusetts	11	West Virginia	1
Nebraska	21	Wisconsin	2
New Hampshire	13		
New Jersey	2	Total	377

Full returns are not yet in, but I estimate the number of reorganized Granges at over 175, which, with the 377 new Granges, adds about 550 to our list of working Granges. Faithfully yours, JOHN TRIMBLE.

Washington, D. C., Oct. 28th.

Enterprise Grange.

[By Past Master DANIEL FLINT.]

Pomona Grange, No. 2, invited itself to meet with Enterprise on Nov. 1st to exchange the common courtesies of life and indulge in a little social recreation.

Worthy Master Hayes, from Oregon, was at our house on his way to National Grange, and we urged him very hard to go with us to Yuba City on behalf of Enterprise Grange. On account of limited time and numerous engagements made, he thought it not practical to do so at this time, but on his return, if Sister Hayes is able to come to California, he says he may remain a short time with us, and if he can do us any good will be glad to do so.

Mrs. F. and myself express our regrets that we could not accept the cordial invitation of Bro. and Sister Ohleyer to be present at their meeting on Nov. 1st, enjoy their kind hospitality and participate in the enjoyable proceedings of Yuba City Grange. We hope not far in the future to make good our loss.

The country roads are very dusty and rough from want of rain to wet them down, and consequently the throats of man and beast soon become parched and dry. I saw a watering-trough at a mechanical establishment on which was painted in large letters: "Free water, but no beer." There was food for thought; there was a text for a sermon. My horses were for prohibition. They could not sympathize with me; so while they were taking in the cooling draughts I worked the pump-handle and went for the pure stuff at the bottom of the well. As I gazed into that tin cup and thought of the fond recollections of the past and saw the hopvines creeping up the gable end of the building, and just across the road a barley-field, I soliloquized thus: "So near and yet so far."

With a good deal of imagination and some self-denial, I emptied the cup where I thought it would do the least harm, and started off for more dust; and yet—

"The dust we tread shall change
Beneath the summer showers,
To golden grain or mellow fruit,
Or rainbow-tinted flowers."

Worthy Master La Rue of Sacramento Grange was invited to manage the gavel, and after the routine work a sister was instructed in the second degree.

As it frequently occurs on such occasions, I was called upon to act as pioneer or break the ice for others, thereby giving them a starting-point or chance for criticism. After I had made my talk, Bro. A. A. Krull said the subject for discussion to-day was, "What had the Grange done, and what could it best do to improve the condition of the farmer?" Bros. La Rue, Hull, Krull, Rich, Holmes, Simons, Plummer, Jackman, Davis, Wilson, Johnson, and others took part; while several of the sisters stated in an intelligent manner what the Grange had done and the work still before it.

Sister Jackman was in good spirits, and she had prepared and read a play upon the initials of the officers of Pomona Grange. I heard her say something about D. F., the Overseer, but have forgotten whether it was flattering or not. Sister, please send chromo with initials and words attached, so I can investigate.

Some of the brothers gave interesting accounts of shipping fruit, kind, quality and profits.

Bro. La Rue gave us his experience in selling grapes to winery, and also drying the same, cost, profit and methods.

The Pomona Grange is the very place to give and receive information on all farm subjects, and I am glad Bro. La Rue has set such a good example, and let us prepare ourselves to follow. Here is the place to learn of success and failure, and profit by such information.

I congratulate Enterprise Grange on having more young members than I have seen in any Grange for many a day.

What splendid opportunities spread out before them! Will they improve them while their observation is keen, memory retentive, characters plastic, and physical conditions perfect?

One of the gray heads whose pate is well covered said to me as he looked around among the fair young sisters, "I wish I was young again."

The young ladies gave us several pieces of music in a stirring manner, and the one that rang out with such an unselfish request was:

"As we go forth to labor,
And toil within the field,
God bless with us each neighbor
And give a glorious yield."

All ye who respect fat turkeys and love pumpkin pies, are invited to come to Enterprise Grange on Thanksgiving Day.

Temescal Grange.

At the meeting of Temescal Grange, Saturday, Nov. 1st, the sad news of the death of Dr. Strentzel, Master of Alhambra Grange, was announced and many feeling words of sorrow and sympathy were spoken by members. On motion a memorial committee was appointed by the Worthy Master consisting of Brothers J. G. Lemmon and A. T. Dewey and Sister Nettie Jones to present resolutions for action of the Grange at its next meeting.

FLORIST AND GARDENER.

The Los Angeles Chrysanthemum Fair.

[Written for the RURAL PRESS by CLARA S. BROWN.]

The Second Annual Chrysanthemum Fair opened at Los Angeles on Wednesday evening, Oct. 29th, continuing until Nov. 7th. It is under the auspices of the ladies connected with the Simpson M. E. Church, and the proceeds will be used to purchase a pipe organ for the church. The fair, however, is such a pleasurable education to the public that no denominational feeling is anywhere manifest.

The new Armory Hall, over the market on Broadway, is 90x150 feet in dimensions, with a gallery extending along two sides. This ample room is so completely filled with plants and booths that, if a display of curios had been made like that of last year, it would not have been possible to find a place for everything. The exhibit of chrysanthemums is far superior to that of the first fair, and it is much better arranged. Two Japanese gardeners have been employed in this city since last spring in bringing the "Queen of Autumn," or "Flower of Gold" (as it is called in Japan) to perfection of growth and bloom. Our local florists have taken unusual interest in the flower, and have many varieties on hand. In addition, the managers of the fair sent to all the Eastern breeders for their choicest specimens, and received from them all that they thought worth anything.

Judge Widney tells an amusing story of the anger and disgust shown by the Japanese gardeners when these Eastern plants arrived, each one carefully labeled with its American name. The labels were torn off and thrown in a heap, while the gardeners ejaculated "no good," "no good." They then set to work and applied to each plant its true native name, to which has been added the translation, so that a visitor to the fair may find on each tag both the Japanese and English version. This is an important change in nomenclature; probably nowhere in America are chrysanthemums to be seen so correctly classified as these.

As an illustration I will cite the famous Mrs. Alpheus Hardy. This magnificent white chrysanthemum was sent to Mrs. Hardy, a Boston lady, by a missionary friend of hers in Japan. She disposed of it to a florist, who sold it to another florist for $1500, and the possessors of the plant in two years made a profit of $50,000 from it. Its true name is said to be Mikado's Palace. Other specially fine varieties are the Mikado, Sunrise, Moon in the Window, Light of the Moon, Heavenly Beauty, Yellow River, Abundance, Prosperity, The Bridegroom, A Thousand Sparks, Eye of a Snake, Talons of an Eagle, Hand of a Devil, Firewindow, Anasoma (a city in Japan), Flying Crane, Beauty of Castlewood, Crystal and One Voice. There are about 7500 plants on exhibition, comprising 700 varieties.

The most striking floral design in the hall is a full-rigged ship, 20 feet long, sent in by the Redondo Beach Company. It stands in a sea of green mosses, bordered with out flowers. The rigging is entwined with smilax, the hull is decked with ivy and gorgeous blossoms, and the tall masts are covered with beautiful chrysanthemums, their colors tastefully blended. A silken cable moors the graceful vessel to the most resplendent wharf ever seen—a mass of brightest bloom. Along one side of the wharf extends a railway upon which stands a train of freight cars decorated with flowers and ivy. The whole forms a very good facsimile of what may be seen any day at Redondo, in more substantial material, and excites much admiration.

The Raymond Nursery Co. of Pasadena makes a large exhibit. The display of the Oriental nursery, Los Angeles, is also notable. The potted plants are arranged in rectangles and diamonds throughout the hall, crowded close in order that the throng of evening promenaders may have room to pass between the beds. A shelf along the base of the balcony railing is filled with the smaller plants in bloom. Along the front of the stage, terraces rise from the floor in which cut blossoms are massed in exquisite shading.

On the right of the stage is the Japanese booth, with roof of Nile green and white, hung with Chinese lanterns and furnished in Japanese style. One of the young lady attendants has lived in Japan. On the other side of the stage there is a two-story pagoda covered with evergreens. Lemonade, soda, candy, etc., are dispensed in pretty booths, and there is a tasteful booth devoted to the press, in charge of Mrs. Mary E. Hart, editor and proprietor of the *Pacific Monthly*. The Woman's Exchange has for sale a considerable amount of fancy-work.

At the opening, Mayor Hazard, members of the Council and Board of Education, Superior Court judges and other distinguished persons were present and addressed the audience. An orchestra provides music each afternoon and evening, and there is a varied program of readings, calisthenics, singing, etc. The attendance is not large through the day, but is excellent in the evening. At this writing, one cannot form an estimate of the cash that will be taken in, but the indications are that a handsome sum will be realized for the organ fund. The ladies serve hot refreshments every day from 12 to 2 o'clock, and a large ice-cream room is well patronized in the evening.

San Diego's Chrysanthemum Fair.

EDITORS PRESS:—Nature with her wealth of flowers, and women with hearts of pity and benevolence, co-operate to relieve the distresses of humanity in the most pleasing and effectual way. The noble women of San Diego are in no degree behind their sisters in older cities in their zeal and helpfulness. An incorporated association, known as the Flower Festival Association, composed of the cream of San Diego's women, gives two exhibits each year, in April and October; at the former, roses are the leading feature, and at the autumnal exhibit, chrysanthemums. The proceeds are equally divided between the Woman's Home, Woman's Exchange and Day Nursery.

The Chrysanthemum Fair just closed was a charming entertainment, though not as well attended as it should have been, owing to the nearness of election and nightly campaign meetings. The successful candidates, in view of detracting from the attendance, may be moved, in the flush of victory, to contribute handsomely to the fair treasury, for no worthier object could receive their recognition on assuming the duties of office. Do taxpayers and public officials realize the vast sums saved from the public funds by the incessant work of women? It might be a profitable subject for leisurely reflection.

On entering Loomis' hall, the attention was arrested by the charming effect of various booths of bamboo, furnished with Japanese chairs, matting, fans, tea service, ornaments and flowers, presided over by pretty young ladies in Japanese costumes; the artistic display of chrysanthemums of every color known to the flower; the flood of electric light revealing the minutest object, and the whole enlivened by music. It represented months of work, weeks of planning and days of arranging. Those who planned and worked months ago executed their plans, untiring, uncomplaining.

Two immense bouquets, presented to Col. and Mrs. Markham, grown at the Coronado gardens, too massive to be taken away and too beautiful to wither in a railway car, were placed on exhibition near the entrance. Directly in front was a semi-circular table covered with choice specimens. In the center of the hall, a Japanese pagoda divided into eight compartments, each peculiar in itself and presided over by ladies of the association. Chinese, Japanese, Mexican and Indian curiosities, potted plants, cut flowers, stationery and toys were fancifully arranged on the matted counters. At the rear of the building, two florists, Miss Kate Sessions and Mr. Bernard, had model displays of flowers and tropical plants, representing a practical arrangement of chrysanthemum beds.

Miss Sessions, formerly of Oakland, is a most untiring worker in her chosen field, and a constant inspiration to other young women who have a taste for floriculture. She has 140 varieties of chrysanthemums and is each year developing new ones. This year she has a dozen new seedlings from seed sent to a friend by a missionary at Japan. The finest, and by many considered one of the very prettiest of this large family, is named in honor of the donor, Nellie Allchin. It is very large and full and a deep pink color. Another choice bloomer, from the same lot, bears the name of Chula Vista.

Of course the ladies are happy in the possession of the Ada Spaulding, the elegant chrysanthemum that won the National prize at Indianapolis. Other beauties, old and new—Mrs. Alpheus Hardy, both white and lavender; Leopard, pink and white, spotted; Kioto, a vivid yellow and exquisite shape; Mrs. Wheeler, Crown Prince, E. G. Hill and Advance, are admirable representatives of the 210 varieties counted in making a tour of the exhibition hall. A collection of very fine potted plants, raised by Oakland Japanese, attracted merited attention. Surmounting this gorgeous display from the floral kingdom, in evergreen letters, was the appropriate legend, "Woman's Work for Woman." The fair was in session five days, was more satisfactorily arranged and conducted than any previous one, but at this writing the proceeds above expenses are not announced. The officers of the association are already making arrangements for a rose festival in April.

National City. FLORA M. KIMBALL.

STATISTICS OF IRRIGATION.—The subject of irrigation has been made a matter of special investigation in the Division of Agriculture of the Eleventh Census. It is estimated that upward of two-fifths of the acreage of the United States need irrigation. The total number of acres now irrigated, together with the quantities and varieties of crops grown under the system, will be shown. The melting snows of the mountains and the rivers that heretofore ran free will more and more be utilized and led over the great plains, causing them to become fruitful and to afford happy homes for millions yet to come.

SOUTHDOWN BREEDERS.—A meeting of the American Southdown Association will be held on Tuesday, Nov. 18, 1890, at 7:30 P. M., in the Sherman House, Chicago, Ill. As this meeting will occur during the second week of the American Fat-Stock Show, a full attendance is expected. To those who cannot attend, the usual invitation is given to present by letter to the secretary any suggestions they may have to make for the good of the association.—S. E. PRATHER, Sec'y, *Springfield, Ill.*

Notes on the Fairs.

Escondido—22d District.

The 22d District Agricultural Association's Fair, held at Escondido, Sept. 30th to Oct. 3d, presented, according to the *Union* correspondent, "the most complete and perfect exhibit of horticultural and agricultural products ever seen in the county" of San Diego.

The Cuyamaca Horticultural Society had by far the largest display. This district won the banner last year and intends to hold it against all comers. Chester Gunn of "Willow Glen" ranch, near Julian, showed the largest individual exhibit, with 15 varieties of apples, 7 of plums, 3 of peaches, 7 of pears and a large array of fruit in glasses, and won first premium for best displays of northern fruits, of apples and of prunes.

Maurice Riedy of Escondido was conceded to have the next best showing of northern fruits, including apples, Kelsey plums, white heart cling and Heath cling peaches and Muscat grapes, and was also awarded first prize for his display of dried fruit, the Escondido Canning and Packing Co. being second.

Even beside Cuyamaca's, Poway made no mean show, occupying the whole north side of the east wing with its many excellent exhibits. Elsinore, Escondido, Bear Valley and Twin Oaks were also among the districts that contributed largely.

In the long list of awards on special varieties of green fruit, O. S. Chapin of Poway (apples and pears), Mrs. A. Reed of Wynola (apples and prunes), James Duffy of Julian, Z. Quincy of Ballena and D. M. Breedlove of Bear Valley (peaches), are named with most frequency.

Major Merriam of Twin Oaks had a remarkable collection of green fruit, including apples, pears, peaches, figs, quinces of various kinds, and 42 varieties of grapes. He also had comb and extracted honey, squashes, etc.

Charles Calloway of Escondido showed Navel, Malta Blood and Mediterranean Sweet oranges and Eureka lemons.

Mrs. S. P. Abells of Escondido made a particularly fine display of fruit in glass, including apricots, grapes, pears, plums, peaches, nectarines, figs, quinces, cherries and blackberries; also, roses in bloom.

D. H. Smith of Agua Tibia "took the cake" on Vicar of Winkfield pears, bellflower apples, Lisbon lemons, Jap. persimmons, black figs, pecans, English walnuts and best 5 lbs. of raisins; though Mrs. C. C. Watson of Poway was adjudged to have the best display of raisins and best box of Sultanas.

As to grain and vegetables—the bare enumeration of awards for wheat, rye, barley, corn, beans, beets, potatoes, onions, cabbages, pumpkins, peppers, melons, tomatoes, etc., is too much for us. And then there was B. F. Dixon's "best collection of nursery stock," Mr. Betten's ornamental shrubbery, and premium citrus stock from the Sweetwater Nursery.

When it came to live-stock, there were 48 stalls of race-horses, with roadsters, draft and saddle horses, mules, Guernsey, Jersey and Holstein cattle, and a few choice ducks and chickens.

At the formal opening, on the second day, Pres. Steadman, after making a brief address, introduced J. N. Turrentine, who spoke at some length upon the prospects of the county and of the Escondido valley in particular, and bade all welcome to the fair. Afterward F. A. Kimball, Col. Jno. Kastle and Geo. N. Nolan spoke, the latter on the subject of sending an exhibit to Chicago, which proposition was received with favor.

One of the most attractive events of the week was the public drill of the Poway Equestrian Club, numbering 12 couple of young women and men under the leadership of Captain Thatcher, who were presented with a fine American flag from the citizens of Escondido.

Napa—25th District

The fair for the 25th Agricultural District, embracing the counties of Solano and Napa, was one of the earliest in this year's circuit, having come off at Napa Aug. 19th to 23d. Our matter relating to it, however, was mislaid; yet we prefer to print an account even at this late day, rather than allow so important an occurrence to go all unchronicled in the RURAL PRESS.

The weather was fine, and the attendance at the race-track was (according to the Napa *Register*) the largest ever present on an opening day. The entries of live-stock and poultry were uncommonly numerous, and the stock parade strung out to over a mile in length.

Among the chief prize-winners were the following:

M. C. Alexander, Napa—Poland-China sow, 6 mos old; do, boar.

S. Buford, Napa—Gentleman's roadster to harness.

F. L. Coombs, Napa—Standard stallion, 2 yrs old.

Capt. Drake, Vallejo—Mare general purposes, 3 yrs.

C. Edgar, Vallejo—Gelding to saddle.

T. B. Edington, Oakville, stallion roadster, 3 yrs old; stallion and five colts.

Wm. Emrie—Shorthorn bull, cow and calf; Jersey and Hereford cows; Emden geese, Pekin ducks, Bantam fowls.

Frisbie Bros. & Baily, Napa Junction—Polled Angus cattle.

Mrs. W. H. Gibbs, Yountville (special)—Jersey cow and twin calves; Jersey cow, 3 yrs old.

J. W. Grigsby, Napa—Best Holstein bull, 3 yrs; graded cow, 1 yr old; draft mare, 4 yrs or ov
Plymouth chicks; breeding pen Leghorn fowls.

R. G. Head—Best standard stallion, 1 yr old; best general-purpose mares, 3-yr-old and 1-yr-old; bronze turkeys; light Brahma, Cochin, Wyandotte, black Spanish, white, brown and black Leghorn chickens, and Rouen ducks.

B. C. Holly, Vallejo—Best standard mares, 2 yrs & 4 yrs or over; mare and colt; standard stallion, 3 yrs; thoro'bred mare, 4 yrs; suckling colt.

R. D. Hunt, Napa—Stallion general purposes, 3 yrs; carriage team to pole.

J. Jepsen, best standard mare, 3-yr.

F. W. Loeber, St. Helena—Standard stallion, 4 yrs or over; standard stallion and 5 colts.

J. M. Mansfield, Napa—General-purposes mare; mare and colt, and mare and 3 colts; Shorthorn cow, 1 yr old.

Mrs. A. McFarland, Napa — Roadster mare, 3 yrs old.

E. McLees, Vallejo—Roadster stallion, 2-yr-old; roadster mare and suckling colt.

D. McVicker, best stallion roadster and best gelding to buggy, carriage, saddle, etc.

Harry C. Melone, team of ponies to pole.

I. Metcalf, Napa—Pony to harness; roadster mare, 4 yrs old.

C. Oesch, St. Helena—Draft stallion general purposes, 2 yrs old.

C. Reams, Suisun—Standard stallion with 5 colts.

R. Reed, Napa, saddle pony.

Chas. Scott, Napa—Shorthorn cow; roadster draft stallion; draft mare and suckling colt; draft mare 3 yrs old; stallion and 5 colts.

P. Sheppa, Batavia—Poland China and Berkshire sows; Shropshire buck; Toulouse geese.

R. Farran, Calistoga—draft stallion 2 yrs old.

Mrs. Silas Skinner, Napa—Best standard mare and family; draft mare, 4 yrs or over; draft stallion, 1 yr old.

F. H. Smythe, Lake Co. (special), stallion roadster, 4 yrs.

Mrs. I. A. Starr, Vallejo—Holstein bulls, 2 yrs, & b. calf; cow, 3 yrs; heifer, under 1 yr; Jersey bull, 3 yrs; cow, 3 yrs, & Jersey heifer, under 1 yr; Poland China sow and 8 pigs; ewes & rams, Oxford.

J. Stephens, Napa—Brown Leghorn and Plymouth Rock fowls.

F. Varty, Napa—Draft filly, 2 yrs.

G. W. Watson, Napa Junction—Draft mare with 3 colts; Poland China boar.

Of the awards made for exhibits at the pavilion, the most interesting to farmers and fruit-growers were as follows:

C. C. Agie, special on peaches.

H. R. Borrette, best coll. fruit 1 orchard; sun-dried apples, peaches, plums, seeded plums, grapes, apricots, canned fruit.

E. C. Briggs, best butter (divided with McFarland).

H. W. Crabb, many premiums on wines, brandies and cordials.

M. L. Durbin, Suisun—Best single variety pears, single var. prunes, coll. oranges, exh. wine grapes 1 vineyard; best display agricultural products of Solano county.

T. H. Epley, best quinces, sun-dried fruit, sun-dried apples, prunes.

A. V. Evans, Atlas Peak—Best sack rye, sheaf barley, sheaf black oats, 10 ears of corn, corn on stalk, single var. apples, var. nectarines, rutabagas.

Wm. Imrie, best 2 sks. wheat, Chili club; best sheaf wheat.

Chas. Krug, St. Helena, several prizes for wines.

Mrs. A. McFarland, best butter (divided with Briggs).

Mrs. R. E. F. Moore, best onions, exh. apples, exh. pears, prunes, almonds, catsup, honey in comb, honey strained.

James Reames, Suisun, special on bitter almonds; 3 var. prunes; best var. apples.

J. N. Reynolds, 2d best coll. fruit from 1 orchard; exh. plums; exh. figs, White Smyrna; exh. melons banana-musk.

Paul Sheppa, exh. table grapes.

Johnny Stevens, coll. lemons.

Lilian Stockmon, Napa, Crawford peaches.

Mrs. J. M. Thompson, coll. potatoes; single potatoes.

G. W. Watson, sk. wheat; sk. barley.

Sorghum Syrup.

The production of sorghum syrup is evidently increasing in this State, and success is being attained with it in widely separated regions. We alluded recently to a good sample from Butte county, and now Mr. James Linforth shows us a sample sent him by B. L. Musseter of Chino, San Bernardino county, which is exceptionally of good color and flavor, and commends itself to all those who have a sweet tooth in their heads. Mr. Musseter has made over 200 gallons and may get out 600 or 800 gallons more if the cane and the weather hold favorable. He uses the Victor mill and Cooke evaporating pan, manufactured by the Blymyer Company, for which Mr. James Linforth is the agent.

A Young Man from Illinois.

Dewey & Co.—GENTS: Inclosed please find remittance for a year's subscription to the PACIFIC RURAL PRESS and a copy of "California Fruits and How to Grow Them."

I am a young man lately from Illinois and have come to help build up this wonderful State. I am located in one of the prettiest valleys of California. The PACIFIC RURAL PRESS is the best farmers' paper I have seen on this coast, and as good as I have seen anywhere. Yours truly, B. L. H.

THE OUTLAWED LOTTERY.—Attorney-General Miller has sent a circular letter to all the United States attorneys, calling attention to the new Lottery law, with a suggestion that they spare no effort in its enforcement. Similar instructions are sent to the United States Marshals.



A Dewdrop's Adventures.

[Written for the RURAL PRESS by DAGMAR MARIAGER.]

I was a dewdrop high within a cloud,
And I was beautiful, as well as proud;
I wished to fall upon a flow'r or tree,
But I was doomed to fall into the sea.

"Oh! oh!" I cried, when I this truth did spy,
"No dewdrop is more wretched than am I;
To do some good in life was my desire,
Yet here I fall, and shall at once expire.

"O my poor heart its hope did fondly cherish,
Not knowing we should all so quickly perish;
My hope is flown and lost, and I—oh, I
May grieve a moment only; then I die!"

Thus I wailed, while wav'ring, as I fell
Into my grave, the great wide ocean's swell;
And, falling low'r, the coast range did shrink back
In mockery, or in terror from my track.

A porpoise sporting 'mong the waves, I saw;
And I, in bitter jealousy and awe,
Gazed on the jewels that its tail did toss
In heedless gayety, my path across.

Then plump I fell amid the sparkling spray,
And with my plastic body then did play
The rocking brine, and gold and silver rain
Fell all around me on an open plain.

At first I looked up tearfully, in thought
That my existence to an end was brought;
But when I found that I was yet unharmed,
I looked again, and I was deeply charmed.

The panorama all around me lay
In verdant beauty, and with rich display
Of still and moving things, among the trees
And feath'ry plants that waved, as by a breeze.

While thus my eye was drinking in delight,
Another picture dawned upon my sight;
The roving natives of the briny deep,
I learn'd, were not 'mong coral caves asleep.

In a promiscuous circle, to astound
The oldest ocean diver to be found,
They gather'd 'round me, ask'd wherefrom I came;
What was my mission and what was my name.

'Tis true, theirs was the same aquatic speech
That all submarine pedagogues do teach
The young aspirants, in their many parts—
Gymnastic, pantomime, and other arts.

They gaped and star'd at me, and some did smile;
Some grinn'd and rolled their eyes, and all the while
Some gapes grew large and small, with a sublime
Solemnity, while all their fins kept time.

Thus while I slowly, very slowly sank,
I left the round, the horny, short and lank,
'Mong the menagerie high o'er my head,
And nearer drew unto the ocean's bed.

"O this is fairyland!" I cried with pleasure,
"Here's great variety, a mint of treasure—
Plants, flow'rs, and goblin things upon the sands;
All shapes and hues, and some with magic wands.

"In higher altitudes cannot be seen
A garden half so fair as this, I ween;
And I am glad I fell into the sea,
As I'm a dewdrop happy as can be."

An oyster's casket sat upon a rock;
In this I fell, and scarcely felt the shock;
And down I nestled for a sleep and rest,
In my exceeding soft and cosy nest.

And there I slept for weeks and months and years,
A dreamless sleep, shorn of all joys and fears—
A Rip Van Winkle from existence hurled,
To wake and live again within the world.

One day I 'woke, and I was in affright,
Feeling my casket torn away with might;
We moved and moved, and then a man, Tom Peck,
Cast us with others on a vessel's deck.

Just think how I was doubly horrified,
Finding my plastic body petrified—
A bluish, milky luster rich did furl
My form, as I had chang'd into a pearl.

I've suffer'd much in hardship since that day,
But now, at last, all horrors stand at bay,
Since Robert placed me on a finger white,
His and his lady's love to there unite.

Santa Barbara.

The Little Exile.

Poor little Maggie, with both elbows on the window-sill and her face held tight between her hands, looked out on a dreary picture before her, her heart within as cheerless as the world without. A November day was drawing to a close, and the leaden sky, which had looked so threatening since early morning, gave vent to its feelings as night was coming on by a real downpour. It brought none of the sweet, refreshing influence of a summer rain, which makes every leaf and blade of grass take on new beauty; it was simply desolation. The rain beat against the windows, and the wind blew just hard enough to snatch off the few remaining leaves from the bare branches of the old apple trees which stood close to the house. Maggie watched the little stream by the roadside, which was every moment growing larger and larger, and she followed, until they disappeared in the distance, the little twigs and dead leaves that were carried on by the swift current, wondering how they liked to sail away on a hap-hazard journey.

"Oh dear!" sighed the little girl, "why is everything so hard for me?" and her eyes filled as she thought of her dear mamma, who had left her only a few months ago and who could always bring sunlight into the dreariest day. A flood of memories swept over Maggie, almost bringing a sense of comfort with them. She thought of one May day, long passed, when these same apples trees were in blossom, and the soft spring air was full of sweet perfume, how lovingly her mother led her to the open window, saying: "See, Maggie, how these beautiful branches are reaching up to you, as if they were trying to take you and your whole little room right into their arms; but I shall not let them have you!" and Maggie remembered how her mother clasped her in her own arms with the merriest laugh and the brightest look in her dear eyes, as if nothing could rob her of her little daughter.

And then she recalled another scene, one of those last days when she sat quietly by her mother's side and held in her own warm little grasp the white, thin hand whose hold on life was so very feeble.

"Dear child," the mother said," you are now nearly twelve years old, and you must be your papa's brave little woman and a little mamma to Chubbie. Your papa has to work hard, and he gets very tired, but have everything bright for him when he comes from his work at night; and I know you will try to take good care of your little brother and be patient and kind to him always."

Maggie, at the time, could answer only by pressing more tightly the hand she clasped; but now she sobbed almost aloud, "O mamma, I will, I will!"

This being patient was a lesson that Maggie had not yet learned. She had loving impulses, but every-day self-denial was a path too hard and steep for her to tread. Sometimes it seemed more difficult for her to rise from a chair in which she was sitting comfortably than to do some act of self-sacrifice which her father justly praised as heroic.

Only that very day, as she sat alone and lonely in her own room, the door had opened and Chubbie's happy face had peeped in and the merry little voice had called out:

"O Maggie! *do* come and play stage coach wif me. You can be driver if you will."

Maggie did not feel like playing with him. She was not happy, and did not know the surest way to make herself so, and so she had answered rather pettishly:

"I don't want to play stage-coach. Run away now and shut the door."

"But Maggie," and all the sunshine was gone from his face, "I don't fink you're very kind. I fink you're mean. The next time you play wif me, I'll make the horses run away wif you, I will," and off had scampered the little fellow with a menacing scowl.

And now, only to deepen Maggie's gloom, all this was remembered, too, and she started to her feet and thought, "I will not think of myself any more; I will make Chubbie happy, if I can."

As if anticipating this sudden good resolution on Maggie's part, at this very moment the door opened again, and Chubbie called out:

"O Maggie! you must come and see my coach. I made it all myself," and then as he looked up at the somewhat tear-stained face, he added:

"Seems to me you look a little drizzly."

"Well, Chubbie," was the smiling reply, "I have been a little 'drizzly,' but I feel better now, so come and show me the coach;" and with a fervent kiss Maggie led her little brother downstairs.

Such a dear little boy he was! Although he was so small and fat for his five years that he hardly looked as old as that, his papa had yielded to his constant entreaties for "grown-up trousers" and had just bought him his first little suit of clothes. With his round, rosy face, his bright eyes and his radiant smile, which lighted up his whole face whenever he spoke, he looked like the happiest little Tom Thumb that could possibly be found.

As the two drew near to the library door, where the grand surprise was to be seen, Chubbie suddenly said:

"Now, Maggie, shut your eyes. Don't peek till I say one, two, free!"

"No, Chubbie, I won't peep; but don't let me bump into anything," said Maggie, as she closed her eyes tightly and cautiously extended her hand to protect herself from running against the door.

"Oh dear, it's just lovely, and you'll laugh yourself to pieces when you see it," cried Chubbie, with ringing voice, as he opened the library door and led his big sister into the room where his masterpiece stood.

"One, two, free!" called out the little voice tremulous with excitement, and Maggie looked. One glance of astonishment and then she exclaimed:

"Chubbie, you naughty, naughty boy! Oh, my new coat, and papa's hat, and those fans that came from South America, and all those books, and the *ink!* Oh, how could you be such a bad, bad boy!"

Maggie's voice shook with excitement as she gazed at the scene before her. Her father's library table was the foundation of the coach, and all the books and papers, which no one was allowed to touch, were pushed off on the floor, where they lay in the greatest confusion. On the table were perched two chairs, and on one of them sat the driver, which Chubbie had made himself by stuffing Maggie's new coat with a pillow, the sleeve of which had evidently been used to wipe up some ink which had been spilled in clearing the table. On the top of the pillow Chubbie had succeeded in balancing his papa's new silk hat, now all crushed out of shape. The two chairs, which were horses, were harnessed with his own reins, and the two beautiful peacock-feather fans, which had been a choice possession in the family for years, had been pinned on to the chairs for the horses' tails at the sacrifice of most of the feathers.

"Why, Maggie, don't you like it?" and some of the light died out of the upturned face. "*I* fink it is splendid. It's no matter 'bout papa's hat, for it wasn't a very strong one. I stood on it to get the fans and it all squashed."

"Like it!" exclaimed Maggie, with indignation. "You knew you were a naughty boy, and you deserve to be sent right out of town for doing so much mischief. I won't touch a thing until papa comes, but will just leave you to think of what you have done;" and with this outburst she turned and left the little culprit to his own thoughts.

Chubbie stood as if he were petrified for a moment, and then he broke out again, quite to himself:

"I fought Maggie would be pleased; but she is only a girl and doesn't know about coaches. I fink she is cross and mean," and the blue eyes flashed. "She said I ought to be druv out of town, and I'll just go and find some one to take care of me who likes horses wiz fezzer tails, and boys who can make real drivers."

Chubbie was determined, and with all his soul in the work he immediately made all his preparations to leave town. Out of the library and up to his own tiny room the little fat legs trotted, and then there came a pause for reflection.

"I must take some clothes to wear, for it may be a long travel out of dis big town;" and Chubbie took from his closet the stout nutting-bag which Maggie had made for him when they went nutting a few weeks before and which would now serve as a valise. Into this deep bag went the red jacket with brass buttons which Chubbie called his "soldier coat," his box of necktles and his little empty purse. Then followed his few treasured books, a broken whip, his old doll "Plato," which had been to him a confidential friend during most of his short life, a box of pebbles he had carefully collected and his tin soldiers. Chubbie gave the bag a good shake, and seeing that there was still room for something more, gave one last look over his possessions to see if anything important was left behind.

"O Billy! did you fink I *could* forget *you?*" he cried, as he saw his poor old battered horse standing in the corner as well as his three legs would allow him. "You're pretty big for me to carry, but I could never, never leave you here all alone;" and in an instant Billy's head was thrust in the bag, but alas! his body was too big to follow. Repeated jerks and pushing did no good, and the little master saw that his faithful old horse must stay behind.

"Never mind, Billy," and the fat little arms pressed the old horse close to his loving heart with great tenderness; "be a good horsie, and I'll come back to you some day when I'm a big man. I'm not good enough for dis house. I'm druv out of town; but we're good friends, Billy, aren't we?" and Chubbie pressed a farewell kiss on old Billy's head.

"I guess I have everyfing I need now," he added, and then he put on his new red cap and stout little overcoat. Just as he was ready to sling his pack over his back like a miniature Santa Claus, he spied some gloves of his father's on the table just outside of his door.

"P'raps I'd better wear dese," he said, as he drew them on his fat hands, leaving the fingers to hang in limp helplessness. "People might fink it queer just to see a little boy go out of town, but now I look like a big man!"

Softly down the stairs the little fellow crept, with his burden over his shoulder, and quietly opened the front door, and with good courage stepped forth into the fast gathering darkness of that bleak November day.

Maggie, in the meantime, had gone back to her room, her heart full of indignation toward Chubbie for being such a mischief maker.

"There is no use in trying to do anything with boys; they are too bad, and then, just as I was trying to make him happy, to have him act so!" were poor Maggie's incoherent thoughts. "Well, it will do him good to stay alone until papa comes home, and I will get a breath of air by going for the mail, even if it does rain."

Maggie glanced out of the window and convinced herself that it was not raining very hard; and then she made herself secure against the storm with heavy wraps and an umbrella, and started out to get the letters which she knew her papa would like to find, with his dressing-gown and slippers, when he came home tired that night. She had gone but a few steps before the chill of the evening air made her feel that she had not been wise to venture out from home when it was so bleak and dreary; but the thought that her father's route home from his business was not in the direction of the office, and that if she pressed on she would save his coming out later, gave her fresh courage to continue on her way. As the wind blew a little stronger, Maggie quickened her pace, and noticed that the rain was beginning to turn into snow.

There were not many people on the street in the little village at this hour. A few men hurried by, eagerly seeking the warmth of their own firesides; and more than once Maggie almost decided to turn back as she saw the deserted street now growing white under the fast-falling snow; but still on she went, hardly thinking of herself.

"Oh dear!" she exclaimed, shivering; "think of the poor people who have no shelter to-night! Think of the little children who will be cold!" and a vision of her naughty Chubbie rose before her mind, warm and safe in his own cheerful home.

"Dear little Chubbie," she thought; "perhaps he did not mean to be so naughty. Anyway, I was not one bit like mamma to him; and if she saw me, I know she is sorry I forgot my promise."

At this very moment, Maggie glanced across the street and saw through the gloom a tiny figure walking wearily along, carrying what seemed a heavy burden.

"Some poor little boy," she thought, "struggling to find his way home."

Her heart was touched, as she went on her way, and then all at once she stood still. That little trudging fellow suggested her own Chubbie so much that she exclaimed: "Oh, let me do for that child what I should want some one to do for my little brother if he were out to-night."

She turned back and flew across the street with outstretched hands, crying: "Come, little boy, and I will take you home. Who are you?"

Scarcely above a whisper a little voice answered, with a tone which pierced Maggie to the soul, "I'm Chubbie—I'm bad—I want my mamma." And right at her feet through sheer exhaustion fell little Chubbie, still clinging to his dearest treasures.

Poor Maggie bent over the little form with fast-beating heart and gathered her little brother in her arms, crying: "O Chubbie, forgive your sister! *Here* is Maggie to take you home."

That night, as Maggie stood beside the little bed where Chubbie was quietly sleeping, and thought how near she had come to losing her hold of that dimpled hand forever, she felt that at last she had learned a lesson which could never be forgotten. She bent over the tired little form and kissed his soft cheek and whispered—she hardly knew what, but it was something about "bless thy little lamb to-night."—*E. Linden in Independent.*

WHAT IS A GREENBACK?—A "greenback" is a statement engraved and printed in the similitude of a bank note that "the United States will pay to the bearer —— dollars." It bears on its face the engraved signatures of the register and treasurer of the United States, a memorandum that it is issued under the Act of March 3, 1863, and that it is a legal tender for —— dollars. A facsimile of the treasury seal is printed upon it in red ink, and by a separate impression. In an open space on the back is a statement that "this note is a legal tender at its face value for all debts, public or private, except duties on imports and interest on the public debt," with a note of the punishment denounced against its counterfeiting or alteration. Originally it bore a certificate of its right to be converted into bonds of the United States bearing interest at the rate of six per cent per annum. The right was withdrawn by Act of March 3, 1863, as to all notes not presented for exchange before the first day of June in that year. The greenback, then, is the naked promise of the United States to pay the bearer a certain number of dollars, unsecured except by the national credit, without date or time of payment, which, for all ordinary purposes, is money, equal to the gold and silver coins authorized by law.—*Harper's Bazar.*

"JIM" FISK'S MONUMENT.—In the cemetery of Brattleboro, Vt., located upon a hill overlooking the town, we came unexpectedly upon the monument of "Jim" Fisk, the financial hero of Black Friday. It is an imposing and beautiful structure of white granite from the quarries of Dummerston, a little way up the river, and was erected by his widow at a cost of nearly $200,000. It consists of a shaft mounted upon a square base at the four corners of which are life-size figures of Commerce, Finance, Banking and Railroading, all charmingly conceived and admirably executed. Esthetically considered, it is a rare and beautiful piece of work, but what a commentary upon the truthfulness of monumental fame!—*American Magazine.*

HE WANTED THE STATEMENT MODIFIED.—A thin, nervous-looking man stepped up to the pastor as the latter came down from the pulpit. "You have had a good deal to say this morning," he observed, "about a feller that killed a man named Abel." "Certainly," replied the pastor. "'The Sin of Cain' was the subject of my discourse." "I wish't you'd do me the favor, next Sunday," said the thin man in some excitement, "to tell the folks that the man you was talking about this morning ain't no relation to the Kane that keeps a livery stable down by the grist-mill. I don't want none of my friends to think that I had a hand in that killin'. That's all. Good day."—*Chicago Tribune.*

Let Her Follow Her Bent.

The end of woman is to marry and raise up a family. She starts out in this direction when she carries a doll in childhood. Your girl who leaves home and goes out for herself does so because she has failed to find the man she wants to marry. By and by she does find him, and when she does she drops everything and goes with him. She stops short in her music, her acting, her art, her literature, or whatever it is, because after all, her instinct tells her to marry, and she follows her instinct instead of her reason. A man can marry and go ahead in the particular pursuit or profession he has chosen, but the woman stops and subjects everything to the one duty of wifehood. That is the reason women do not succeed as well as men. They fall short.

Grant all this for the sake of argument. Admit that it is the general mission of woman to marry and raise up a family. But I am now writing about the exceptions. There are exceptions to all classes, all rules, all theories and all philosophies. Most women do marry young, and that is right. That is as far as most of them want to go. They are fitted for this sort of life, and have no desire nor fitness for another. But are you going to make one kind of a girl do this when it is a straitjacket and an abomination to her? In other words, is she to marry simply for the sake of marrying, "settle down" simply for the sake of settling down? Why not allow her to follow her natural bent as well as the young man? True, she may, as my objector says, find some man while herself following a successful career whom she will love and whom she will marry, thus cutting short a work that might otherwise have been rounded out and made complete. True, women are not as completely successful as men in the more independent pursuits of life.

But the point I wish to make clear and emphatic is that society and the woman herself, and the man she marries, and all directly or remotely concerned, are the better for her having done even something for herself, however little. I repeat that the self-reliant woman is a civilizer. The busy world is improved by her having been a participator therein. Her words are gentle and kind, and her presence is a restraint to the headlong impetuosity of men. Even though she may not remain long with us single, let us be thankful that she has come at all. If she falls in love and marries, even at the expense of an independent career, her life after all is not in vain. Her own views have been broadened, her sympathies have been deepened, her capacity for enjoyment made greater and her scope for usefulness widened. I say again and again, let the ambitious girl see what she can do for herself.—*Woman's Journal.*

Chaff.

AWKWARD MISS (with umbrella): Beg pardon! Polite gentleman: Don't mention it. I have another eye left.

THE ORDER: "Pack my box with five dozen liquor jugs" contains but 32 letters, and yet omits no letter in the alphabet.

A BLIND old soldier, asking for alms at a Manchester, England, church door, had a board hung around his neck inscribed as follows: "Engagements, 8; wounds, 10; children, 6; total, 24."

LITTLE things tell in this life—little brothers, for instance.—*Berkshire News.*

A WELL-KNOWN politician was under discussion at a club-house the other evening. "He claims to be an agnostic, doesn't he?" asked one. "Only as to religion," replied another. "As to everything else, he knows it all."—*Chicago Tribune.*

"I LIVE mostly within myself," said a conceited fellow. "I understand," replied his neighbor at the table; "you occupy a flat."

HE (cautiously): What would you say, darling, if I should ask you plumply to be my wife? Darling (even more cautiously): Ask me and find out.—*Washington Star.*

LITTLE HAL was out in the yard playing with his nurse, who was a colored boy by the name of Lewis. Lewis was shooting with a bow and arrow; and when he pointed it straight up to the sky, Hal cried out in a distressed voice and said: "Oh, don't, Lewis! You might shoot God."

MRS. GOSLOW: And how did you enjoy Paris, Mrs. Quickly? Mrs. Q.: Oh, beyond imagination. Pa and me got to be regular Parisites.

COLORADO MOTHER: Here, you Sal! Wot er' yo doin'? Sally (aged nine); Herdin' the baby.—*Puck.*

A YOUNG MAN led a blushing damsel into the presence of Rev. Dr. Carpenter. "We want to be married," he said. "Are you Rev. Dr. Carpenter?" "Yes," replied the genial minister, "Carpenter and Joiner."

"YOU are a man after my own heart," said the watermelon to the purchaser.—*Terre Haute Express.*

A FELLOW thinking to appear smart, entered a store on Sixth avenue the other day and said to one of the saleslades: "Ever have any call for husbands here?" "Oh, yes, occasionally. Are you looking for a market?" "Yes," said Smarty. "All right. Step right up to the ten-cent counter."—*Siftings.*

"I'M afraid, Johnny," said the Sunday-school teacher rather severely, "that I will never meet you in heaven." "Why? What you been doin' now?"—*Ashland Press.*

YOUNG FOLKS' COLUMN.

Whistling for His Dinner.

The Terry boys lived in a substantial farmhouse in a picturesque valley on Long Island. The incidents which I am about to relate occurred in the times, a good many years ago, when deer were plenty in the swamps and forests of that part of the island.

Dan Terry, the second in age, was very fond of hunting, and the table of his widowed mother was supplied with the meat of beast and fowl he had, in his frequent expeditions, brought down with his trusty gun.

To kill a buck all by himself, and have the horns to keep as trophies and pleasant reminders of his valor against the time when the deer on Long Island should live only in story, was the wide-awake, active boy's greatest ambition.

His mother often said: "I don't know what will become of Dan, he is so reckless. He isn't afraid of anything, and every time he goes out of my sight I expect he will be brought home dead, as his father was from trying to rescue a wretched sailor out there among the rocks. It seems a pity, for he is as good a boy as ever lived."

"No one ever worries about me or praises me," said Fred, the oldest and the worker of the family. "I can go along and provide the whole house with all their grub for a month, and nothing will be said about it; but if Dan happens to shoot a squirrel his praises ring from Montauk to Riverhead."

One day, when he felt especially discouraged over his hard work and had started for the huge field of corn, he said: "Come on now, Dan. Leave your gun, tell Rob to throw away his pumpkin-vine flute, and both of you come right along and help me about harvesting."

The boys went cheerfully, for they were used to Fred's grumbling and his imperious ways. As they trudged along toward the fields, Rob, in the natural exuberance of his spirits, fell to whistling "Yankee Doodle" with great gusto.

"Do stop your whistling, Rob," said the older brother, presently, "Your racket is as incessant as that of the birds and frogs. Hurry up and let us get to work. You will never get your dinner by whistling."

"Oh, he may," said cheerful-hearted, hopeful Dan; "no one can tell. Oh, my sakes alive, there's his chance! Do you see that buck and doe out there on the edge of the corn-field? Put in now, Rob, and whistle your very best while I run for my gun. What in the world was I thinking about not to take it along with me."

Rob filled his lungs anew and began to whistle like a jubilant blackbird. Dan, crouching along a few steps at first until out of sight behind a thin strip of brush, ran like a hare for the house; and matter-of-fact, plodding Fred, who was not taken into account at all in this existing contingency, made his way as stealthily as an Indian in the shadow of the thick, tall corn, until he came suddenly in front of the handsome creatures who, with their graceful necks arched, large, shining eyes dilated, and one forefoot of each lifted in an expectant curve, were listening to the entrancing music as Rob trilled out at the top of his lungs his favorite roundelays.

The buck stared at Fred for an instant and then, as the shrewd boy had calculated, made a furious charge for him. Standing his ground firmly until the infuriated beast was close upon him, he jumped to one side like a flash, and, with the sinewy ability of a panther, seized him by his formidable horns.

The situation, indeed, was at this juncture a very perilous one; but, by a prodigious spring, helped in no small degree by the movement of the buck in vigorously throwing up his head, the brave boy placed himself astride the creature's broad back.

For a moment the outwitted animal stood motionless; and then, with a sudden curving leap, he plunged forward into the thick, woody swamp.

Fred's presence of mind did not desert him for an instant in this extremity. No sooner did the wonderful steed begin his long, sweeping strides for the thicket than, leaning forward, Fred drew his sharp sheath-knife that he had used for cutting corn and severed his jugular vein.

As a horse in battle when a minie-ball has pierced his brain, so the great, muscular creature made a tremendous lunge forward and fell, death ending his struggles in a few moments.

Fred found himself some paces in advance in a pool of slimy water. Presently, fishing himself out in a matter-of-fact way, and having become assured that the game was quite dead, he started for the house, arriving just after Rob, with great gulping sobs of affright, had reported that poor Fred had been tossed and mangled on the old buck's murderous antlers, and carried away lifeless into the almost impenetrable swamp, and that they should never see him again.

Dan had dropped his gun, and was sitting down on the stone hearth in the kitchen in hopeless terror; and Fred approached the open door just in time to hear his mother, between frantic outbursts of tears, extol his industry, patience and self-denial, together with a surprisingly long list of other virtues.

"Hallo!" he shouted, bursting into the kitchen: "cheer up. Rob has whistled up a dinner in good earnest to-day. Come out, boys, and help me dress the old fellow, and get the carcass home. Straighten out your faces, all of you. Don't you see, mother, I'm all right?"

"Of course you are all right, you dear, blessed boy," said Mrs. Terry, tears of joy now welling out of her mild blue eyes. "You always were, and you always are. I was in no wise worried at first about you being killed, I knew you were so level-headed and so sensible; but the boys made such an ado, and were so sure the old buck had given you your death-wounds, I was giving up just as you came in."

The shock from the supposed tragedy having passed off, the boys fell into pleasant badinage over the division of the honors pertaining to the remarkable capture.

"Had you kept quiet, Fred," said Dan, "I should have brought him down with my gun in good time."

"He liked my music first-rate," said Rob. "He stood as still as a stone chimney until Fred went for him."

"Oh, well," spoke up Fred, complacently, "you, Rob, you may have all the honor, Dan shall have the horns, mother and I the venison."

This story of Robert Terry whistling for his dinner has been handed down in the family and in the neighborhood to this day, and often repeated when one takes the credit of another's work.—*Methodist Protestant.*

GOOD HEALTH.

Cholera and Cataracts.

EDITORS PRESS:—I have an idea; something I frequently haven't got. I see in the newspapers that dreadest of all dread epidemics—the Asiatic Cholera—is heavy in the islands of Japan, and that it may come in a ship to California one of these days,

Now in the trough, or valley, of the Ohio river is the City of Wheeling, and in that city I was born (so I've been told), and also, I was reared to some degree of manhood in that place, and as it is of pious record that I have been upon this earth for about threescore years, it stands to reason that I must have seen something of the cholera; for that disease has been in these United States several times since I came, and it about always strikes hard upon the line of the Ohio river.

When I was a boy the disease swept my native city furiously, and since then it has hit it pretty hard again and again, but at none of these times, or, as I think, at any time, has this disease prevailed in Zanesville, Ohio, 87 miles west of Wheeling on the Muskingum river, a branch of the Ohio.

During a heavy attack of the epidemic in Wheeling a vigorous young physician of Zanesville volunteered and went to Wheeling to study the great destroyer, and having soon died there of the disease, his body was taken to Zanesville and buried, but there were no cases succeeding his funeral. I have often, while I resided in Zanesville for ten years subsequent to 1852, wondered and pondered why there was none of this disease there when it struck Wheeling again during the fifties. The soil about the two cities is similar, the products the same, the surface hilly, the people's habits and housings alike, the fuel bituminous coal for both, the "breed" of the people from a like stock, morals, religion, education, and amusements nearly related; the trees, rocks and climate are not different. What then is it which preserves Zanesville from cholera and punishes Wheeling? The Ohio river moves "on its clear winding way toward the sea" with steady, even, strong current as it glides past Wheeling, leaving no stagnant water; while the Muskingum tumbles and whirls over rocks and rapids as it gurgles onward passing the whole length of Zanesville.

I have an idea that the rapids in the river at Zanesville have something to do with her exemption from the rapid disease. That the *microbes, bacilli, whoodle bugs or what-ye-may-call'ems* cannot stand the racket and the roar of pure, fresh water in large quantity. Large quantity, because the Muskingum is a stream larger than the San Joaquin, and, except in spring flood, its water is clear as a diamond. I have no knowledge of how the Asiatic terror acts, if at all, around Niagara Falls or other rapids of water, but the PRESS can inquire about this matter and find out, and perhaps it may be that rapid rolling waters are remedial or preventive when the cholera comes around.

I am about satisfied that water has a great deal to do, not only with cholera, but with several other epidemic diseases. Water of any kind is a dangerous fluid, anyhow. I've sampled it several times.

If we find that waterfalls are efficacious as against the invasion, we have only to "flee unto the mountains" up stream, and squat.

Let us all hope and the pious pray that the pestilent plague may keep away. In the mean time—yours, J. W. GALLY.

Pajaro Valley, Oct. 22d.

TREATMENT WHEN FOREIGN BODIES ARE SWALLOWED.—Considering the frequency with which foreign bodies are swallowed, especially by children, the best treatment to employ in such cases should be generally known. A variety of such methods has been advocated, but just now the so-called "potato cure" appears to be the most popular. One physician not long ago reported that he had successfully applied it with the best results in three ca... One was that of a 6-year-old boy, who had swallowed a small weight; another, that of a girl, 9 years old, who had swallowed a nail; and the remaining one, that of a woman who had swallowed a set of teeth. He fed the patients for three days on nothing but potatoes.

DOMESTIC ECONOMY

Buttons and Button-holes.

[Written for the RURAL PRESS by M. M. S. P.]

I used to be greatly annoyed by finding, after each washday, so many garments minus the very necessary buttons. I often wonder how the little ones manage to lose so many. I suppose some came off during their progress through the wringer, although I always tried to fold the buttons inside.

Finally I learned a new way to sew them on strongly and securely. I doubled a strong thread, then, putting a large darning-needle between the button and the cloth, I sewed over and over that until there was a thick cord, round which I wrapped my thread after pulling out the darning-needle. It was almost too strong ever to come off. It was so durable that it was well worth the extra work.

My worst trouble was with the button-holes. There wasn't a week that I hadn't some worn or torn button-holes to mend. Often I could do nothing else than rip out the torn piece and lengthen the band, so I could make a new button hole. This was very irritating, and I usually lost my patience completely.

When I was married, my husband's mother taught me her way of making button-holes, and I have practiced it ever since with excellent results.

I would stitch firmly around the outline before cutting, and then work the button-hole over from four to six strands of thread held loosely twisted as I worked. The thread must all be of the same shade, and one can easily become used to holding it comfortably as she works.

After finishing the button-hole, stretch it a trifle with the points of the scissors and it is a handsome, strong button-hole with a firm little ridge outlining it, all the result of a few moments' work.

The cloth will often wear out first, and as the loop of twisted threads comes at the outer edge, it will not easily pull out; besides, it looks so nice.

In using stocking supporters, I cut off the brass arrangements that are usually slipped over a button on the waist, because they always out off the button in a few days. Then I make button-hole pieces of strong silesia and work the button-hole with very strong thread over coarse wrapping twine. They are not very ornamental, but wear a long time. If ever I have to replace the tape to which the stocking-catch is sewed, I use dark dress braid, doubled and sewed on the machine.

CARE OF MATTING.—In sweeping the pretty and economical straw matting that is growing to be very popular with housekeepers during warm weather, do not use a broom, for it will tear the strands in a short time. A long-handled bristle brush, such as is used for oil-cloth, is the nicest and will remove the dust best, for the soft bristles can go into crevices that a broom would miss. Always, when possible, brush the matting the lengthwise of the grain and the strands of straw will not wear and break as quickly as though brushed across. Some persons clean matting by sprinkling bran or coarse Indian meal over it; then with a long-handled mop, with cloth wrung out of clean, warm water rubbing the grain well all over the carpet, then leaving it until dry, when the grain is brushed off. This is claimed to be a thorough way of cleaning matting, but it is usual to simply wipe it off with a damp cloth, wet in salt and water, not wetting the matting much. For winter use, if a heavy layer of carpet lining is put under it, matting is a comfortable floor covering. With pretty rugs scattered over it, the room has a pleasant, homelike appearance that is very attractive. It is cheap, and if care is taken when putting it down that little cleavers, made especially for the purpose, are used instead of the ordinary carpet tacks, it can be easily taken up at any time when cleaning house, cleaned and put down.—*Carpet Trade Review.*

TO GET RID OF ANTS.—I took about half a saucer of molasses, and to this I added about a tablespoonful of Paris green; and having stirred well, placed one in the cellar-way and another down-cellar; and any time for a week or two, I don't remember just how long, if you went to those saucers, you would see the shelves nearly black with them coming and going. We left them there until there were no signs of any ants around them. We never found one dead ant, and it has been four years next month since I fed them on molasses and Paris green; yet, strange as it may seem, we never have seen one in the house since. I will say further that our house is an old one, and had been overrun with them for years. Care should be taken to keep all eatables out of the way. They disappeared from all parts of the house before they did around the saucers. This has been my experience with ants, and if they ever return, they will be fed the same as before.—*Maine Farmer.*

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SAN FRANCISCO:

Saturday, November 8, 1890.

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Business Announcements.

[NEW THIS ISSUE.]

Plows—Baker & Hamilton.
Seeds—Thos. A. Cox & Co.
Stovepipe Drums—M. P. Farnham, Germantown.
Pianos—Wm. Knabe & Co., Baltimore.
Dictionaries—G. & C. Merriam & Co., Springfield, Mass.
Carpets, Furniture, Etc.—Chas. M. Plum & Co.
Books—Laird & Lee, Chicago.
Peach Trees—D. S. Meyer & Son, Bridgeville, Del.
Live Stock—J. P. Thompson, Napa Junction.
Rubber Stamps—Thalman Mfg. Co., Baltimore, Md.
Home Mutual Ins. Co.—J. F. Houghton, Pres.

See Advertising Columns.

The Week.

As we write on Wednesday evening the election agony is over and the results somewhat in doubt. Enough, however, seems to be conceded on both sides to indicate that California and the Eastern States are pursuing different lines of thought and voting.

In California the State officers, the Legislature and the congressional representatives are largely Republican; at the East, something like a cyclone seems to have set in, which has blown a number of old Republican States over into the Democratic fold and has given the Democrats a large majority in Congress.

At the East there have been immense movements upon industrial lines, the agricultural population especially showing its dissatisfaction with prevailing policies on the tariff and other questions. California apparently approves the recent tariff legislation by giving the victory to the party upholding it.

It will take a little time to analyze and fully understand the significance of the results recorded on Tuesday, and fortunately the American people is so constituted that it will speedily turn all new manifestations of the popular will to its progress and prosperity. Herein lies the strength of the nation.

Terms Used in Call-Board Sales.

We have heard the objection that the wheat quotations of the RURAL were not given plain enough and were therefore not generally intelligible. Any one who feels discommoded by such objection should notice first that the descriptions of the course of the market are given in as plain English as our reporter is capable of and that the prices of "Grains, etc.," in the table headed "Domestic Produce" are in plain figures. These comments and these figures represent the true course of the market and by themselves alone will inform any reader on this subject. We presume it is in the condensed statement of transactions in the Call Board that some possibly may stumble over, but will probably find that most of those selling wheat in this market understand fully what the terms mean. More than that, we have explained them on previous occasions, which probably some may have overlooked. These terms are as follows:

"Buyer season" and "seller season"—"Buyer season" means that the purchaser can call for the delivery of the stuff at any time during the season, which runs from July 1st of one year to June 30th of the following year, but he must accept the stuff on the last date mentioned. "Seller season" means that the seller can deliver the stuff at any time within the specified season, but on the last day of the season must make delivery of it.

"Buyer year" and "seller year" assume exactly the same privileges and obligations as already described, except that the period closes on December 31st instead of June 30th.

Either buyer or seller can, in *lieu* of delivery of the actual produce, pay the difference between the contract price and the market price at the expiration of the period or at the time when "called" by the opposite party.

Of course these are the means by which "grain gambling" is carried on, and men may deal indefinitely without ever owning or delivering a pound of grain, but the same method is sometimes used in transactions in which the seller actually has the grain in the warehouse, and in other cases wheat is purchased and put in warehouse to meet maturing obligations, for in this way a man may buy wheat low to deliver when his contracts at a higher figure mature.

When the produce advances above the contract price, the buyer may call upon the seller to make his margin good, and when it declines below the contract price the seller may insist on delivery or call upon the buyer to cover his margin between the contract price and the price at which the stuff can be bought at the time.

We trust these remarks may aid those who perhaps are not called upon to acquaint themselves with such technical matters and who may think that terms constantly used by those in the trade are unintelligible.

The Fruit-Growers' Convention.

We trust readers will not forget the Fruit-Growers' Convention, to be held under the auspices of the State Board of Horticulture, at Santa Cruz, beginning at 10:30 on Tuesday, Nov. 18th, and continuing four days. It is especially requested that samples of fruits, either fresh or dried, be exhibited at this meeting. A card should be attached to all samples, giving name, etc., and stating briefly how processed. It is also requested that all those having new fruits and inventions of value to horticulturists will exhibit them at this meeting.

The Southern Pacific Railroad Co. will allow return tickets at reduced rates from all points on their lines to Santa Cruz, *provided* not less than 100 persons make the trip, and a receipt for the ticket purchased be taken at starting-point. Those intending to attend should apply to B. M. Lelong, Secretary State Board, 220 Sutter St., S. F., for blanks upon which to obtain receipts for tickets purchased.

We expect to present in our next issue some matters of especial interest to those who will visit Santa Cruz, and invite contributions to this end from all readers.

An Irrigation Inquiry.

We have received copies of a circular issued by R. J. Hinton, as special agent of the U. S. Department of Agriculture for the collection of information on irrigation. This branch of Government work, which promises to be of much value and importance, is provided for by the following clauses in the Deficiency law approved by the President Sept. 30, 1890:

Irrigation Investigations—To enable the Secretary of Agriculture to continue to complete his investigations for the purpose of determining the extent and availability for irrigation of the underflow and artesian waters within the region between the 97th degree of longitude and the eastern foothills of the Rocky mountains, and to collect and publish information as to the best methods of cultivating the soil by irrigation, $40,000. *Provided*, That no part of said sum shall be expended under this paragraph unless the entire investigation, collection and publication contemplated herein, including the report thereon, can be fully and finally completed and finished before July 1, 1891, without any additional expense, cost or charge being incurred.

To aid him in securing data for this report, Col. Hinton has prepared blank forms of questions with spaces for answers by those who will contribute the information desired. These questions cover the engineering features of the irrigation enterprises in all neighborhoods, the canals and ditches, reservoirs, dams and weirs, acreage irrigated and character of crops grown; the value of irrigated lands as compared with adjacent arid lands, etc. It is also designed to pay especial attention to irrigation by artesian wells, as well as to all appliances for raising and distributing water.

Col. Hinton has a wide acquaintance with such subjects, as his previous reports to the Government show. We hope our readers will volunteer their aid and apply for blanks for reports, if they do not receive them. All correspondence addressed "Artesian Wells Investigation," Dept. of Agr., Washington, D. C., will reach the spot. It will be a good thing for California to have her irrigation enterprises and their results publicly proclaimed.

Storm Tracks in October.

We alluded last week to Lieut. Finley's explanation of our dry October of 1890 as compared with the wet October of 1889, as due to the fact that storm tracks ranged so much farther north this year than last. Since then, Lieut. Finley has kindly sent us a pair of charts showing these storm tracks in each of the months specified. In October, 1889, these tracks ranged south all through Washington and Oregon, and one fell as far south as the northern counties of California, while this past October not a storm ventured to cross below Puget Sound. The result is as stated in last week's RURAL. Accompanying the charts to which we allude, is the following note:

The most striking feature for the weather for the month of October has been the marked deficiency in rainfall throughout the Pacific Coast States. The cause of this decrease in precipitation is due to a falling off in the number of storms which have entered the North Pacific Coast from the Japan current, and also, and more especially, to the fact that these storms have passed eastward at a higher altitude than in previous Octobers. In order to illustrate this very important fact, I have prepared a set of storm-track charts for October 1889 and 1890. A glance at these charts will show the relation between the extreme southerly position of the storm paths in October, 1889, and the extraordinary rainfall of that month; and the relation between the extreme northerly position of the storm paths and the marked deficiency of rainfall for October, 1890. The amount and distribution of rainfall dependent upon the latitude of the storms from the Japan current is one of the most important features of Pacific Coast weather and is worthy of the careful attention of the public.

So far as predictions go, then, it would seem very desirable to discern the course of these storms before they appear upon the coast, and this carries the inquiry out upon the bosom of the Pacific. How far extension in this direction is practicable remains to be seen.

DEATH OF DR. JOHN STRENTZEL.—With deep regret we announce the death of Dr. John Strentzel of Martinez, which occurred at the close of last week. His life was filled with so much of public interest that we do not attempt a hasty sketch of it, but postpone the theme for a later issue. The thousands who have known him will unite in feelings of bereavement and sorrow.

Pickling Olives.

Prof. Hilgard, Director of the University Experiment Station, has in contemplation a University Bulletin concerning the pickling of olives, in answer to a flood of inquiries he has received from California olive-growers. Preliminary thereto, Mr. L. Paparelli, who came from Italy last year to fill a position as one of Prof. Hilgard's assistants, has prepared the following statement concerning methods employed in pickling olives in his native country:

Many inquiries having been made in regard to the manner in which olives are pickled in Italy and France, I hereby give a brief statement on the subject and will give another more complete in a future article. For the purpose of pickling, the olives must be picked while green, namely, one month or six weeks before maturity; the latter of course is variable according to climate and variety cultivated.

The olives should be picked by hand, early in the morning or late in the evening. It is necessary to select the best fruit only, rejecting especially that which is spoiled or imperfect, and also to free it from leaves and stems.

All the modes of preparation can be reduced to two; one using a lye of greater or less strength, the other, pure water only. The lye treatment is as follows: The olives are placed in vats, where they are immersed in a solution of caustic soda (concentrated lye) of the strength of 6° B-aume, equivalent to about five ounces per gallon. After some hours, this solution is drawn off and replaced by soft water, which must be changed several times during three or four days, until it is completely clear. Then the olives are placed in kegs, with a brine consisting of one ounce of salt and 13 ounces of water for each pound of olives; or a gallon of brine containing 10 ounces of salt to 10 pounds of olives. The lye is also made with one part of quicklime and six parts of fresh wood-ashes, well sifted.

After having been in this lye six hours, the olives are taken out and placed in fresh water, where they will remain during eight days, being careful to renew the water every 24 hours. After this time the olives are placed in a brine of salt and water as stated above. In this manner they are preserved very well; they will be in a condition to be used in from one to two months, according to taste.

To preserve olives without lye, they are placed in a crock or wooden vat, in which they are submerged in pure water covered with lemon leaves and a grated frame placed above them to keep them submerged. The olives will remain one month in this liquid, which must be changed every 24 hours. After this the fruit is placed in vats; in the bottom a layer of salt, then a layer of olives, then salt again, and so on, the proportion being 12 pounds of salt to 100 pounds of olives. This being done, the olives remain in the vats 48 hours, and after that clean water is added and a layer of one inch of salt placed on the top. One month after this treatment they can be used. The olives can also be improved by placing aromatic herbs like fennel and pistachio, etc., among them after the first treatment.—L. PAPARELLI, *Berkeley*.

The University Bulletin by Prof. Hilgard will consider the subject of olive-pickling more broadly and will aim to aid, so far as possible, those who have reported to him difficulties in the way of satisfactory handling of the fruit.

CASH FOR THE COLLEGES.—On the 22d ult. the Secretary of the Interior signed certificates for the amount of $15,000 each, appropriated under an Act of Congress approved August 30, 1890, for the present year in aid of agricultural and mechanical colleges, to the following States: Indiana, Kansas, Ohio, New Jersey, Michigan, New York, Pennsylvania, Massachusetts, Delaware, Mississippi, Tennessee, Texas, Virginia, Colorado, Illinois, Maryland, Minnesota, Oregon, Wisconsin, New Hampshire, Alabama, Idaho, North Dakota and the Territory of New Mexico.

STILL FASTER TROTTING.—At Independence, Ia., Oct. 24, C. J. Hamlin's team Belle Hamlin and Justina were driven by their owner to beat the world's record of 2:15 made by them, and although the day was cold and rainy, they made the mile in 2:13¼. On the preceding day, at Cambridge, Indiana, the stallion Nelson trotted the fastest half-mile on record. First quarter, 0:32¼; second, 0:30¾, the fastest quarter on record, making the half in 1:03.

THE LEADING AGRICULTURAL COUNTIES.—We read in the *Register* of Middletown, Md., that according to the census of 1890, Lancaster county, Pa., stands first in value of agricultural produce; Champaign county, Ill., stands second, and Frederick county, Md., third. It is an interesting fact that Lancaster county also stood foremost of all the counties of the United States ten years ago.

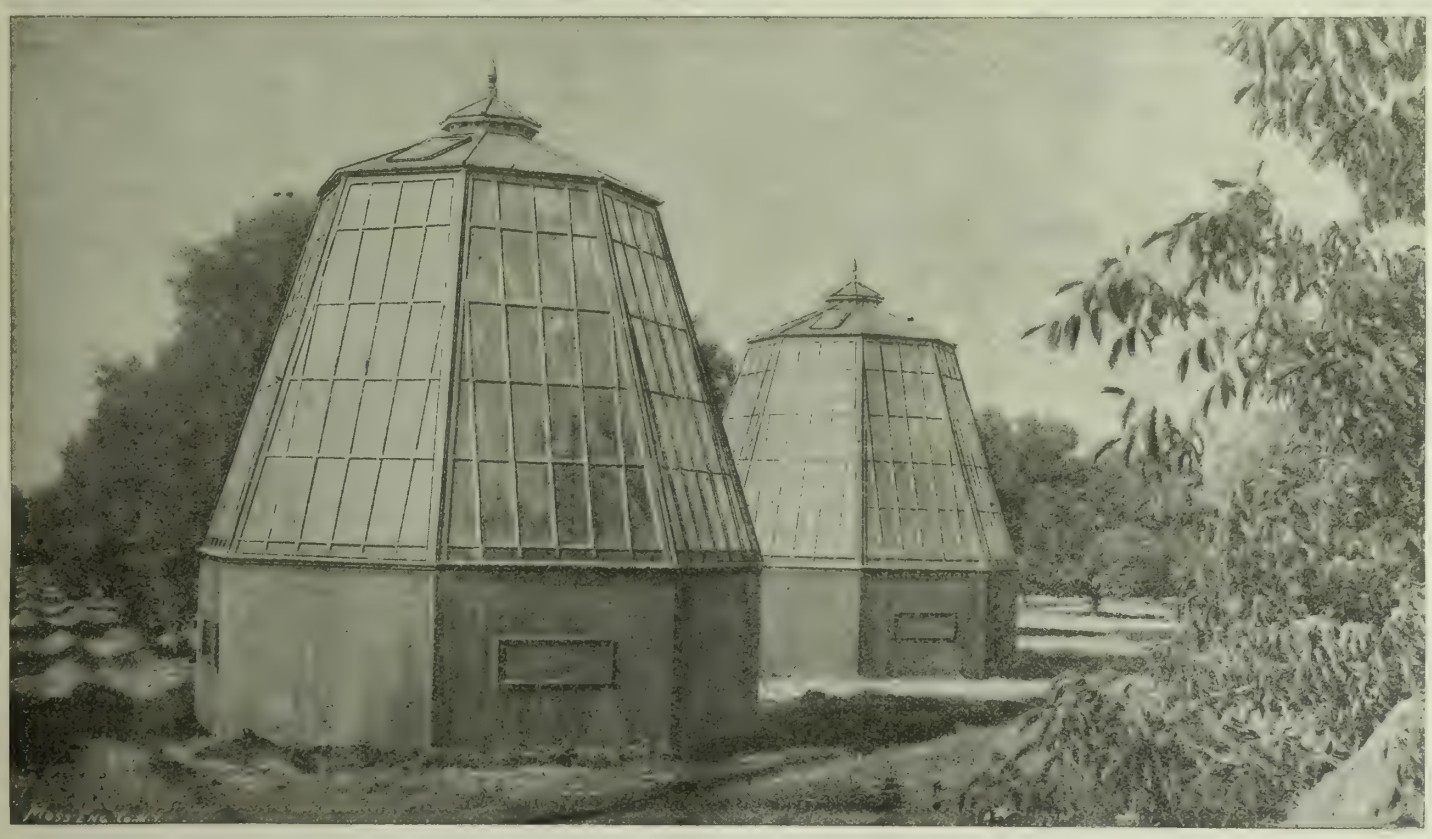
ENTOMOLOGICAL.

Winter Protection for the Vedalia Cardinalis.

[Written by B. M. LELONG, Secretary State Board of Horticulture.]

The winter of 1889–90 was a very severe one upon the increase of parasitic and beneficial insects, as it rained almost continuously until spring. This was the vedalia's first winter in California, and grave doubts were entertained as to their living through it. In early spring (1890), it looked very much as if they had died out, as neither the larva nor the beetles could be found; but a few weeks of warm sunshine caused them to multiply, and our hopes were gratified by discovering thousands of the larvæ at the various places where they were put, with due precaution, late in autumn and before the wet weather had set in. From these places, all infested orchards throughout the State have been supplied with colonies.

The board, at its meetings Aug. 14, 1890, resolved unanimously to at once erect two glass houses, covering large orange trees, where the destructive cottony cushion scale (*Icerya purchasi*) can be thickly colonized, and at the approach of inclement weather place a few of the *Vedalia cardinalis* in one of the houses, reserving the other for later use should the first stake, and the risk of them dying out is too great to allow this to be again repeated. It is to prevent all possibilities of a failure that these precautions have been taken.



GLASS HOUSES AT SAN GABRIEL FOR THE PROTECTION OF VEDALIA CARDINALIS THROUGH THE WINTER.

become overstocked. In this manner the board hopes to preserve this wonderful insect to the fruit-growers of California.

This course was prompted by the experience of last winter. In the spring it was almost impossible to find a living specimen, and as the cottony cushion scale reappeared in a number of groves where it was supposed to have been exterminated, having passed through the winter under the ground at the collar of the tree, under a weed, or in some way secure from the attacks of the vedalia, at the approach of warm and congenial weather, the scales hatched and developed with such rapidity it created considerable alarm among orchardists.

The experience of the past few years was too fresh to again allow the scale to become established. The icerya is now very scarce, and the possibility of the vedalia passing through the winter months is now reduced to a minimum. The board has had erected at San Gabriel, Los Angeles county, two glass houses, a good idea of which can be had by reference to the accompanying photo engraving plate. They are at the orchard of Col. J. R. Dobbins, and are octagonal and so designed that they present a good surface to the sun, and are thereby warmer and more suitable for the propagation of both scales and ladybirds.

The dimensions are each 16 feet in diameter by 18 feet in elevation; every part is well fitted, and the ventilation protected by very fine brass-wire mesh, to guard against the entry of any ladybirds before the cold weather sets in, otherwise the scales would be destroyed by them early in the season; and also to prevent the ladybirds from escaping during the time they are being colonized for distribution in the spring.

Many are of the opinion that this most important foe to the baneful icerya "has come to stay," but there are no facts upon which to base such an opinion, beyond the fortunate results of the past winter, when they passed through it unprotected. There is too much at stake, and the risk of them dying out is too great to allow this to be again repeated. It is to prevent all possibilities of a failure that these precautions have been taken.

Scale-Eaters at the South.

EDITORS PRESS:—Your favor of the 27th inst. making inquiry about a ladybird that is reported as effectually destroying the black scale (*Lecanium oleæ*) in this end of the State is just received. I do not know of any kind of ladybird that is doing such a work as this. The Twice-stabbed ladybird (*Chilocorus bivulnerus*) preys upon these pests, and Pilate's ladybird (*Exochomus pilatei*) is reported to have similar habits; but neither of these two species are abundant enough to appreciably lessen the numbers of the *Lecanium* in question. A far more effectual agent in reducing the numbers of these pests is the Chaleid-fly (*Dilophogaster Californica*). I have frequently examined orange trees upon which fully 80 per cent of the *Lecanium oleæ* had been destroyed by this *Dilophogaster*. I have noticed that the rosin spray proves fatal to this useful insect, but, judging from analogy, the hydrocyanic-acid gas treatment does not. A few days ago I examined some orange trees that had been treated with this gas and was not able to find a single living *Lecanium hesperidum* upon these trees, although their dead bodies were there in large numbers. I inclosed in a box several of these dead scales, and a few days later a Chaleid-fly (*Coccophagus lecanii*) issued from one of them, the gas having killed the scale without at the same time destroying the parasite that infested it.—D. W. COQUILLETT, *Los Angeles.*

ELECTRICITY IN INSECTS.—M. Nicolas Wagner, by a series of experiments displayed before the Academy of Sciences, showed that electricity produced variation in the color of butterflies. His experiments were performed on *Venessa urtica*. He found that electric currents changed reds into orange and blacks into reds, and with a constant battery, a weak current produced spots varying in shape with the strength of the current. He further demonstrated that the colors naturally existing in the butterfly's wings were due to currents in that organ, the most powerful of which passes from the attachment of the wing outward along the middle nervure to the outer edge. In these experiments he used a galvanometer of 20,000 coils. The following are the conclusions he arrived at: 1. The existence of fixed electric currents in the wings of insects. 2. The possibility by means of electric currents to provoke a change in the shade and disposition of the coloring matter. 3. The possibility, by means of these currents, to produce a kind of atrophy and to change the shape of the wings. He concludes as follows: "With these facts as a basis, I propose to pursue my research on this subject."

THE POTATO BUG.—An amateur scientist student at Wakefield, Mass., planted a potato in a little soil at the top of a factory, 40 feet from the ground, to see if the potato beetle would find the plant. It has found it, and now the amateur wants to know whether the beetle is a bird or a fly.

THE National Bank circulation continues to decline at a rate exceeding $20,000,000 a year, reports *Bradstreet*.

THE VETERINARIAN.

Answers to Queries from Rural Readers.

EDITORS PRESS:—About a year ago, I observed a tumor or swelling on the side of the neck of a six-year-old mare, located in about the middle between head and shoulder and mane and throat. It is quite hard, about six inches in diameter and rises in the center, about one and one-half inches above the proper line. There is apparently no sensation in it. What caused it in the first place is a mystery, as there never was any visible injury. It does not seem to incommode the animal in the least, but as it seems to grow I would like to get some advice through the columns of the PRESS what to do in the matter to remove the growth without an operation, if possible, or to stop its further growth if the first cannot be done.—OLD SUBSCRIBER, *Sunol.*

I judge that the trouble is a white fibrous tumor. I would advise the insertion of a seton through the tumor and apply to the enlargement the ointment of the biniodide of mercury. If the animal is valuable, secure the services of a qualified veterinary surgeon.

Splenic Apoplexy.

EDITORS PRESS:—I have some sick cows and have lost seven head of them. The first symptom that I can see is that they commence to lick and gnaw at their hind legs and then they will rub the rump or the root of their tail, and lick at their sides; then they get down and will kick their feet together as though they would tear them off; they will have a hard chill and shiver and shake as if in a fit. They get weak in the small of the back and in their hind parts, and when you press on their flank it seems to give them relief. They don't live long; the longest that any of them have lived is three days and nights. Their noses are dry and their nostrils flap as though they were out of breath, and their sides the same way. They get their breath like an ox that is at work on a hot day. They run a little at the nose a kind of water, and when they get down they roll their eyes back all the time. Their dung is hard, as a general thing, and their water a yellowish-red color.

I opened one of them and I found the stomach which has those fine leaves in it full and hard and the gall was in a yellow slime all over one side of the liver. I have had all of the cow doctors in this part of the country and they all say they never saw anything like it before.—L. A. IRWIN, *Woodland.*

The cows are suffering from splenic apoplexy, which is the most frequent form of anthrax in cattle. It is due to *bacilli* in the blood, and they must have been some time multiplying in the system, and the attack is simply when the bacilli begin to manifest their effects. There are no curative means of any use. Prophylactic measures comprise those which I have frequently recommended for anthracoid cases in general. Employ a competent veterinary surgeon to investigate, and he will advise you what to do.

A. E. BUZARD, M. R. C. V. S. L.
11 Seventh St., S. F.

THE Chicago Government building, which cost $6,000,000 about 14 years ago, has been condemned as unsafe, and is to be abandoned. Mr. W. K. Bell, the Government superintendent of buildings, says that during the past 13 years the structure has settled from six to 18 inches, and has settled from ¼ to ½ inch in the past few days. The number of employes in and about the building is stated to be "about 3600."

THE ordinary sand filter will not destroy or filter out bacteria from water.

Work of the Department of Agriculture.

Valuable Charts.

So useful a purpose has been served by the Album of Agricultural Statistics of the United States, recently distributed by the Department of Agriculture, that, upon the basis of the same material, the Statistician has prepared a series of cartographic maps illustrating the distribution of area in corn, wheat and oats, the values of cattle in the several States, and the State distribution of rural population. These values are averaged for ten years, eliminating annual fluctuations, and give a much fairer result than the record of a single year. The maps illustrate the differentiation by States in five groups, each distinctively marked by mechanical drawing and separate tints. Being somewhat expensive, the edition is small, and its distribution will be restricted to Farmers' Institutes, Agricultural Colleges, Manual Training Schools and such other educational institutions as desire to teach rural economy. By the classes indicated, the charts may be obtained upon application to the Secretary of Agriculture, Washington, D. C.

Chestnuts for Market.

Samples of American chestnuts superior to those of foreign growth both in size and in flavor, have recently been received at the Department of Agriculture, affording a striking illustration of the results of culture and selection. By these means it is believed that the maturity of the chestnut likewise may be materially hastened. Reports received from various sections of the country indicate that the nut may be best prepared for market by being immersed in boiling water for about ten minutes as soon as gathered. Wormy nuts will float on the surface and may be removed; all eggs and larvæ of insects will be destroyed; and the condition of the meat of the nut will be so changed that it will not become flinty by further curing for winter use, and still be in no wise a "boiled chestnut." The nuts may be dried in the sun or in dry-houses after being placed in sacks in such quantities as to admit of their being spread to the thickness of about two inches, the sacks being frequently turned and shaken. Dried by this method, they remain quite tender, retain for a long time the qualities that make them desirable in the fall, and may be safely stored; but, of course, will not germinate. A bulletin on nut culture is being prepared by the Division of Pomology, and when published may be obtained by applying to the Secretary of Agriculture, Washington, D. C., or to the Division of Pomology, Department of Agriculture.

The Hollyhock Disease.

Number 2, Vol. VI, of the Journal of Mycology issued by the Division of Vegetable Pathology, United States Department of Agriculture, is now being distributed. Florists will find the publication of special interest, as it contains a full account of a new hollyhock disease and of successful experiments in its treatment. The disease appeared in several New York houses a few years ago and has proved a very serious pest, the loss this season in one establishment being over $3000. The knapsack sprayer mentioned in a previous number is described and illustrated. This machine has been found as effective as any of the more expensive pumps, and not being patented can be made at small expense. Other papers in the Journal discuss recent investigations concerning the smut fungi; a new and destructive disease of oats; copper soda and copper gypsum as remedies for grape mildew, etc. For the benefit of those who are specially interested, a reprint of the article on the hollyhock disease has been issued for special distribution, and may be obtained by applying to the Secretary of Agriculture, Washington, D. C., or to the Chief of the Division of Vegetable Pathology.

The Experiment Station Record.

The agricultural experiment stations of the country, over 50 in number, issue annually some 300 bulletins and reports of from 4 to 250 pages each. Very few people have access to all of these publications, and fewer still can afford the time required to note the character and results of the experiments they describe. Those who find it desirable to keep pace with the progress of agricultural experimentation will find a condensed record of all station work in the Experiment Station Record, issued by the United States Department of Agriculture. The October number is being distributed, and the November number also is practically ready.

PLANT FOOD.—A French agricultural experiment station reports that out of 575 plants the goat eats 449 and refuses 126; the sheep out of 518 plants eats 387 and refuses 141; the cow out of 494 plants eats 276 and refuses 218; the horse out of 474 plants eats 262 and refuses 212; while the pig out of 243 plants eats 72 and refuses 171.

Agricultural Notes.

CALIFORNIA.

Alameda.

Heavy Shipments of Farm Products.—Livermore *Herald*, Oct. 30: These are busy times at the railroad station here. Two of the leading products of the valley—hay and grain—are being shipped in large quantities. Three cars of dried grapes go East per day, to say nothing of those that go West. A large freightage of hay goes regularly every day, and last Sunday a special train of eight cars was made up and taken to the Bay.

Colusa.

Grasshopper Pest.—Orland *News*, Nov. 1: Grasshoppers are becoming very thick this fall, and it would be well for those having orchards to look out for them, as their bite is poisonous to fruit trees. A very little labor will rid an orchard of these pests should they begin to attack the trees, as they can be driven out the same as a band of animals, and when once out, one person can keep them herded away from quite a large orchard.

Agitating for a Raisin Drier.—Colusa *Sun*, Nov. 1: There are many fine vineyards in the vicinity of College City which bear profusely, and much of this season's second crop will go to waste because of proper facilities for curing. Uncle Billy Calmes is more fortunate than his neighbors in that he possesses a steam drier, hence will save most of his crop. Surveyor Brasfield told a *Sun* scribe it was the talk of the vineyardists in that locality of forming a stock company whose aim would be to erect an immense steam drier to insure the preservation of their grapes.

Fresno.

A Raisin Drier Consumed.—Fresno, Oct. 30: Last night the immense raisin drier of J. M. Sugh, who resides on the Malaga tract, between Orange and Cedar avenues, was consumed by fire. It was caused from the explosion of a coal-oil lamp. The drier has a capacity of about 900 trays, and the loss is not less than $1500. This is the thirteenth raisin drier which has been consumed by fire this season in Fresno county. The insurance companies refuse to take risks on them.

Dried-Fruit Shipments.—Fresno *Republican*, Oct. 30: Fresno continues to be one of the great shipping points of the Southern Pacific railroad, ranking high in outgoing and incoming business. The shipments of raisins and fruit from July 1st to October 25th, both inclusive, wholly products of this year, were as follows:

	Carloads.
Raisins	340
Dried grapes	120
Dried fruit	70
Green fruit	189
Total	719

The season's work of the vineyards and orchards thus exceeds that of last year, up to date, by 90 cars, with about half of the raisin and dried fruit crop yet to go forward and all of the wine, which last season amounted to 161 cars and will go much higher this year.

Second-Crop Raisins.—Selma *Irrigator*, Oct. 30: Quite a lot of second-crop raisins are out yet, and these sunny days are just the thing for them.

Los Angeles.

Orange-Growers Organized.—Pomona *Progress*, Oct. 30: The Ontario orange-growers have organized a protective union that bids fair to be a thorough success. The purpose of the union is to get better prices for the fruit of the members of the organization by negotiating with the shipper for the whole crop of the union at one time, and to find, by frequent meetings and discussions, the best methods of growing and marketing fruit.

Successful Orange Growing.—Pomona, Oct. 30: We notice that all of our most successful orange-growers do more or less fertilizing in their groves. All the Riverside orange-growers use fertilizers, and see what wonderful returns some of them get year after year!

Land Advancing.—Pomona, Oct. 30: There is a mighty good movement in all well-watered acreage property. We know of many pieces of land that could have been bought 30 per cent cheaper a year ago than now. Those who did buy can easily sell to-day and make a very good thing on their investment.

The Scale Pests.—Los Angeles *Express*, Oct. 30: The Los Angeles Co. Horticultural Commission, consisting of A. F. Kercheval, Geo. J. Mitchell and Jno. Burr, visited the orchards in the Vernon district on Thursday to observe the results of the experiments of the orange-growers to rid their trees of the red scale. With the exception of two or three growers, all have this season sprayed their trees with a resinous wash. Where this has not been done, the orchards look very bad, the trees rapidly decaying and bearing little or no fruit. The growers who have made the effort to relieve themselves of the pests show clean and beautiful trees, their branches loaded down so heavily with fruit that they have to be in most instances supported by props. The leaves of the sprayed trees also look vigorous. The contrast is in fact very marked between the neglected orchards and those that have received treatment.

Mendocino.

Rains and Outdoor Work.—Laytonville Cor. Ukiah *Dispatch and Democrat*, Oct. 31: We have had two good rains, and consequently Mother Earth is putting on her mantle of green and soon feed will be abundant. Some of the farmers are putting in their grain, and it is to be hoped that a large yield will be harvested next year, for hay can hardly be obtained here now and wheat is selling at two cents per pound.

Modoc.

Grain Yield.—Alturas *Modoc*, Oct. 30: The average yield of grain this year on the ranches around Eagle creek was over one hundred bushels to the acre. One gentleman, whose name we cannot just now recall, raised 2600 bushels on 23 acres of land.

Monterey.

Large Yield of Potatoes.—Salinas, Oct. 30: The enormous quantity of potatoes per acre raised on the Buena Vista ranch this year is almost incredible. Several of the parties who bought land there a little over a year ago, paying $100 per acre, have raised this year upon the same upward of 200 sacks per acre, and some as high as 300 sacks, and have sold them on the ground at $1 to $1.25 per sack.

Harvesting Sugar Beets.—Salinas *Index*, Oct. 30: About 150 men are employed in the work of harvesting sugar beets on the Molera tract. Six digging plows, drawn by two horses each, are constantly running, each of which has a crew of men who throw the uprooted beets into rows, after which the toppers follow up and prepare the beets for shipment. The knives used in topping are made on the farm by an old Frenchman, who says he served with Napoleon III, and the toppers use these knives so expertly that the growth above the surface is removed by one dextrous stroke with the knife. After the beets are topped, they are thrown into boxes holding about 75 pounds, and when full the topper calls "check," and the boss hands him a small copper check and chalks the box. The check, when presented to its redeemer, represents the earnings of the party passing in his checks. The price paid is 2½ cents a box. The ranch is provided with tramways constructed in sections so that they are portable and can be strung along at different points on the ranch where the harvesting force is at work. The cars are switched from the main line and run out on these tramways, so that when the beets are in the boxes, they only have to be hauled a short distance to the train. Trucks are on hand for hauling the filled boxes to the train on the portable tramway. They take about ten boxes at a load.

Orange.

Potato-Digging by Machine.—Santa Ana *Blade*, Oct. 30: Two potato-diggers are now on their way from the East to Orange county, to be used by parties near Westminster in gathering their winter crop of spuds, which will be very large all through that country. One of these machines will be operated with four horses and the other with one. It is claimed for the one-horse machine that it will throw out 400 sacks of potatoes a day. We are not informed as to the capacity of the larger digger. We understand that one thing that led to the procuring of these machines was that the men who have made a business of digging potatoes struck for a raise from 10 to 15 cents per sack for the work, and the owners of these fields have concluded it will be cheaper to buy the machines than to pay that price.

Santa Barbara.

Profits in Onions.—Lompoc *Record*, Oct. 25: I. M. Clark has given us the amount of produce and profits from 5¼ acres of onions grown on his farm the present year. Mr. Clark took from this land 1268 bags and boxes from which the net profits reached $1880. This is a net yield of $350 per acre. Mr. Clark cleared $1750 net off of seven acres of this same land planted to potatoes last year.

Apple Shipment.—Lompoc, Oct. 25: When it is known that 2700 boxes of apples left the wharf by the last steamer, some idea can be formed of the magnitude of the fruit industry in our colony. Every steamer leaving here for the past month has taken a thousand or more boxes, and there are a good many thousand boxes yet to be shipped.

Walnut Shipments.—Santa Barbara *Independent*, Nov. 1: Mr. Curtis of W. R. Strong Co. says: "I have just loaded three cars of English walnuts and sent them to New York over the Santa Fe route. Our firm has the sacks labeled 'Selected Santa Barbara Walnuts' and they go to the Eastern markets under that brand. We will probably have about 50 carloads this year, two-thirds of which will come from Santa Barbara and Ventura counties. The nuts this year are of fine quality and command good prices. Hon. Russell Heath has sold eight carloads to us this year."

San Diego.

A Productive Valley.—San Diego *Union*, Oct. 30: Tia Juana valley is furnishing much of the fruit brought to market this season. Loads of cantaloupes came up Friday, and H. Bloom's ranch furnished many boxes of red Spitzenberg apples.

Good Sale of Raisins.—El Cajon, Oct. 29: A. W. Gilbert & Bros. have just sold to New York parties 25 tons of raisins in the sweat-boxes at 7⅞ cents a pound delivered at their packing-house here. The raisins will be shipped to New York and put up in cartoon boxes for select retail trade.

Women Orchardists.—S. D. *Union*, Oct. 23: Dried figs of the Yellow Smyrna and White Ischia varieties were brought to market yesterday by Mrs. Rupp of Valley Center, whose ranch is near Escondido. She has prepared 1000 pounds in this way and packed them neatly in square boxes. Her process is to dip the fruit in a brine, which keeps out the insect so familiar to patrons of the imported fig of commerce. The fruit is intended as a sweetmeat, to be eaten without cooking, as it is tender and deliciously sweet. * * * Mrs. Reed commenced work in the Julian country 12 years ago on a homestead, $800 in debt and with six small children to support. She has supported and raised her family, paid her debts, improved her place and saved some money. This year her place will net her $2500. She has carried on general farming, but has given her attention mainly to miscellaneous fruits. She has now a large quantity of apples in the bin that would make an Ohioan or a "York Stater" grin all over.

Santa Cruz.

Sugar-Beet Delivery.—Watsonville *Pajaronian*, Oct. 30: But a few hundred tons of this valley's beet crop are undelivered, and it is expected that they will be in next week.

San Joaquin.

Irrigation Canal.—Stockton *Independent*, Oct. 29: Considerable work was done on the Woodbridge Canal and Irrigation Co.'s canal some time ago, but recently matters have been at a standstill. Now it is proposed to go ahead and complete the work that was so well begun. It is the expectation to have the water ready for delivery in time to irrigate the alfalfa crops next season. The water is taken out of the river at a point inside the town limits of Woodbridge, 150 yards south of the hotel. The levee is cut and a massive gateway constructed. The flume, as it may be called, is 60 feet long, 48 feet wide and 20 feet deep. It extends into the river for a few feet, and a large apron runs out into the water for a depth of 16 feet. The main canals the corporation contemplate to run cover a distance of 46 miles. The one to New Hope is 12 miles long, another to Brack's 9 miles, the third to the Five Mile house on the Sacramento lower road will be 11 miles, and the canal running to the Calaveras river, for which bids have been called, is 13 miles.

San Luis Obispo.

Turkey-Raising.—Simmler, Oct. 29: The grain business is not all that we are into here. I. R. Sweena was the first to try the market with turkeys, which many of our enterprising women have done a good business in. Ed Tomlin and S. D. Fairbanks went out with a load of fine large turkeys this week, of which there will be several hundred to go from this settlement this fall.

Shasta.

Cotton.—Editors Press:—Our country is attracting fruit-growers, and the more they investigate, the more I think they will like it. We have some cotton plants from the seed you sent us that stand nearly six feet and are still in blossom. I suppose a good many people (not well informed) in the other end of the State would imagine that we of the north are frozen up by this time, but the only way to convince all such is for them to come up and see for themselves.—A. P. Henning, *Cottonwood, Oct. 26th.*

Sonoma.

Chicken Cholera.—Petaluma, Oct. 30: Chicken cholera is playing havoc with poultry on some of the farms in this neighborhood. Several hundred fowls have died in a few nights. One farmer is reported to have lost over a thousand.

Ladybugs.—Cloverdale *Reveille*, Nov. 1: Ladybugs have invaded this valley from Cloverdale to Guerneville, from our personal knowledge, within the last three days. They came in uncounted thousands, and are feeding on the young leaves of the French prune, and being omniverous, they swarm on all kinds of flowers which they utterly destroy. Bahach does not seem to kill them, and we are trying sulphur.

Dairy Interests.—Sonoma *Index-Tribune*, Oct. 25: The dairy interests of Sonoma and vicinity are growing in importance every year. The feed on the Sonoma marshes, where our leading dairies are located, is peculiarly adapted to cheese and butter making, imparting a flavor to those products that is at once pleasing to the taste of connoisseurs. The cheeses of Sonoma dairies find a ready sale at highest market prices in San Francisco, whence they are exported in large numbers to Asiatic and South American ports. The dairies which have made the largest cheese and butter shipments this season are those of Chas. Filippini, M. Marti, Anton Kiser, S. A. Ringstrom, Harry Fisheer, Peter Kiser, Millar Bros., Ignatz Kiser, H. Rubke and Fred Neuenschwander. The latter alone has shipped since the first of last November 63,000 pounds of Limburg and Swiss cheese to San Francisco, and he is by no means the heaviest shipper among our Sonoma dairymen.

Sutter.

A Grape-Stemmer.—Yuba City *Independent*, Oct. 31: John Wilkie, who cultivates a vineyard just below town, has an ingenious method of stemming dried grapes. It consists first of an ordinary fan-mill, such as is used in cleaning wheat. On top of this is placed a wooden frame in which is suspended a circular receiver made of coarse wire netting, which tapers downward somewhat in the form of an inverted sugar loaf. Inside of this receiver is another similar shaped wire contrivance, made of smaller wire with smaller meshes, which revolves within the larger one, which is stationary. At a convenient hight from the ground there is a wooden hopper into which the grapes are dumped and from which they are carried up by ordinary elevator-cups and emptied into the receiver. By the revolution of the inner wire netting the grapes are separated from the stems and pass down into the hopper of the fan-mill, where they are cleaned of all coarse stems, dust and refuse grapes, and run into sacks. Horse-power is used to run the machinery.

Spraying Orange Trees.—Yuba City, Oct. 31: The work of spraying orange trees for the destruction of scale has commenced in Marysville. It is being done under the direction of the Horticultural Commission. We have heard of no movement to that end in Sutter county as yet, but the spraying the trees received last spring seems to have been very effective, and but few trees seem to be infested with scale. The matter should not be neglected, however, or the pest will increase rapidly.

Sutter-County Raisins.—Yuba City, Oct. 30: By far the largest sale of Sutter-county raisins ever made was consummated yesterday, B. C. Kelb of the Sutter Fruit Company selling to Loose, Kuhn & Laeger of Chicago five carloads, all grown and cured within five miles of this city. The purchasing agent pronounced them equal to the best grown in the State, and it is understood that they brought top prices.

Tulare.

Fruit Notes.—Traver *Advocate*, Oct. 30: Raisins in the sweat-boxes are still being received at the depot here for shipment to Fresno and other places. Many thousands of dollars have been distributed in Traver this summer for fruit, and it has given the fruit industry a great impetus. Many of our horticulturists are getting ready to enlarge their orchards and vineyards, and the area now devoted to fruit will be doubled the coming season. There is considerable inquiry for land in this vicinity now, and quite a number of sales have recently been made or are on the tapis.

Cheese Notes.—Visalia, Oct. 30: The cheese factory, under the efficient management of J. G. Cahoe, is rapidly coming into notice in San Francisco markets as a manufacturer of good cheese. The first shipment to San Francisco brought 12 cents per pound. The product for the next four months has been contracted for at 13¼ cents, which is top price for cheese.

Tree Planting.—Visalia *Delta*, Oct. 30: A large aggregate area of fruit trees and vines will be planted in the country south of Tule river to Deer creek and beyond to White river. Most of this is in small amounts, but the acreage will be increased each year until that also becomes one of the principal fruit districts of the county.

Yolo.

Raisin Crop.—Dixon *Tribune*, Nov. 1: The raisin crop is being rapidly harvested, and with a few weeks more of sunny weather our section will beat the record in that line.

Raisin Notes.—Blocks, Oct. 20: The raisin men are having good weather to save their second crop of raisins, which will be of excellent quality. It is thought that the picking of the second crop will be finished this week.

Fig Shipment.—Winters *Express*, Nov. 1: The first car of the season of dried (oxed) figs was shipped to-day, by Henry Craner, to Kansas City, Mo.

Yuba.

A Large Acreage to Be Sown to Wheat.—Marysville *Appeal*, Oct. 30: The busy season will soon be fairly opened for the farmers of Yuba and Sutter counties. Many are already preparing ground and sowing wheat. The most of the summer-fallowed ground has been sown, and the farmers are doing their best to get all the ground possible ready for fall sowing. John Kimball of Sutter county was seen yesterday in relation to this matter. He stated that there would be a great deal of wheat sown this year, and a great deal of it would be on summer-fallowed ground. Last spring it was too wet for the farmers to do much planting, and as soon as the ground dried sufficiently the plow was put at work and prepared the land to receive the grain this fall. Mr. Kimball stated that he had not sown yet, but would shortly. He is of the opinion that there will be more ground put into wheat this fall than there has been for years. There were a number of other farmers questioned by the reporter, and they all seemed of the same opinion in regard to the large acreage of wheat that would be put in this fall.

Foreign Competition on Our Own Soil.—There seems to be an inclination expressed by British manufacturers to remove their plants, or invest their capital in new ones, in this country, to offset the restrictions placed upon their American commerce by the new tariff law. As it is evident that the passage of this important Act will have a tendency to increase domestic manufactures, it is not remarkable that foreign capitalists are desirous of making heavy investments here. But alien capital and labor ought to be placed under such restrictions that the interests of American citizens engaged in production shall be protected against undue business rivalry on our own soil.

On Sept. 1st the total amount of money in the country, including the amount in the Treasury of the United States, was estimated at $2,082,568,924, and on Oct. 1st at $2,109,580,687, an increase of over $27,000,000 in one month.

POULTRY YARD.

Care of Pigeons.

"Homer" contributed to the *Cackler* awhile ago the following suggestions, which are now timely and fitting:

At this season the fancier looks for the result of the year's work. The molting season has about ended, and the markings of the fancy birds give to the eye of the skilled breeder keen pleasure at his successful matings, or deep regret at those which have turned out disappointing, and to many of these latter the lack of a pedigree book can be at once traced.

The Homing breeder looks little after the markings of his birds; the turn of a feather amounts to nothing with him; still, the trying season of the year is just past, and he views his sleek hard-feathered racers with the satisfaction of feeling that, owing to his care, the results he so carefully labored for months to obtain have been accomplished.

On the other side are the fanciers (though not truly so), who, as soon as the birds begin to look ragged, or the racing season is over, let their pets shift for themselves, making them stand all manner of neglect at a most critical period when greatest attention is necessary. The result is now plainly seen. His losses have been large, many of his best birds are gone, and he breeds from his poorer ones a still lower grade of stock, until in a short time he has little else than scrubs, and no doubt gives up the fancy in disgust. To which class of fanciers shall we belong? Certainly not to the latter, and if by ignorance we are this season classed among the unfortunate breeders, let us at once make up our minds to do better in the future. Let us at the beginning of next season take our birds in hand early, and bring them through their molt so that they will be a credit to us and not a source of regret.

Separating the Sexes.—We will first separate sexes, as no breeding must be allowed during molting time.

Ventilation.—Second, we will see that our house, though well ventilated, is without drafts. Cold wind blowing on birds at this season means almost certain death.

Water.—Next comes water. When molting, the birds give off a certain scurf from the skin, which fouls the bath and makes the water unfit for drinking, so that when we place the bath in the loft, which we do on sunny days only, we must change the water often and remove it soon as birds are done bathing, forcing them to drink from some vessel into which they can get their heads only.

Tonics.—A little Douglass mixture added to the drinking fountain is beneficial, as is also a little saffron; but only a little should be used, more as a prevention of ills than anything else.

Feed.—Now we come to the feed. Avoid cracked corn as you would poison. A little small round corn will do no harm, but if possible make Egyptian corn or good sound wheat the staple food, adding a little canary seed, and occasionally a little hemp seed. Stale bread soaked in water and well squashed out is relished, and is healthful if only given in such quantity as to be eaten up clean, and not lay and sour. A small quantity of flaxseed with the wheat has a good effect and should not be forgotten.

Salt Cat.—The lump of rock salt is good in its way, but generally belongs to the fancier, who keeps no pedigree-book, and who breeds haphazard in hopes of getting birds as good as their parents, but who looks upon improving his birds as something beyond him. A good salt cat is easily made, and is so much better than a lump of salt that no true fancier will use the latter. The salt cat I use, and which has given me entire satisfaction, is composed of five pounds clay, three pounds sharp gravel, three pounds pounded mortar, two pounds salt, one pound cummin seed, two or three good-sized lumps of asafœtida, and two or three handfuls of granulated bone and ground oyster-shells. Pound all up and mix thoroughly; then add water to make the whole into a stiff paste; mold in old flower-pots or other convenient forms, dry and keep out of the rain, giving the birds a cake of the cat as often as necessary. They will eat it greedily, and it is a great assistance to digestion, especially during the molting season, when the whole system of the bird seems to be out of gear, as it were.

Did Dr. Gally Feed Lousy Wheat?

EDITORS PRESS:—In regard to Dr. Gally's loss of chickens, I have waited several weeks hoping that some one from this vicinity would write who had himself lost chickens in a similar manner.

A dealer in this place purchased a lot of wheat which had been raised in the interior of this county, which on looking at was plump and good looking; but all who had bought of that lot of wheat lost largely of their chickens, at least six families in this neighborhood having suffered from this cause. One farmer brought home his sack in the evening, fed his chickens and found six dead under the roosts next morning, and so on through the list. On close inspection this grain was found to be infested with a *mite* of almost microscopical size and much the color of the grain.

On closely examining the dust in the bottom of the sack, it could be plainly seen by the naked eye. The grain was rendered harmless by being boiled or baked.

Much of the wheat raised in that section of country with this was said to be similarly infested. Is not Dr. Gally's loss from the same cause? MRS. H. STEWART.

Cayucos

SWINE YARD.

National Swine-Breeders' Association.

The ninth annual meeting of the National Swine-Breeders' Association will be held in the Sherman House, Chicago, Ill., at 2 P. M., Wednesday, Nov. 19, 1890. Notice is sent to every member, and also to many breeders who will doubtless become members when they think of the advantages to be derived from having a large and influential National Swine-Breeders' Association. Every swine-breeder in America is more or less concerned in the prosperity of the National Association. Its field of work includes every State and Territory of our country, and every reputable breeder and feeder of hogs within this area is welcome to membership. The association has in the past done much good in collecting and disseminating useful information, as shown by its annual publications. Still more may be accomplished by co-operating with the State, district and record associations in securing such legislation as the good of the swine-breeding industry may from time to time require.

The proper showing of swine at the fairs is a subject that might well be considered by the association. A well-arranged classification should be devised that will commend itself to the leading fair-association managers. The importance of a uniform classification of swine, as also of live-stock generally at the fairs, can hardly be overestimated.

The coming meeting will be in the second week of the American Fat-Stock Show. It will be the week also of the American Dairy Show, the American Poultry Show, and of many other meetings held in Chicago by live-stock breeders.

The increasing interest in live-stock affairs occasioned by preparations for the World's Fair in 1893 leads to the expectation of a large attendance on the 19th of November. A good program has been arranged. The proceedings will be of unusual interest and when published well worth reading by the members who cannot attend the meeting.

The constitution of the association provides that any reputable breeder or feeder of swine, or any State Swine-Breeders' or Swine Record Association may be admitted to membership by the payment of $1. The annual dues of members amount to $1 each. The names of new members, as well as of all renewals, will appear in the list published with the proceedings, giving breed or breeds kept by each member. PHIL M. SPRINGER,

Springfield, Ill. Secretary.

PECULIAR INFATUATION.

Different Methods of Following the Injunction "Love One Another."

Do men ever fall in love with each other?

Women do. Not long ago a young woman in New Jersey was married to a youthful laborer on her father's farm. Some time afterward it was discovered that the husband was a female; the young wife refused, however, though earnestly entreated by her friends, to give up her chosen consort. The strangest part of the discovery was the fact that the bride knew her husband was a woman before she was led to the altar.

If men do not exhibit this strange infatuation for one of their own sex, they at least oftentimes give evidence of the fact that they love one another. There are many instances on record where one man has given his life for another. There are many more instances where men have given life to another.

It is a proud possession—the knowledge that one has saved a precious human life. Meriden, Conn., is the home of such a happy man. John H. Preston of that city, July 11th, 1890, writes: "Five years ago I was taken very sick. I had several of the best doctors, and one and all called it a complication of diseases. I was sick four years, taking prescriptions prescribed by these same doctors, and I truthfully state I never expected to get any better. At this time I commenced to have the most terrible pains in my back. One day an old friend of mine, Mr. R. T. Cook of the firm of Curtis & Cook, advised me to try Warner's Safe Cure, as he had been troubled the same way and it had effected a cure for him. I bought six bottles, took the medicine as directed and am to-day a well man. I am sure no one ever had a worse case of kidney and liver trouble than I had. Before this I was always against proprietary medicines, but not now, oh, no."

Friendship expresses itself in very peculiar ways sometimes; but the true friend is the friend in need.

"Battle of Gettysburg."

The celebrated Panorama of the Battle of Gettysburg and Museum, corner Market and Tenth Streets, San Francisco, is a wonderful production. It has captured the entire State, doing a great deal of good. There is no better way of passing an hour or so, and in studying American history, than by visiting this Grand War Panorama. If any of our readers have not seen it, it will pay them well to do so.

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If you fail to get this paper. We prefer to send missing Nos. Write soon and to the office direct. It is important that we should know when the paper miscarries.

Good News!

No one, who is willing to adopt the right course, need be long afflicted with boils, carbuncles, pimples, or other cutaneous eruptions. These are the results of Nature's efforts to expel poisonous and effete matter from the blood, and show plainly that the system is ridding itself through the skin of impurities which it was the legitimate work of the liver and kidneys to remove. To restore these organs to their proper functions, Ayer's Sarsaparilla is the medicine required. That no other blood-purifier can compare with it, thousands testify who have gained

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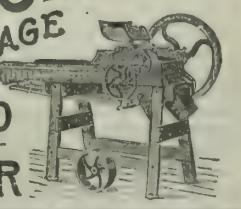
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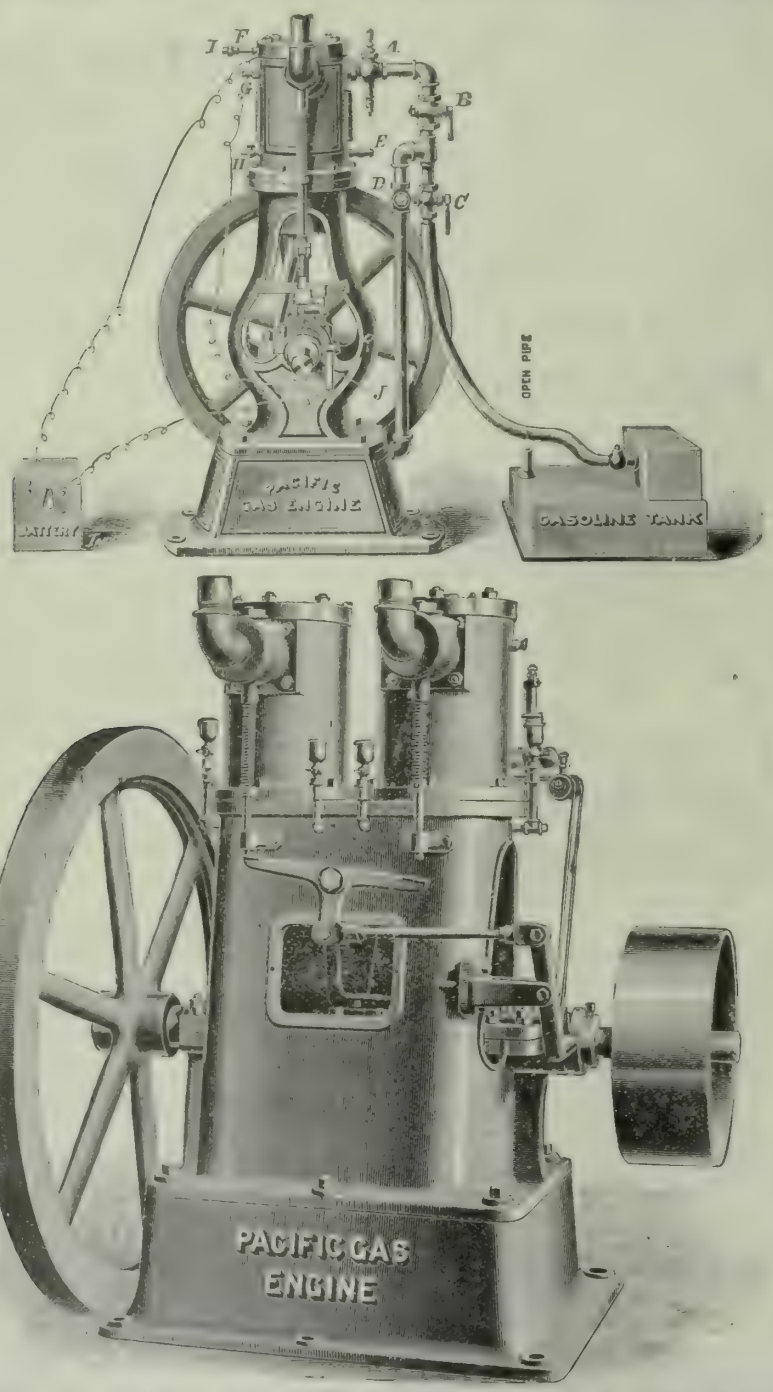
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A visit to the works of the Pacific Gas Engine Co. shows the demand for their popular engine to be far in excess of their ability to supply, forcing them to make arrangements which will within the next 60 days more than double their present output.

On the first page of this issue we illustrate their single and double engines. The motive-power is obtained by drawing air over gasoline which is contained in an iron tank (or carburetter) located at some distance from the engine. This is again mixed with pure air, which mixture of air and gas is drawn into the cylinder of the engine by the downward stroke of the piston, and there closely compressed by the upward stroke of the same. This mixture of air and gas in its compressed state is ignited by an electric spark produced by a small battery. This mixture of air and gas, upon being ignited, produces extraordinary power by the expansion of the heated gas. When the engine is operated by natural or manufactured gas, direct communication is made to the meter.



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The Stockton Street Railway Co. has fitted up a car with these engines, and it is now in successful operation in that city. Their motor carries 40 passengers at a speed of ten miles per hour. The company plans to adopt this system on their entire line, and will probably have it in operation early in the coming year. San Jose is also advancing in this direction, and has a Pacific street-car motor now ready to be put on their tracks. Sacramento capitalists are taking a deep interest in the new power and are now taking steps toward introducing it in that city.

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The company has had numerous communications regarding the use of the engine on agricultural machinery, but owing to the press of business during the past year, have been unable to give the matter their personal attention, but as soon as they are established in their new works they will build a new model specially adapted to agricultural purposes. On headers and threshers it is believed this will be a great improvement on present methods, as danger of fire, which is now the great objection to power in the field, will be entirely obviated.

In looking over the testimonials received by the company, we notice that one purchaser got excellent returns from his investment, and in a manner not taken into consideration when buying his engine. He says: "A fire broke out at 2:30 o'clock this morning in a tenement-house on my premises. I started the engine, connected the hose and by its use saved at least $3000 worth of my property. The engine never faltered and threw the water between 50 and 60 feet high."

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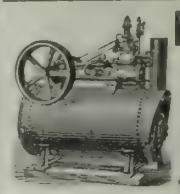
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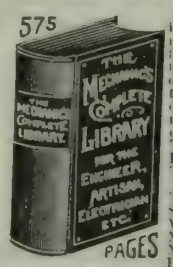
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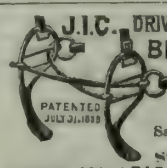
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TRACK AND FARM.

The First Souther Farm Sale.

Great Brood Mares and Promising Young Stock at Auction—Good Road Horses—Some Well-Bred Young Stallions—A Good Opportunity to See a California Stock Farm.

The Souther Farm began collecting well-bred trotting stock in January, 1887. The collection has been gradually increased since that time, and as nothing has been sold, the farm is at present greatly overstocked; consequently a large number of well-bred trotting stock will be sold at the first annual sale, which will take place on Thursday, November 20, 1890, at the Souther Farm, near San Leandro. On that day practically the entire produce of the farm will be sold, the only exceptions among the young stock being two or three fillies reserved for brood mares, and all of the foals of 1890, which are too young for present sale. Furthermore, on that same day the entire Souther Farm collection of brood mares will be sold, saving and excepting a few that are not in condition to place on the market, besides three or four kept for road use. Among this collection of brood mares are some of the best and most fashionably bred, and there are a great many individuals that produce good colts. The produce of almost every mare offered will be shown in such a manner that purchasers may judge for themselves of the worth of the mares.

I wish it distinctly understood that every animal offered will be sold without reserve, limit, or by-bidding, and it will be a long time before those who are looking for brood mares will have a better opportunity of purchasing first-class stock at exactly what they will bring when fairly and squarely offered at public sale.

The following is a partial list of the stock that will be sold on Nov. 20th:

Brood Mares.

VERONICA, b m, right hind foot white, foaled 1884; bred by Silas Skinner, Napa, Cal., by Alcona 730, son of Almont 33, and Queen Mary by Mambrino Chief 11; 1st dam Fontana (dam of Silas Skinner 2:19, Flora Belle 2:24) by Almont 33; 2d dam Fanny Williams (dam of Bay Chieftain 2:28¼) by Alexander's Abdallah 15; 3d dam by Denmark, etc.

Veronica is a full sister to Flora Belle 2:24, for whom Mr. Corbitt paid $3000, and a three-quarter sister to Silas Skinner 2:19, he being by a son of Alcona from Fontana, whereas Veronica is by Alcona from the same mare. Her dam has produced two with fast records, and her granddam produced Bay Chieftain 2:28¼, the only trotter ever produced by John F. Payne. Veronica is a grand individual fully 16 hands high, beautiful head and neck, has grand size, substance and finish, and has every mark of a grand brood mare which she will undoubtedly be. Her first colt Woodside, by Woodnut, Mr. B. C. Holly considers one of the best colts he ever handled, as he drove him quarters close to 40 seconds when the colt was but 14 months old. Her second foal is the bay colt Lord Clive by Sable Wilkes, now the property of Coombs Bros., Napa. Her third foal, a weanling, is now at the Souther Farm, and will be exhibited on the day of the sale. At the sale of Mrs. Silas Skinner's stock on March 6, 1890, Veronica brought $2500, and her dam Fontana $4400. Stinted in 1890 to Figaro (son of Whipple's Hambletonian and Emblem, sister to Voltaire 2:20¼, by Tattler).

ROSALINE, b m, hind ankles white, by Major Mono, son of Pacific, he by Old Niagara, dam unknown.

Rosaline is the dam of Alpheus 2:27—a gamer horse never lived. The mare is very powerfully built and is a model brood mare; every colt she ever produced has shown great speed.

Not stinted in 1890—the mare was supposed to be in foal until so late in the season that it was decided not to breed her until 1891.

PUSS, ch m, strip, hind foot white, foaled 1866, bred by D. H. Gleason, San Leandro, Cal., by Skenandoah 926 (Kentucky Hunter).

Puss is the dam of Haverly (pacing) 2:25, and Modjeska (pacing) 2:32½, who showed a half-mile at Napa in 1:11½, in the heat she nearly lost through slipping in a wet part of the track. Puss is also the dam of Belle Davis, who was the best three-year-old of her year, and made a record of 2:40 some 13 years ago. Puss has produced two fine-looking colts by Figaro, and is in foal again to the same horse.

NAMORA, br mare, small strip, foaled May 24, 1879; bred at Fairlawn, Kentucky; by Almont Mambrino 761 (by Almont 33 out of Monogram by Mambrino Chief); 1st dam the Lackey mare by Blood's Blackhawk. I bought this mare on the showing made by two of her colts which I purchased at the sale of Mrs. Silas Skinner's stock in March, 1890. She is well bred, being by a son of Almont from a Mambrino Chief mare; and Blood's Blackhawk has, through his sons and daughters, given the trotting turf some of its very best and purest gaited performers. See Wallace's Year Book, page 428, for Blood's Black Hawk.

ROSEBUD, br m, foaled 1884; bred by Monroe Salisbury; by Gibraltar 2:22½ (sire of Homestake 2:14¼); 1st dam by A. W. Richmond, sire of Arrow (pacer) 2:13¼, and dam of Anteeo 2:16¼ and Antevolo 2:19½; 2d dam by Crichton, thoroughbred (son of Imp Glencoe), sire of the dam of Arrow (pacer) 2:13¼. Homestake won one of the best races of the year at Napa on Oct. 14th, defeating Hazel Wilkes, Maggie E. and Emma Temple in three straight heats. Time 2:18, 2:14½ and 2:14¼, the last two heats the fastest ever trotted in a contested race in California. Rosebud is by the sire of Homestake out of a three-quarter sister to Arrow 2:13¼. She is a grand individual, and showed a full mile in her work at Napa in 2:40, last quarter in 38 seconds. In the right hands she will make a good race mare and will be of great value as a brood mare.

EFFIE DEANS, br m, foaled about 1875; bred by David Stoddart (now) of Oakland; by Whipple's Hambletonian; first dam, Hallidie mare, a mare that carried Mr. A. S. Hallidie from one end of California to the other when he was Surveyor-General of this State. Effie Deans is the dam of Gerster, by Washington, a pacer that drove out the winner of a heat in about 2:24 on the Northern Circuit this past summer. Effie Deans' weanling foal by Jester D. is one of the best colts of his age at the farm and will be exhibited on the day of the sale. The mare has great speed and wonderful endurance, and she will produce trotters. Daughters of Whipple's Hambletonian are producing very creditably.

ROBERTA, gr m, foaled about 1878; by Patchen Vernon (sire of Allan Roy 2:17½ and the dam of Voucher 2:22) son of George M. Patchen Jr. 31 and Lady Vernon; first dam by John Nelson (sire of Nerea 2:23½ and of the dams of Albert W. 2:20, Valensin 2:23 and others). This mare is bred from strong lines. She has great endurance herself and should produce game and fast colts.

STRAWBERRY, roan m, foaled about 1879; by Newland's Hambletonian (son of Speculation and a mare by imp. Joseph, the sire of the dam of Vanderlynn 2:21); first dam by Owen Dale, one of the best, if not the best son of Williamson's Belmont. This mare has beautiful finish and was a great road mare, but she ran away one day and was put to breeding. Her first foal is a yearling by Figaro and is simply a phenomenal pacer. He has been driven but about six weeks and has been worked very easily, as he is too good a colt to spoil. He will be sold with the other Souther Farm yearlings. Her weanling foal is also by Figaro, and is the best lot trotter on the farm, and unless all signs fail he will be a horse of wonderful trotting speed. He will be exhibited on the day of the sale. This mare will produce extreme speed and will be simply invaluable to whoever purchases her.

FANNY LINFOOT, bl m, foaled about 1873, by Erwin Davis (son of Skenandoah 926), sire of Ed 2:26, Carrie F 2:27¾ and the dam of Florence R 2:26¼; 1st dam by Frank Wise, a Black Hawk horse formerly owned by Mr. Hathaway of San Lorenzo.

Fanny Linfoot is the dam of Jim Linfoot by Figaro, who was the fastest two-year-old on the Souther Farm last spring except El Benton, and he could make it lively for him. He took to growing, however, and it was deemed prudent to stop driving him for fear of overtasking his strength. He will be shown in harness and sold at the sale, and in the right hands will make a dead game race horse.

LA TOSCA, b m, foal 1887, by Ulster Chief, son of Ryedyk's Hambletonian. 1st dam Puss (dam of Haverly (pacing) 2:25, and Modjeska (pacing) 2:32½, by Skenandoah 926.

La Tosca is a full sister to Modjeska (pacer), 2:32½, and half sister to Haverly (pacer), 2:25. With proper handling she should become fast, and will make a good brood mare.

FREDA, brown filly, foaled 1888, by Fred Arnold, son of Nephew; 1st dam Bernarda, a great road mare, every one of whose colts show speed.

Freda started in the two-year-old purse at Napa on Oct. 17, 1890, and divided second and third money with Captain Ben Harris' Dawn filly Starlight.

Freda was timed in the second heat of this race a mile in 2:49¾. She is a perfect beauty in form and coloring, is a dead game little trotter, and with proper handling will make a grand campaigner. She has shown quarters very close to 40 seconds; is very clean-gaited and a delightful filly to drive. Whoever gets her may consider himself fortunate. If she were by one of my own horses, I would reserve her for a brood mare.

Freda's dam Bernarda and two of her half sisters, four and five years of age, both by Fleetwood (son of Nutwood and Centennial Belle by Woodburn) will also be sold.

BABY, ch m, star, foaled about 1885 by Tom Benton [son of General Benton (sire of the dam of Sunol, 2:10½), from a mare by George M. Patchen, Jr. Tom Benton is the sire of Ned Winslow (pacer), 2:15, and Mary Lou, 2:21]; 1st dam Weasel by McCracken's Golddust (sire of Artist, 2:26¼); 2d dam Young St. Lawrence by McCracken's David Hill (sire of Black Swan, 2:28½); 3d dam Old St. Lawrence mare, dam of Dave Hill, Jr. (sire of George Treat, 2:25½), by Foster's St. Lawrence, who had a record of about 2:32, and died in a race on the Kalamazoo track.

This mare had great natural speed, but was foundered before she came to the Souther Farm. She is a splendid brood mare, and has a remarkably good pedigree which will bear close scrutiny. Her sire, Tom Benton, is a producing son of the great General Benton, and through her dam she has three crosses of first-class Black Hawk and St. Lawrence blood, so useful in giving purity of action and fine road qualities, coupled with extreme speed.

With the above will be sold many other well-bred trotting road and work brood mares. Everything will be sold to the highest bidder, and no by-bidding will be tolerated; so this will be an unusual opportunity to acquire good breeding stock.

The following two-year-old stallions will be sold:

JIM LINFOOT, br c, foaled 1888 by Figaro (son of Whipple's Hambletonian and Emblem, full sister to Voltaire 2:20¼, by Tattler); 1st dam Fanny Linfoot (see above), by Erwin Davis; 2d dam by Frank Wise (Black Hawk).

A very fast colt of fine size and conformation; would make a first-class stock horse for the coming season of 1891.

THE BARBER, gray colt, foaled 1888 by Figaro; 1st dam Roberta (see above), by Patchen Vernon; 2d dam by John Nelson.

A large, stout-built colt of very speedy formation. He certainly ought to finish his miles in good shape if speed sustaining blood will tell.

HORATIO, b c, foaled 1888 by Alcona (sire of Flora Bell, 2:24, etc.), by Almont; 1st dam Namora (see above), by Almont Mambrino 761; 2d dam by Blood's Black Hawk.

Horatio is of fine appearance, and shows a first-class gait. He is a three-quarter brother to Prince Warwick, a horse that Mr. Hickok campaigned through the past season without getting him a record. Prince Warwick went through the grand circuit and seemed as capable of trotting second in 2:15 as in 2:25. Horatio will earn some man a good living, as he is well-bred and very promising.

Gran Moro, bl c, foaled 1888, by Le Grande (son of Almont and Jessie Pepper by Mambrino Chief) sire of Grandee, three-year-old record 2:23½; first dam Sunny Slope Belle (dam of Don Carlos three-year-old record 2:32) by The Moor [sire of Sultan 2:24 (sire of 19 in 2:30 list), and grandsire of Stamboul 2:11½, within three-quarters of a second of the world's stallion record]; second dam, running bred, a mare that won races in and about Los Angeles for Mr. L. J. Rose. I hope to have her pedigree by the date of the sale. Don Carlos 2:32 (out of the dam of Gran Moro) is used as a gentleman's roadster in New York, and has been driven a mile over the Fleetwood track in 2:25.

The above is a preliminary and partial list of the stock that will be sold on Nov. 20th at the Souther Farm. Besides these there will be sold the yearlings, colts, and fillies, and the two-year-olds, colts, geldings and fillies. Complete catalogues are now ready and will be mailed to all applying to Killip & Co., 22 Montgomery street, San Francisco, or to the Souther Farm, San Leandro, Cal.

Full instructions for reaching San Leandro, where conveyances will take purchasers to the farm, will be duly advertised. It is a pleasant drive from San Francisco to the farm by way of the creek ferryboat to Oakland, and the place is but eight miles from Oakland, so that all living in or about that city can drive to the farm easily, where careful men will look after all horses driven there. Take the county road between Oakland and San Leandro and turn off at the sign-board.

The stock will be exhibited in harness and at the halter, a few days before the sale; due notice will be given of the exact date. On the day of the sale a good lunch will be provided for all attending. An invitation is extended to all interested in fine stock to come and see the horses and the appointments of the farm, which are very complete.

The stallions El Benton, Glen Fortune, Figaro and Jester D. will remain at the farm, and the business of educating, training and boarding horses will be carried on in the most careful manner.

None of the foals of 1890 will be sold, as it is intended to sell them when they are yearlings in the spring of 1891. GILBERT TOMPKINS.

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Both air and water abound in microbes, or germs of disease, ready to infect the debilitated system. To impart that strength and vigor necessary to resist the effect of these pernicious atoms, no tonic blood-purifier equals Ayer's Sarsaparilla.

SECRETARY WINDOM has determined to call a meeting of the lady managers of the World's Fair in Chicago, November 18th. They will receive $6 per day and expenses.

Floral Shows.

These elegant exhibitions are now on the tapis and deserve most cordial and liberal encouragement by the public. During Thursday, Friday and Saturday of this week, November 6th, 7th and 8th, the State Floral Society will hold its fall show in the new building of the Academy of Sciences, on Market street, near Fourth, in this city. The exhibition will not be large, but it is expected that it will be notably fine, and in the line of chrysanthemums especially will be a sight to look upon. The display will be open day and evening and our readers in the Bay counties to whom this notice will come in time are urged to attend. The rules and premiums were published in the RURAL of Oct. 25th.

On another page of this issue will be found accounts of the chrysanthemum shows of Los Angeles and San Diego, prepared for our columns by two of the best known literary ladies of Southern California. Their descriptions are charming, as the reader will no doubt discover for himself.

Another important floral event will be the first floral exhibition to be held Nov. 11th to 14th, under the auspices of the Southern California Floral Society in Hazard's pavilion, Los Angeles. The premiums aggregate some $1100 in cash, and every facility is afforded exhibitors.

A neat pamphlet premium list is published and may be obtained from H. W. Kruckeberg, Secretary, 218 N. Main St., Los Angeles.

The society extends a cordial invitation to all persons interested in its work to become members. The initiation fee is but 50 cents, and the dues 50 cents per quarter. Application blanks are to be had of the secretary, to whom application should be made.

The society also asks that growers from distant localities send in flowers for exhibition. It is designed that the coming display be a Southern California affair, and not in any sense local in its general character. To avoid this, it is earnestly requested that the growers of Santa Barbara, Ventura, Los Angeles, Orange, San Bernardino and San Diego counties send plants and cut flowers for the exhibition.

List of U. S. Patents for Pacific Coast Inventors.

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439,550.—LEAF-TURNER—J. E. Pellow, Sierra City, Cal.

439,224.—SHINGLE MACHINE—D. W. Williams, Fortuna, Cal.

439,336.—COMBINATION TOOL—Geo. Zitlow, Tacoma, Wash.

The following brief list by telegraph, for Nov. 4, will appear more complete on receipt of mail advices:

California—William H. Anderson, Riverside, treadle pump; John W. Criter, S. F., mining; Owen T. Davies, Brighton, combined ditcher and cultivator; James B. Dean, Lompoc, and H. H. Earl, S. F., brush attachment for dustpans; Adolf Fritsch, Suisun, cigar or cigarette-holder; Louis Goldstone, S. F., street or station indicator; Charles D. Kennedy, California City, machine for making shells; William A. J. Kohrn, S. F., telegraph key; William Maybury, Pasadena, apparatus for drying, bleaching and washing yarn; Horace D. Ranlett and G. Provost, S. F., device for operating shutters for elevator shafts; James W. Reid, S. F., discharge attachment for wash basins, etc.; Percy W. Ross, Los Angeles, car-coupling; Frank Sharon, S. F., hose-coupling; Joseph L. Stillman, Fresno, car-coupling; John Taggart, San Diego, rubber-shoe attachment; Ludwig Wagner, S. F., wine schooner; Alfred M. Whiteley, Sacramento, attachment for chairs; William H. Wiester, S. F., waterback for gas stoves.

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WHITE ADRIATIC FIGS.—A. B. Van Arsdale of Yuba City has produced this year a very fine article of dried White Adriatic figs of which we have seen a sample. The color is light, but we do not detect any sulphur flavor. If sulphuring has been done, it has been well done. The skin is moderately thin and tender, the pulp well preserved, and the product on the whole a creditable one.

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O. J. ALBEE, Lawrence, Cal. Pure bred poultry.

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J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Cross-bred Merino and Shropshire Sheep. Rams for sale.

R. H. CRANE, Petaluma, Cal., breeder and importer, South Down Sheep from Illinois and England for sale.

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ANDREW SMITH, Redwood City, Cal.; see adv't.

SWINE.

JOSEPH MELVIN, Davisville, Cal., Breeder of Poland-China Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

TYLER BEACH, San Jose, Cal., breeder of thoroughbred Berkshire and Essex Hogs.

ANDREW SMITH, Redwood City, Cal.; see adv't.

BEES.

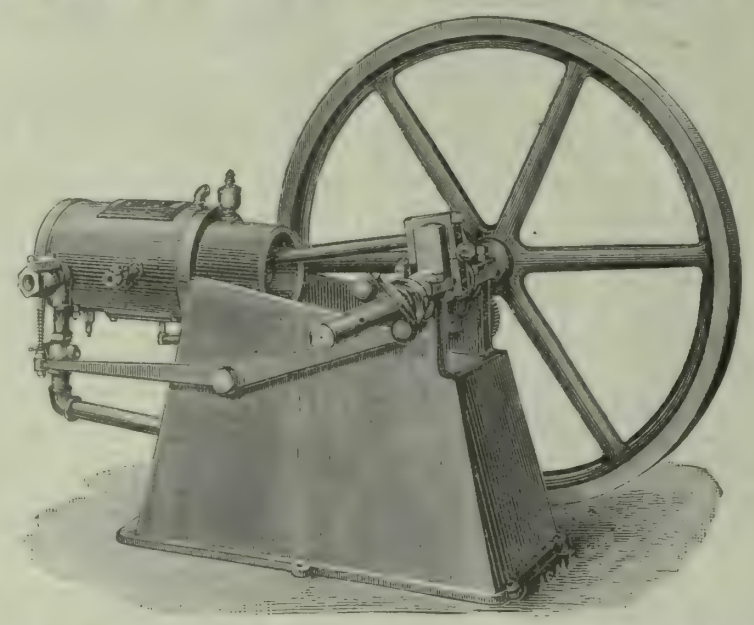
APIARIAN SUPPLIES for sale by Mrs. J. D. Enas, Napa City, Cal.

IMPORTANT!

That the public should know that for the past **Eighteen Years** our **Sole Business** has been, and now is importing **(Over 100 Carloads)** and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires, and Jerseys (or Alderneys) and their grades; also, **all the varieties** of breeding Sheep and Hogs. We can supply any and all good animals that may be wanted, and at **very reasonable prices** and on **convenient terms.** Write or call on us. PETER SAXE and HOMER P. SAXE.

San Francisco, Cal., Oct. 22, 1888. **PETER SAXE & SON, Lick House, S. F.**

REGAN VAPOR ENGINE.



NO BOILER, FIRE, EXPLOSION, STEAM, ASHES OR ENGINEER.

STARTED INSTANTLY WITHOUT EVEN A MATCH.

The Moment Engine Ceases to Run, all Expense Stops.

Upright and Horizontal, Stationary and Marine Engines from ¾ to 60 Horse Power.

OUR STATIONARY ENGINES are especially adapted for PUMPING and IRRIGATING.

OVER 150 IN USE.

POPE & TALBOT, Lumber, Office, 204 California Street. P. O. Box 2215. San Francisco, Feb. 25th, 1890.

Regan Vapor Engine Co.—Gentlemen: The 4 H. P. Vapor Engine I bought of you last May has been in constant use ever since, and has given me entire satisfaction. I have found the engine to be all that you claimed for it, and more too. You can use my name for reference if you so desire. I am, yours truly, H. TALBOT.

We carry a full line of Thos. Kane & Co's Famous Racine Launches, fitted with our New Compound Engines. SEND FOR CIRCULAR.

REGAN VAPOR ENGINE CO.,

221-223 First Street, San Francisco, Cal.

THOS. KANE & CO., 137-139 Wabash Avenue, Chicago, Ill.

Walnut Grove Herd of Poland China Hogs

JOSEPH MELVIN,

Proprietor,

DAVISVILLE, CAL.



BREEDER

— OF —

Strictly Bred

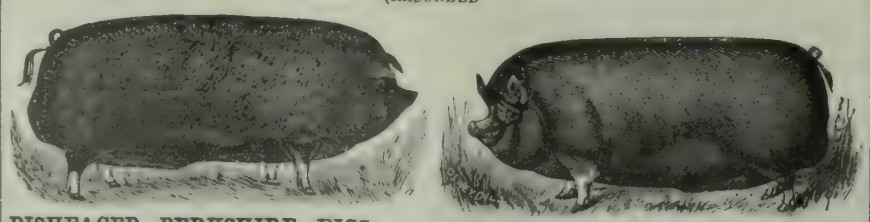
POLAND CHINA SWINE.

At the head of the herd stands PERFECTION KING, No. 7579; KING OF THE WEST, No. 8921; HOOSIER BOY 2d, No. 8923. Breeding Sows as fine individuals and as strictly bred as any in the land; also recorded in the C. P. C. R. record with pedigrees full to standard. Breeders for sale at all times. I have first-class Pigs of both sexes at reasonable prices. Residence 1½ miles northeast of Davisville, Cal. Personal inspection solicited. All inquiries promptly answered. Yours truly, JOSEPH MELVIN.

ANDREW SMITH,

IMPORTER AND BREEDER OF THOROUGHBRED

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DISHFACED BERKSHIRE PIGS,

IMPROVED POLAND-CHINA PIGS,

SHROPSHIRE DOWN SHEEP,

Young Stock for sale at reasonable prices. Every animal guaranteed.

OFFICE—218 California St., San Francisco. REDWOOD CITY, CAL.



HEADQUARTERS FOR ALL VARIETIES OF FANCY FOWLS,

Ducks, Turkeys, Geese, Peacocks, Etc.

EGGS FOR HATCHING.



Publisher of "Niles' Pacific Coast Poultry and Stock Book," a new book on subjects connected with successful poultry and stock raising on the Pacific Coast. Price 50 cents, post-paid. Inclose stamp for information.

BREEDER AND RAISER OF THOROUGHBRED

Jersey and Holstein Cattle. Also, Poland China and Berkshire Pigs.

Address, WILLIAM NILES, Los Angeles, Cal.

MECHAM & FRITSCH,

—IMPORTERS AND BREEDERS OF—

Red Polled Cattle.

We have 19 head of Imported Stock.

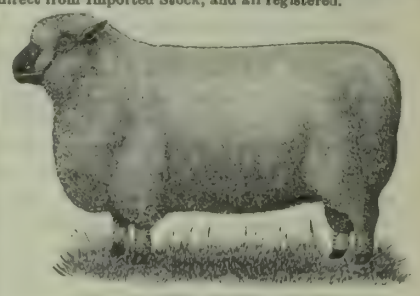
Young Bulls and Cross-breds on Devons for sale.



H. MECHAM,

Importer and Breeder of Shropshire Sheep

They were all imported from England in '88, or bred direct from Imported Stock, and all registered.



H. MECHAM,

—BREEDER OF—

American Merino Sheep Without Horns.

The only flock in the United States. When we bought our sheep East 20 years ago, among them was a ram without horns. He grew to be a large fine sheep, shearing at 2 years old, a 12 months' fleece, 35 lbs. of long white wool.



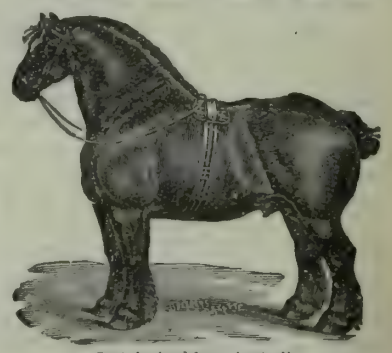
I have bred from him and his get ever since and have never made an out-cross and never used the same ram but one year on the same flock. My rams at 2 years old will weigh from 160 to 180 lbs.; have a strong constitution, without wrinkles, and will shear on an average about 25 lbs., a 12 months' fleece, of long white wool. Rams and Ewes for sale. **P. O. Address:**

Stony Point, Sonoma Co., Cal.

R. R. Station, Petaluma.

FOR SALE!

Consignment of Three Clydesdale Stallions and Three Mares.



Just Arrived from Australia.

Apply to C. L. TAYLOR, No. 428 California Street, San Francisco, Cal.

Can be seen at the Park Louvre, near Bay District Race Track.

BADEN FARM HERD.

Short Horn Cattle and Draft Horses.

Catalogues and Prices on application to

ROBERT ASHBURNER,

Baden Station. - San Mateo Co., Cal.

ANGORAS.

1200 FIRST-CLASS ANGORA GOATS; JOHN S. Harris' stock, of which the Mohair brings the highest price. Address ADOLPH BENITZ, Box 32, Reno, Nevada.

G. W. DIMICK,

BREEDER OF REGISTERED

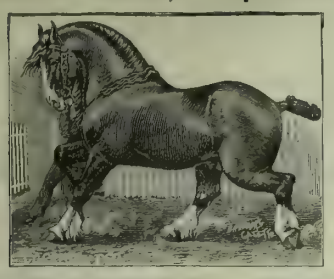
Shorthorn, Aberdeen-Angus and Jersey Cattle.



Young Stock for Sale. Correspondence Solicited. **G. W. DIMICK, Hubbard, Oregon.**

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MOHR BROS., Proprietors.



IMPORTED AND HOME-BRED REGISTERED Clydesdale Stallions and Mares, weighing from 1600 to 2000 lbs each, from prize-winning families. Holstein Friesian Bulls and Heifers of the most noted families. All Registered. Also Registered Berkshire Pigs. Call on or address **H. P. MOHR**, MOUNT EDEN, ALAMEDA COUNTY, CAL., 20 miles southeast from San Francisco. Take train for Haywards station, on broad gauge, or Mt. Eden on narrow gauge railroad. Fare 50 cents. Conveyance at depot if notice is given. Visitors welcome and inspection invited.

IMPORTED STALLIONS!

HOLBERT & CONGER,



Los Angeles, Cal.,

Import Direct from Europe and sell **Full-Blooded Yorkshire Cleveland Bay, Oldenburg German Coach and English Shire Draft Stallions.** The best Coach and Draft Horses in the world. Stables permanently located. Third Importation. We give Eastern prices and guarantee our horses. Correspondence solicited. Address

1002 Olive St., Los Angeles, Cal.

Our Horses are full registered in Europe and America.

COLTS BROKEN.

THE SOUTHER FARM,

One and a half miles northeast of San Leandro, Alameda County, has every facility for Breaking Colts properly. Rates very reasonable. Horses boarded at all times.

THE SOUTHER FARM,
GILBERT TOMPKINS, Proprietor,
P. O. Box 149, San Leandro, Cal

CHLORO-NAPTHOLEUM,



—A—

NON-POISONOUS

SHEEP DIP.

A Safe and Certain Remedy against Parasites of all kinds.

One Gallon will make sufficient Dip for 100 Sheep at a cost of 75 cents per gallon.

Write for circulars and samples.

A. B. CHENEY & CO.,
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VETERINARY SURGEON,

Member of the Royal College of Veterinary Surgeons, London, England.

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1616 and 1618 Mission St.,
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WATKINS & DUHIG, Proprietors,
LIVE STOCK & GENERAL AUCTIONEERS

Horses bought and sold. Auction Sales every Wednesday and Saturday at 11 A. M. A full line of Draught, Driving, Saddle and Business Horses. Particular attention paid to country sales. Special inducements to parties having sale horses. Stock sold on commission and boarded at low rates.

Will be Sold Very Reasonable,

TWO PERCHERON STALLIONS,

One black and the other gray. Both seven years old last spring. Can show their colts. Weigh 1750 and 1840 pounds.

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The most successful college on this continent. For further particulars address the Secretary,

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POULTRY, ETC.

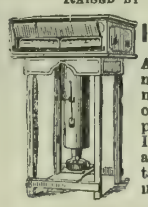
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Manufactory of the PACIFIC INCUBATOR and BROODER. Agency of the celebrated silver finish galvanized wire netting for Rabbit and Poultry-proof fences, the Wilson Bone and Shell Mill, the Pacific Egg Food, and Poultry appliances in great variety. Also every variety of land and water Fowl, which have won first prizes wherever exhibited. Eggs for hatching. The Pacific Coast Poulterers' Hand-Book and Guide, price, 40c. Send 2c. stamp for 60-page illustrated circular to the PACIFIC INCUBATOR CO., 1317 Castro St., Oakland, Cal.

Chickens

RAISED BY THE **Petaluma**



INCUBATORS & BROODERS

Afford more profit than any other business for the capital invested. The most successful machines made; any one can manage them. A large 32 page Illustrated Catalogue, describing Incubators, Brooders, etc., sent to any address on receipt of 2c stamp. Contains more information than is given in many 25c books. Address,

PETALUMA INCUBATOR CO., Petaluma, Cal.



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HALSTED INCUBATOR
COMPANY,
1312 Myrtle Street, Oakland, Cal.
Send Stamp for Circular.

CLOVER VALLEY POULTRY FARM,
Whitewater, Wis.

Largest and finest collection of Land and Water Fowls in the U. S. Hundreds of Prize won at the Leading Shows. Over 70 varieties. Send for prices.

FAY'S PATENT

Manillo-Leather Roofing

And Waterproof Building Manilla.

Used for Roofing and Covering the Outside and Inside of Buildings.

CHEAPER THAN SHINGLES OR METAL
And Lasts Longer.

Insurance Companies make no discriminations. Can be laid over old shingles or metal roofs. One man and boy can lay from 1000 to 1500 feet per day. The cheapest thing in the market for barns, ice-houses and outbuildings.

Estimates Furnished for Covering Roofs or Entire Buildings.

Cottages for Summer Resorts or Camping
BUILT TO ORDER.

Write for Calalogue and Samples.

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SELLING AGENTS,
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JOHN F. WYMAN, GENERAL AGENT.

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Veterinary Surgeon,

Graduate of Ontario Veterinary College, Toronto, Canada.
RESIDENCE AND VETERINARY INFIRMARY:
331 Golden Gate Avenue, San Francisco.
Telephone 3069.
OPEN DAY AND NIGHT.
No risk in throwing Horses. Veterinary operating table on the premises.

APIARIAN SUPPLIES.

Italian Queens, $2.50 each; Black Queens, $1 each. Swarms from $2.50 each; Smoker, $1. Comb Foundation, $1.25 per pound; V-groove Sections, $4 per 1000 Comb Honey wholesale and retail; Hives, etc. W STVAN & SON, The Homestead Apiary, San Mateo, Cal

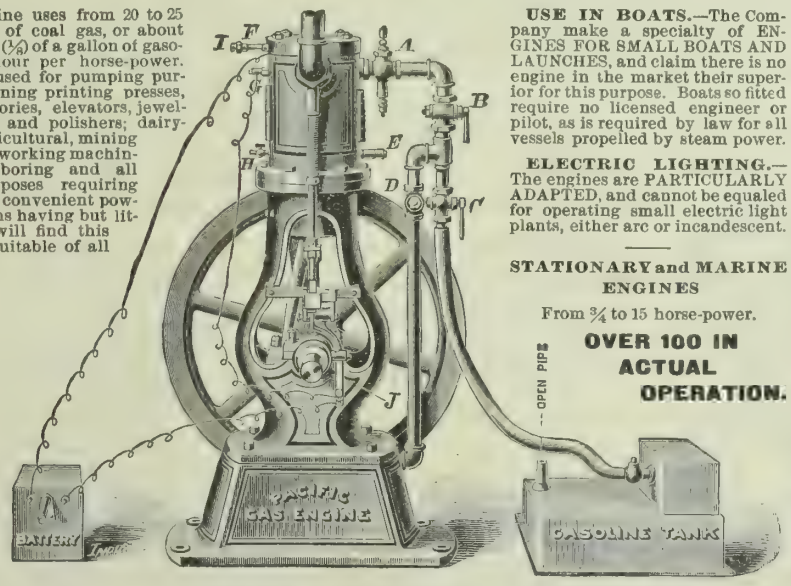
THE

PACIFIC GAS OR GASOLINE ENGINE.

PATENTED JUNE 17, 1890—NOS. 430,504, 430,505, 430,506.
Also in Great Britain and other foreign countries.

Starts Instantly Without the Necessity of Boiler, Fire or Experienced Engineer.

The engine uses from 20 to 25 cubic feet of coal gas, or about one-eighth (1/8) of a gallon of gasoline per hour per horse-power. It can be used for pumping purposes, running printing presses, small factories, elevators, jewelers' lathes and polishers; dairymen's, agricultural, mining and wood-working machinery; well-boring and all other purposes requiring cheap and convenient power. Persons having but little space will find this the most suitable of all motors.



USE IN BOATS.—The Company make a specialty of ENGINES FOR SMALL BOATS AND LAUNCHES, and claim there is no engine in the market their superior for this purpose. Boats so fitted require no licensed engineer or pilot, as is required by law for all vessels propelled by steam power.

ELECTRIC LIGHTING.—The engines are PARTICULARLY ADAPTED, and cannot be equaled for operating small electric light plants, either arc or incandescent.

STATIONARY and MARINE ENGINES

From 3/4 to 15 horse-power.

OVER 100 IN ACTUAL OPERATION.

READ THESE TESTIMONIALS.

ALAMEDA, April 8, 1890.

PACIFIC GAS ENGINE CO.—GENTLEMEN: Permit me to add my testimonial to the many you have received indorsing your engine. As you are aware, mine was a Regan engine which gave me considerable trouble. I had to remove the head and raise the tappet valve every time I wanted to start the engine. I sent you the engine; you removed all the Regan appliance except the cylinder and stand. You put in your appliances, head, sparking device, inlet valve, and, in fact, changed it to the Pacific Gas Engine, which now works splendidly. I have not had to remove the head for any cause since you made the change (over two months). It gives me no trouble; my boy, 14 years old, attends to it.

The change from the Regan to the Pacific is a decided improvement. I can also get a third more power since the change, and I cheerfully recommend your engine as being simple, effective, and cheap. Respectfully yours,
B. S. HILL, S. W. Cor. Encinal Ave. and Morton St.

MAYFIELD, March 26, 1890.

PACIFIC GAS ENGINE CO.—We have given your little 1-H. P. engine a splendid advertisement. A fire broke out at 2:30 o'clock this morning, in a tenement house on my premises. I started the engine, connected the hose, and by its use saved at least $3000 worth of my property. I saved my blacksmith shop lying 12 feet from the burning building, my barn and my dwelling. Three times the fire started in these buildings, and I extinguished it every time. The engine never faltered, and threw water between 50 and 60 feet high. The whole town was astonished, and they acknowledged that I saved at least $20,000 worth of property.

A fire department is being organized here, and I think they will have one of the engines on a truck for fire purposes *They cannot be beaten.*

Hoping that all of your customers will be as well pleased with the engine as I am, I remain, Yours truly,
JOS. P. PONCE.

PACIFIC GAS ENGINE CO.,

Send for Circular and Price List. **230 FREMONT STREET, SAN FRANCISCO.**

MANHATTAN STOCK FOOD.

Saves One-Quarter of Grain Feed.

KEEPS STOCK AND CATTLE HEALTHY. Recommended by Andy McDowell, Sam Gamble, Count G. Valesin, B. C. Holly, John Wieland Brewing Co., Z. Birdsall, Superintendent of Wells, Fargo & Co.'s Stables, and thousands of others. Ask your Dealer or send to 624 Howard St., San Francisco, Cal.

KNABE PIANOS

It is a fact universally conceded that the KNABE surpasses all other instruments

A. L. BANCROFT & CO
132 Post Street.

WANTED—A Cheap Second-Hand Washington PRINTING PRESS

For Experimental Purposes.

I. A. HEALD, 108 Main St., San Francisco.

Commission Merchants.

MOORE, FERGUSON & CO.,
WOOL, GRAIN, FLOUR
—AND—
General Commission Merchants,
310 California St., S. F.

Members of the San Francisco Produce Exchange

Personal attention given to Sales and Liberal Advances made on Consignments at low rates of interest.

DALTON BROS.,
Commission Merchants
—AND DEALERS IN—
CALIFORNIA AND OREGON PRODUCE,
Green and Dried Fruits,
Grain, Wool, Hides, Beans and Potatoes.
Advances made on Consignments.
308 & 310 Davis St., San Francisco
[P. O. Box 1936.]
Consignments Solicited.

ALLISON, GRAY & CO.
SUCCESSORS TO
LITTLEFIELD, ALLISON & CO.,
501, 503, 505, 507 and 509 Front Street and 300 Washington St., S. F.
General Commission Merchants.
GREEN and DRIED FRUITS.
Poultry, Eggs, Game, Grain, Produce and Wool.

[ESTABLISHED 1854.]
GEORGE MORROW & CO.,
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COMMISSION MERCHANTS,
39 Clay Street and 28 Commercial Street
SAN FRANCISCO, CAL.
SHIPPING ORDERS A SPECIALTY.

EUGENE J. GREGORY. [Established 1852.] FRANK GREGORY.
GREGORY BROTHERS CO.,
Commission Merchants,
PACKERS AND SHIPPERS OF
CALIFORNIA FRUIT AND PRODUCE.
126 and 128 J St., - Sacramento, Cal.
San Francisco Office, 313 Davis St.

WETMORE BROTHERS,
Commission Merchants,
Green and Dried Fruit, Produce, Eggs, Etc.
Consignments solicited. 413, 415 & 417 Washington St., San Francisco.

EVELETH & NASH,
COMMISSION MERCHANTS
And Dealers in Fruit, Produce, Poultry, Game, Eggs, Hides, Pelts, Tallow, etc., 422 Front St., and 221, 223, 225 and 227 Washington St., San Francisco.

WITTLAND & FREDRICKSON,
Commission Merchants,
All Kinds of Green and Dried Fruits.
Consignments Solicited. 324 Davis St., S. F.

GRANGERS' BANK

OF CALIFORNIA,
SAN FRANCISCO, CAL.
INCORPORATED APRIL, 1874.



Authorized Capital	**$1,000,000**
Capital paid up and Reserve Fund	**800,000**
Dividends paid to Stockholders	**627,500**

OFFICERS.

A. D. LOGAN.....President
I. C. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on Wheat and country produce a specialty.

July 1, 1889. A. MONTPELLIER, Manager.

Cards FREE Send your name and address on a postal card for all the Latest Styles of Silk Fringe, Photograph, Envelope, Beveled Edge, Gray Edge Cards &c., Samples of all free. HOME and YOUTH, Cadiz, Ohio.

S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Nov. 5, 1890.

Election the past week demoralized the market for all kinds of farm products, making it very difficult to get a correct idea of the general situation of each leading product. It will take two or three days yet before business resumes its normal condition. Wheat at the East and abroad has fluctuated slightly. The following is to-day's cablegram:

LIVERPOOL, Nov. 5.—Wheat—Quiet but steady. California spot lots, 7s 4½d to 7s 7½d; cargoes off coast, 38s; just shipped, 37s 9d; nearly due, 37s 9d; cargoes off coast, steady; on passage, not much demand; Mark Lane wheat, firm; English country markets, generally dearer; wheat in Paris, slow; flour, quiet.

Foreign Grain Review.

LONDON, Nov. 3.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: There are good samples of English wheat and prices are 6d dearer. Foreign wheats are slightly stronger under lessening shipments. At to-day's market there was a fair demand for English and foreign wheats at an average rise of 6d. Barley was firm. Oats and corn advanced 6d. Flour was well held at a rise of 3s.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Nov.	Dec.	Jan.	Feb.	Mar.	April.
Thursday	7s7½d	7s7½d	7s7½d	7s7½d	7s7½d	7s7½d
Friday	7s7½	7s8d	7s7½d	7s7½d	7s7½d	7s7½d
Saturday	7s7½d	7s8d	7s8d	7s8½d	7s8d	7s7½d
Monday	7s7½d	7s8d	7s8d	7s8d	7s7½d	7s7½d
Tuesday	....	....	....	....	....	....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	38s0d	37s9d	37s9d	Firm.
Friday	38s0d	37s9d	37s6d	Firm.
Saturday	38s0d	37s9d	37s9d	Firm.
Monday	38s0d	37s9d	37s9d	Firm.
Tuesday	38s0d	37s9d	37s9d	Quiet.

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per bushel:

Day.	Nov.	Dec.	Jan.	May.	June.	July.
Thursday	108½	109	....	112⅝	....	...
Friday	107⅝	109	110	112⅝	....	...
Saturday	107⅞	109½	....	112⅛	....	...
Monday	....	108	109½	111⅝	....	...
Tuesday	....	...	....	....	....	...

The closing prices for wheat have been as follows at Chicago for the past week, per bushel:

Day.	Dec.	May.	June.	July.
Thursday	103	108½	....	....
Friday	103½	108⅝	....	....
Saturday	103½	108⅝	....	....
Monday	103⅛	107⅞	....	....
Tuesday	....	....	....	....

NEW YORK, Nov. 5.—Wheat—$1.08 for cash, $1.07 for December, $1.08¾ for January, and $1.10⅝ for May.

CHICAGO, Nov. 5.—Wheat—$1.00¾ for December and $1.06⅞ for May.

Hops.

NEW YORK, Nov. 3.—Tight money still has a restraining effect on the market here and in London, but prices are not strongly affected. Fancy prices seem out of the question for the time being. Liverpool buyers were a short time ago picking up Columbia river salmon in this market. Saturday a local jobbing firm sold 500 cases of Alaska to go to the city named.

Visible Supply of Grain.

NEW YORK, Nov. 3.—The visible supply of wheat is 21,235,381 bushels, an increase of 1,520,356; corn, 7,017,335, a decrease of 189,108; barley, 4,846,679, an increase of 37,397; oats, 4,161,657, an increase of 38,368.

California Dried Fruits.

NEW YORK, Oct. 31.—California loose Muscatel raisins have been rather more freely offered in this market the past few days, and prices averaged somewhat lower in a number of instances. Brands that enjoy particular favor appear very little affected, if at all, as the arrivals of that class of fruit are nearly all absorbed through deliveries now making on back orders, but the average quality can undoubtedly be secured at a concession on prices generally asked one week ago. The quantity of fruit offering is not very large, nor are there any indications of a general pressure to sell. London layers of really attractive quality are in moderate supply as yet, and bring relatively better prices than loose Muscatels.

NEW YORK, Nov. 3.—California packed goods had a quiet week. Raisins indifferently regarded; three-crown, loose, $2@2.15; layers, $2.50; fancy, $2.75. Pitted plums, steady, 16c. Apricots, unchanged; boxes strongest. No new figures in prunes; some rain-damaged samples have appeared. Buyers make careful inspection, with cheap French competing with ordinary grocery grades. Evaporated-apples, quoted 10c. State superior in quality quoted 15½c; some Western surplus canned fruits moderately held show our poverty in these goods.

Eastern Wool Markets.

BOSTON, Oct. 31.—Further large sales of over 1,100,000 lbs. in all of Territory wools have been made on a scoured basis at 62@65c ₩ lb. for fine; fine medium, 58@60c; medium, 56@58c; fancy Easter Oregon wool sold at 25c, and other sales were made at 17@21c. California wool is firm; choice spring selling at 25@26c, and average at 18 @22c.

NEW YORK, Oct. 31.—*Bradstreet's* weekly summary will say: There is still a good demand for all kinds of wool and prices are unchanged, though it is to be said that sellers in the principal markets predict higher values before January 1st. Manufacturers, as a rule, are understood to be well supplied and dealers generally report lower stocks than usual at this season of the year. There has been so little wool offered at Melbourne that higher prices have not been established, and consequently the American market is not being affected by any outside influence. The demand for Texas and Oregon wools has improved, as they will in part take the place of wools which are excluded by tariff. Ohio and Michigan supplies are being taken as fast as they are offered. There is a fair trade in Territories of which worsted mills are good buyers. The supply of Australian wools is not large, and there is little difficulty of disposing of them at current quotations. It is hard for dealers to fill orders in some grades.

NEW YORK, Nov. 3.—The buoyancy in wool is unabated. If the stocks at the seaboard were equal to it, the buying would continue. Manufacturers who stocked up largely of late are again in the market with an eye to purchase, if not speculation. Prices not higher, but full. The decline abroad causes some comment, but is not really regarded as an early disturbing element upon home quotations.

Local Markets.

BARLEY

	Buyer Season. H.	Buyer Season. L.	Seller 1891. H.	Seller 1891. L.	Buyer 1890. H.	Buyer 1890. L.
Thursday	154⅝	153	...	...	149½	148½
Friday	155½	154½	...	...	150	149
Saturday	155½	154⅝	...	...	149	148⅝
Monday	156½	155	...	...	149⅞	149½
Tuesday	....	....	...	...	....	....

WHEAT.

		S. S.	Nov.	B. '90.	B. S.	S. '90.
Thursday	h.	....	....	136½	144½	....
	l.	....	....	136½	144½	....
Friday	h.	....	....	136½	144⅝	....
	l.	....	....	136	144½	....
Saturday	h.	....	....	136	144⅝	....
	l.	....	....	136½	144⅝	....
Monday	h.	....	....	136	144⅛	....
	l.	....	....	136	144½	....
Tuesday	h.	....	....	....	....	....
	l.	....	....	....	....	....

BAGS—The market is reported dull with standard size obtainable at 6⅜c to 6⅝c for May-June delivery.

BARLEY—The sample market has ruled strong at a slight advance. In futures, trading continues light but at better prices. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—400 tons, $1.50; 100, $1.50¾. Buyer season—100 tons, $1.56; 100, $1.56¼; 400, $1.55¾; 100, $1.56⅜; 100, $1.56½ ₩ ctl. Afternoon Session: Buyer season—200 tons, $1.56 ₩ ctl.

BUTTER—The market is fairly steady. The weather is an important factor in the market. Pickled is in good demand. Eastern creamery is in light receipt—prices too high in the supply markets in the Central States.

CHEESE—The market is strong at full figures, with still higher prices for choice mild expected to obtain.

EGGS—Heavy receipts of Eastern are against Californian. The larger proportion coming to hand from the East are good to choice.

FLOUR—The market is quiet but firm.

WHEAT—In the sample market there has not been any material change. On Call, futures have held barely steady under light trading. The impression prevails that the election just past insures a majority in Congress favorable to free coinage of silver, which, if proven true by after-legislation, will greatly benefit wheat-growers in this country. With this the case, short sellers on Call are timid. The following are to-day's Call Board sales:

Morning Session: Buyer season—200 tons, $1.43¾; 200, $1.43⅞ ₩ ctl. Afternoon Session: Buyer 1890—100 tons, $1.35⅜. Buyer season—400 tons, $1.43¾ ₩ ctl.

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Nov. 4th, were as follows:

Flour, qr. sks	181,391	Middlings, sks	2,944		
Wheat, ctls	221,452	Alfalfa, "	....		
Barley, "	32,261	Chicory, bbls	155		
Rye, "	1,150	Broomcorn, bdls	764		
Oats, "	4,937	Hops, bls	246		
Corn, "	12,051	Wool, "	2,116		
*Butter, "	485	Hay, tons	1,888		
do bxs	181	Straw, "	42		
do bbls	8	Wine, gals	167,340		
do kegs	10	Brandy, "	16,300		
do ½ do	....	Raisins, bxs	5,463		
†Cheese, ctls	296	Honey, cs	329		
do bxs	6	Walnuts, sks	804		
Eggs, doz	9,150	Flaxseed, sks	2,838		
do " Eastern	169,510	Mustard, sks	1,942		
Beans, ctls	31,191	Almonds, sks	733		
Potatoes, sks	41,478	Peanuts, sks	471		
Onions, "	928	Popcorn, sks	687		
Bran, sks	9,334	Beet sugar, bbls	900		
Buckwheat, sks	350	do do sks	3,877		

*Overland....ctls. †Overland....ctls.

Cereals.

Election has demoralized trade, and consequently both remarks and quotations are out of sorts. After this week business will probably resume its natural course, when we can be in position to furnish our usual quota of news.

In wheat, trading has been of an offish character. The offerings have been light, while buyers appeared disposed not to anticipate their wants. In this they have been largely influenced by a prevailing opinion that the price of silver will go down still more, which will be in the interest of Indian and Russian wheat buyers, and against American buyers or exporters. The tonnage situation is still against wheat. The limited supply on spot keeps charters well up. The European and Eastern markets have held fairly strong, with trading, reported by telegraph, light. The close money market at the East, combined with stagnant markets in all speculative securities at the East and abroad, has considerable to do in making English operators afraid of buying heavily of wheat.

In this State, our advices are confirmatory of a large increase of summer-fallowed land. The fall seeding is on a larger scale than for some years past.

Barley has held firm at steady prices. Although receipts continue large, yet stocks do not accumulate. The supply in the State to draw from is light, which causes many well-informed dealers to look for still higher prices. There are some who are confident that buyer season will go over $1.75 before next harvest. Several thousand tons of barley have been bought in Washington for this market, but its purchase has, as yet, no visible effect on our market, so large is the feeding.

Corn has ruled barely steady. The demand is fair, but the knowledge that the supply in the State is large causes many to bear the market. Holders are slow to make concessions; in this they are largely influenced by the high prices ruling for other feedstuffs.

Oats are firm, notwithstanding receipts have been free. It is claimed by many that the supply on this coast is not equal to that at this time in 1889.

Rye and buckwheat are fairly steady.

Feedstuff.

Ground feed has a strong tone although cloudy weather toward the close caused some dealers to be offish. Receipts are only fair, while the demand is good.

Hay continues to rule at full figures. The demand is largely for the better grades. The feeding requirements are reported to be on the increase, while the supply is decreasing. If the weather should set in rainy soon, the feeling may be easier under dealers and feeders holding off, but while this may be the case, yet natural pasturage is not obtained in a week's time, and until length and strength are secured by grass, hay will be in good demand.

Fruits.

The election is still the chief topic, and consequently to-day (Wednesday) it is very difficult to get correct information regarding the market or quotations. It will probably be two or three days before the normal condition of affairs is resumed.

The grapes coming in are generally in excellent condition, and being good keepers are not forced on the market. Buyers in search of choice good keepers have to pay top prices. If rains should set in soon, then the market will again be glutted, but while they hold off dealers clean up fairly well.

Pears show slightly more strength. Apples are in free supply, but then the demand is larger. Choice good-keeping apples are wanted. Some extra choice might command even higher prices than we quote. While defective apples are still on the market, the receipts appear to be lessening, which naturally helps the better selected stock. Peaches come in sparingly.

In dried fruits the market shows continued strength, although the election temporarily restricts trading. After this week a better inquiry is expected to obtain. We have made a very general canvass of the market and find dealers slow to express themselves on the market, preferring to wait until trade resumes its normal state.

Raisins are being shipped quite freely to the East. The second crop is turning out excellent. It now looks as if the pack of first-class raisins will be fully up to early estimates. A large quantity of poorer raisins are being marketed in sacks. They go largely into consumption at the East.

Dried grapes are strong at full figures.

Vegetables.

Garden truck is in fair supply, with the demand still of an offish character.

Cabbages move off free under a good demand.

Onions are in light supply, and as the demand is good, prices rule higher. It now looks as if still better prices will obtain, unless Oregon sends us heavy supplies.

Potatoes are in freer receipt, yet the market does not shade off much, so large is the overland and shipping demand. The more choice kinds are chiefly inquired for. Absence of rains admits of free shipments to this city. Last year large quantities were not dug, owing to rains, but this year no such unfavorable result is expected.

Marrowfat squash, Hubbard squash and pumpkins have a good tone.

Live-stock.

The market is steady for bullocks and mutton sheep. Good roads and absence of rains favor buyers. With the rainy season, it is claimed that better prices will set in. Hogs appear to have a firmer tone. Receipts are free, but all coming to hand have either been bought before shipping or else they have ready sale on receipts. It is much better to sell before sending to this market, and also that there shall not be any reclamation on receipt here. Horses and milch cows are unchanged.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4½@4½c ₩ lb. dressed, 7@8c ₩ lb.; heavy, 4@4¾c ₩ lb.; dressed, 6½@7½c ₩ lb. Stock hogs, 3¾@3½c ₩ lb.

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¾@5¾c ₩ lb.; second quality 4¾@5c ₩ lb.; third quality, 4c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6@8c ₩ lb.; large, 4@6c.

MUTTON—Wethers, 7c ₩ lb.; ewes, 6½c ₩ lb.; lamb, spring, 8@9c.

Miscellaneous.

Poultry is slow and heavy for poor stock, but choice, well-conditioned stock find a ready market.

Honey shows a slightly firmer tone. The uncertainty of the winter weather and next season's flower crop is in favor of holders.

Beans are in heavy receipt, yet the market holds firm at full prices under a good shipping demand.

Hops are essentially unchanged. The supply in first hands on this coast is light. That changing hands is generally from second and third hands.

Wool has a strong, firm tone under a good demand. The grade given preference is for the manufacture of luster goods.

The demand for grass seeds is light, owing to the absence of rain.

Exports by sea the past week aggregate as follows: Flour, bbls, Panama, 325; Central America, 7895; Liverpool, 8600; Japan, 2461; Honolulu, 320; Tahiti, 703; Londonderry, 20,000. Wheat, ctls, Liverpool, 123,654; Cork, 58,335. Barley, ctls, Tahiti, 452; Honolulu, 747. Brandy, gals, New York, 3927. Wine, gals, New York, 141,182; Philadelphia, 334; Baltimore, 1015; Central America, 3603; Liverpool, 1100; Santa Rosalia, 1970. Cotton, bales, Liverpool, 181. Mustard, lbs, 44,982. Canned fruits, cs, Central America, 66; Liverpool, 5988; Glasgow, 583; Dublin, 220; Belfast, 260; Japan, 788; Bristol, 80; Honolulu, 232. Wool, lbs, New York, 123,648. Raisins, bxs, Central America, 175. Honey, cs, Liverpool, 700. Beans, lbs, Central America, 57,758; Victoria, 4656; China, 11,141; Honolulu, 8828; Tahiti, 4760. Dried fruits, lbs, Liverpool, 2551; Victoria, 4750.

From the *Commercial News* of Nov. 4th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	271,758	212,157
On the way to neighboring ports	20,318	11,913
In port, disengaged	6,449	37,832
In port, engaged for wheat	62,975	72,101
Totals	361,500	333,983

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Oct. 29, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	3,469,981	3,834,818
Flour, bbls	381,632	395,054
Barley	151,391	655,318

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Nov. 5, 1890.

BEANS AND PEAS.			
Bayo, ctl	3 75	@	4 00
Butter	2 00	@	2 75
Pea	2 50	@	2 90
Red	2 50	@	2 75
Pink	2 10	@	2 35
Large White	—	@	—
Small White	2 60	@	2 90
Lima	4 00	@	4 50
Fld Peas, bl	1 50	@	1 70
do green	2 00	@	2 25
do NLes	1 35	@	1 55
Split	0	@	—
BROOM CORN.			
Choice to Extra	60 00	@	75 00
Fair to Good	45 00	@	55 00
Poor	40 00	@	—
CHICORY.			
California	5½	@	6
German	6	@	6¾
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair, ₩	15	@	25
do good to choice	27½	@	32½
do Giltedged	37½	@	40
do pickled	22½	@	26
do in kegs	17	@	21
do Creamery in rolls	40	@	—
Eastern do	—	@	—
do do, in tubs	17	@	25
CHEESE.			
Cal. choice mild	10½	@	11½
do fair to good	7	@	9
do gilt edged	12	@	13
Young America	11½	@	13½
N. York Cream	12	@	13½
Western	9½	@	11
EGGS.			
Cal. ranch, doz	42½	@	—
do do sel'cted	45	@	—
do. store	37½	@	—
Est'rn, cld st'rage	18	@	20
do fresh	25	@	30
do selected	32½	@	—
do to arrive	—	@	—
FEED			
Bran, ton	20 00	@	22 00
Feedmeal	28 00	@	29 00
Gr'd Barley	31 00	@	32 50
Middlings	25 00	@	28 00
Oil Cake Meal	25 00	@	27 00
Manhattan Food Per 100 lbs	7 50	@	—
HAY.			
Compressed	14 00	@	19 00
Wheat, per ton	12 00	@	17 00
do choice	18 00	@	19 00
Wheat and Oat	12 00	@	16 00
Wild Oats	12 00	@	15 00
Tame do	12 00	@	15 00
Barley	9 00	@	13 00
Barley and Oat	10 00	@	14 00
Alfalfa	12 00	@	13 00
Straw bale	70	@	80
FLOUR.			
Extra, City Mills	4 25	@	4 50
do Co'try Mills	4 00	@	4 50
Superfine	3 25	@	4 00
GRAIN, ETC			
Barley, feed, ctl	1 42½	@	1 48¾
do Choice	1 50	@	—
do Brewing	1 50	@	—
do do Choice	1 55	@	—
do do giltedg'd	1 60	@	—
Chevalier coce	1 55	@	1 58¾
do com to good	1 40	@	1 50
Buckwheat	1 90	@	2 20
Corn, White	1 30	@	1 35
Yellow, large	1 25	@	1 27½
do, small	1 25	@	1 27½
Oats, milling	1 75	@	1 80
Surprise	1 75	@	1 82½
Choice feed, ch'c	1 75	@	—
do good	1 70	@	—
do fair	1 65	@	—
do Gray	1 62½	@	1 67½
do Black	1 65	@	1 80
do do for seed	2 00	@	2 05
Rye	1 22½	@	1 32½
Wheat, milling.			
Gilt edged	1 43	@	—
do Choice	1 41	@	—
do fair to good	1 38	@	—
Shipping, choice	1 37½	@	—
do good	1 35	@	—
do fair	1 31½	@	—
Sonora	1 30	@	1 35
HIDES.			
Dry light to h'vy	10	@	11
Salted	5	@	8½
HOPS.			
Oregon, 1890	32½	@	40
Cal 1890 Choice	37½	@	40
do Fair to G'd	32½	@	35
ONIONS.			
Silver Skin	2 75	@	3 25

NUTS - JOBBING.			
Walnuts, Cal. ₩	9	@	10
do Ch'ice	10	@	12
Almonds, hd shl	6	@	7
Softshell	14	@	15
Paper shell	15	@	16½
Brazil	18	@	18
Pecans mall	11	@	14
do large	17	@	18
Peanuts	4½	@	5¼
Filberts	11	@	13
Hickory	6	@	8
Chestnuts	12	@	15
Pine nuts	7	@	9
POTATOES.			
Early Rose, sks	55	@	65
Chile	80	@	1 05
Peerless	65	@	95
River Reds	80	@	1 00
Humboldt	—	@	—
Petaluma	—	@	—
Burbanks	80	@	1 30
Sweet	1 25	@	1 60
POULTRY AND GAME.			
Hens, doz	5 00	@	6 50
Roosters, old	5 00	@	6 00
do young	4 50	@	6 50
Broilers, small	2 50	@	3 50
do large	4 00	@	—
Fryers	4 50	@	—
Ducks, tame	4 00	@	5 50
do large	6 00	@	7 00
Geese, pair	1 50	@	2 00
Turkeys, Gobl'r	14	@	17
Turkeys, Hens	14	@	17
Pigeons	1 75	@	2 50
Rabbits, doz	1 00	@	1 25
Hare	1 25	@	2 00
Venison	8	@	—
Dove	50	@	75
Quail	1 00	@	1 25
Snipe, English	1 00	@	1 75
do Jack	50	@	75
Ducks, Mallard	4 00	@	5 00
do Sprigs	2 00	@	2 50
do Teal	1 50	@	2 00
do Widgeon	1 25	@	1 50
do Small	1 00	@	1 25
Geese, Gray	2 25	@	3 00
do white	1 00	@	1 50
Brant	1 00	@	1 10
EGG FOOD.			
Manhattan, ₩ lb	12	@	—
PROVISIONS.			
Cal. Bacon.			
Heavy, lb	10½	@	11
Medium	12	@	—
Light	13	@	13½
Lard	9	@	11
Cal. Sm'k'd Beef	11	@	12
Hams, Cal	13	@	14
do Eastern	14	@	15
SEEDS.			
Alfalfa	8	@	8½
Canary	3	@	4
Clover, Red	1	@	11½
White	17½	@	20
Cotton	20	@	—
Flaxseed	2	@	3
Hemp	4	@	5
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German	5	@	6½
do Common	5	@	6
Mustard, yellow	1 90	@	2 25
do Brown	2½	@	—
Rape	1½	@	1½
Ky. Blue Grass	14	@	16
2d quality	13	@	14
Sweet V. Grass	75	@	—
Orchard	12	@	14
Hungarian	7½	@	8
Lawn	27½	@	40
Mesquit	6	@	7
Timothy	6	@	7
TALLOW.			
Crude, lb	3	@	6
Refined	6	@	
WOOL, ETC			
SPRING—1890			
Humboldt and Mendocino	19	@	24
Sac'to valley	18	@	22
Free Mountain	18	@	24
S Joaquin valley	12½	@	17
do mountain	17	@	22
Calis'r & F'th'll	15	@	24
Oregon Eastern	13	@	22
do valley	20	@	25
So'n Coast, def	10	@	14
So'n Coast, free	12½	@	19
FALL—1890.			
North'n, choice	16	@	18½
do defective	14	@	16
Mountain Free	13	@	15½
San Jo quin defective	9	@	11½
Southern do	9	@	11½

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Nov. 5, 1890.

Bananas, bunch	1 25	@	2 50
Cranberries	9 00	@	12 00
Limes, Mex	4 00	@	5 50
Lemons, Cal, bx	2 00	@	4 00
do Sicily, bx	7 00	@	8 50
do Malaga	7 00	@	8 50
Pineapples, doz	3 00	@	5 00
Strawberries chest	5 00	@	12 00
Pears, bx	75	@	1 50
Apples com box	25	@	60
do good	90	@	1 15
do cho ce	1 25	@	1 50
Grapes, box	30	@	50
do Muscats	25	@	60
do Rose of Peru	20	@	45
do Tokay	20	@	70
do Blk Hamb'rg	25	@	50
do Isabella	50	@	75
do Queen	75	@	1 00
do Malvoise	20	@	50
do Cornichon	50	@	80
do wine Zinfandel	10 00	@	15 00
do other wine			
black kinds	10 00	@	13 00
Crabapples, box	75	@	1 00
Quinces, box	50	@	75
VEGETABLES.			
Okra, dry, lb	6	@	10
do green bx	1 00	@	1 25
Parsnips, ctl	1 25	@	—
Peppers, dry, lb	12	@	—
do green, bx	25	@	40
do Bell	40	@	50
Turnips, ctl	75	@	—
Beets, sk	—	@	1 00
Cabbage, 100 lbs	50	@	60
Carrots, sk	30	@	45
Tomatoes, bx	40	@	65
Lima do	3	@	4
Marrowfat, ton	10 00	@	12 00
Hubbard	15 00	@	20 00
Garlic, lb	8	@	10
Egg Plant, bx	35	@	50
Cauliflower doz	50	@	70

Rope.

Baling, Duplex, lb	11
" Manilla, lb	14
Twine, for hops, balls, tarred, lb, Manilla	15
" " grape vine, balls, lb "	15½
" " " coils, lb "	15½
" spring, lb	1
" binder (650 ft. to lb), lb	15

Duplex twine 3c per lb less.

Dried Fruits, Etc.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations.

Prices named, unless otherwise specified, are for fruit in sacks. Add for 50-lb. boxes ¼c per lb., and for 25-lb boxes ½c to 1c per lb.

Apples, sun-dried, quarters, common	7 @ —
" " " prime	7½@ —
" " " choice	8½@ —
" " sliced, common	8 @ —
" " " prime	8½@ —
" " " choice	9 @ —
" Evap. bleached, ring, 50-lb boxes	11 @ 12½
Apricots, sun-dried, unbleached, common	10½@ —
" " " prime	12½@ —
" " " choice	13½@ —
" " bleached, prime	16 @ —
" " " choice	17 @ —
" " " fancy	18 @ —
" Evap. choice, in boxes	18 @ —
" " fancy, "	19 @ —
Figs, sun-dried, black	2½@ 3½
" " white	— @ —
" " " washed	— @ —
" " " fancy	8 @ 10
" " " pressed	4 @ 6
" " " unpressed	2½@ 3½
" Smyrna boxes	12 @ 14
" do sacks	10 @ 12
Grapes, sun-dried, stemless	3½@ 4½
" " unstemmed	2 @ 3½
Nectarines, Red, sun-dried	10 @ 13
" evaporated, in boxes	13½@ 14½
" white, sun-dried	12 @ 15
" evaporated	15 @ 17
Peaches, sun-dried, unpeeled, common, bleached	10 @ —
" " " prime, "	13 @ —
" " " choice, "	15 @ —
" " " fancy	17 @ —
" evaporated " choice	18 @ —
" " " fancy	19 @ —
" sun-dried, peeled, prime, bleached	16 @ —
" " " choice	19 @ —
" " " fancy	21 @ —
" evaporated, " in boxes, choice	20 @ —
" " " fancy	22½@ —
Pears, sun-dried, quarters	8½@ 9½
" " sliced	9½@ 10½
" evaporated, " in boxes	10½@ 10½
" " ring "	— @ —
Plums, pitted, sun-dried	9½@ 11
" " evap. in boxes, choice	11 @ 12
" " " fancy	13 @ 14
" unpitted	5 @ 8
Prunes, Cal. French, ungraded sizes	9 @ 9½
" " " graded " 90 to 100	8 @ —
" " " " " 80 to 90	9 @ —
" " " " " 70 to 80	9½@ —
" " " " " 60 to 70	9 @ —
" " " " " 50 to 60	10½@ —
" " " " " 40 to 50	11½@ —

Fancy sell for more money.

RAISINS.

Halves, quarters and eighths, 25, 50 and 75 cents higher respectively than whole box prices.

London Layers, choice ₰ bx	$1 80 @ 2 10
" fancy, "	2 25 @ 2 50
Layers, ₰ bx	1 50 @ 2 00
Loose Muscatels, common, ₰ bx	1 15 @ 1 35
" choice, "	1 50 @ 1 75
" fancy, "	1 80 @ 1 90
Unstemmed " in sacks, ₰ lb	4 @ 6
Stemmed " " "	4 @ 7
Seedless " " "	6 @ 7
" ₰ 20-lb bx	1 15 @ 1 25
" Sultanas, unbleached, in bxs	1 15 @ 1 25
" " bleached "	1 25 @ 1 30

CALIFORNIA HONEY.

Comb, dark, 2-lb. frames, 60-lb. cases, ₰ lb	4 @ 5
" amber, " cs. new "	4½@ 5½
" white " " "	9 @ 12
Extracted, dark, 5-gal. cans, 2 cans to case, ₰ lb.	4 @ 4½
" amber, " "	4½@ 5½
" white, " "	5½@ 6
Comb, 2-tins, 2 doz. to case, ₰ doz	— @ —
Extracted, "	— @ —
" 4-lb. tins, 1 doz. "	— @ —
Beeswax, per pound	21 @ 24

HOG CHOLERA IN PENNSYLVANIA. — Word comes from Brownville, Pa., that 400 hogs, which were being fattened at a distillery, had died and had been buried in a trench. The State Veterinary Surgeon, after a careful investigation, pronounced the disease hog cholera of the worst kind. Meanwhile the rest of the drove, some 700, had been driven through the streets of Brownville and shipped East, mainly to Philadelphia. Many of the hogs dropped dead on the streets, but were picked up and shipped with the living. Many animals owned by farmers in that vicinity have since died.

BERKSHIRE SALES.—Phil M. Springer, Secretary American Berkshire Association, Springfield, Ill., sends us information of transfers of recorded Berkshires as follows: Model Prince 24431, Beauty 24881, and Belle 24882, by Andrew Smith, Redwood City, Cal., to Sessions & Bigelow, Los Angeles, Cal.; Alexander 24837, by R. W. Carey, Macleay, Oregon, to C. M. Stiles, Williams, Oregon; Jennie 24838, by R. W. Carey to J. W. McKinney, Turner, Oregon; Oregon Standard 24839, by R. W. Carey to C. J. Strange, McCoy, Oregon.

The combination of ingredients found in Ayer's Pills renders them tonic and curative as well as cathartic. For this reason they are the best medicine for people of costive habit, as they restore the natural action of the bowels, without debilitating.

Eugen D'Albert to William Knabe & Co.
(Translation from the German.)

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New York, May 16, 1890.

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PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE. Oct. 29-Nov. 4.	Olympia. Rain	Temp.	Wind	Weather	Portland. Rain	Temp.	Wind	Weather	Eureka. Rain	Temp.	Wind	Weather	Red Bluff. Rain	Temp.	Wind	Weather	Sacramento. Rain	Temp.	Wind	Weather	S. Francisco. Rain	Temp.	Wind	Weather	Fresno. Rain	Temp.	Wind	Weather	Keeler. Rain	Temp.	Wind	Weather	Los Angeles. Rain	Temp.	Wind	Weather	San Diego. Rain	Temp.	Wind	Weather
W.	.00	52	S	Cl	00	60	N	Cl.	.00	58	SW	Cl.	.00	80	S E	Cl	.00	76	N	Cl	.00	72	W	Cl.	.00	84	Nw	Cl					.00	64	W	Cl.	.00	64	W	Cl
T.	.00	54	N	Cl.	.00	66	E	Cl.					.00	82	S	Cl.	.00	76	Cm	Cl.	.00	54	W	Cy	00	82	SW	Cl.	.00	66	Cm	Cl	.00	66	Nw	Cl.	.00	70	Cm	Cl.
F.	.00	46	N	Fy	.00	60	N E	Cl.	.00	50	SW	Fy.	.00	82	S	Cl.	.00	74	Nw	Cl.	.00	52	W	Cy.	.00	80	Nw	Cl	.00	66	Cm	Cl.	00	70	Nw	Cl	.00	70	Nw	Cl.
S.	.00	52	N	Cl.	.00	66	N E	Cl.	.00	50	SW	Fy.	.00	80	S E	Cl.	.00	70	W	Cl	00	52	W	Cl.	.00	78	Nw	Cl.	.00	66	SW	Cl	.00	72	W	Cl.	00	60	Nw	Cl
S.	.00	50	N	Cl	.00	66	N E	Cl.	.00	40	SW	Fy.	.00	80	S	Cl.	00	74	Cm	Cl.	.00	56	W	Cl.	.00	78	Nw	Cl	.00	64	N L	Cl	.00	74	Nw	Cl.	.00	68	Nw	Cl.
M.	.00	48	S	Cy.	.00	58	N	Cl.	.00	48	Nw	Fy.	.00	76	S	Cl	.00	72	Nw	Cl.	00	72	W	Cl.	.00	76	W	Cl.	.00	62	Cm	Cl	.00	82	W	Cl	00	80	Nw	Cl.
T.	.00	50	Nw	Cy.	.00	52	W	Cy.	.00	50	N	Cy.	.00	72	S	Cl.	.00	72	SW	Cl.	00	54	W	Cl.	.00	76	S	Cl	.00	62	S	Cl.	00	74	Nw	Cl.	.00	74	Nw	Cl.
	.00				.00				.00				.00				00				.00				.00				.00				.00							

EXPLANATION. Cl. for clear; Cy., cloudy; Fr., fair; Cm., calm; — indicates too small to measure. Temperature wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

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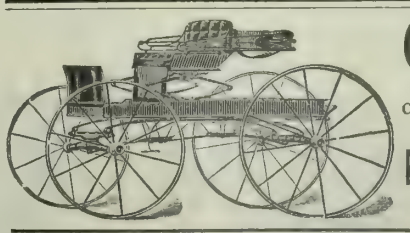


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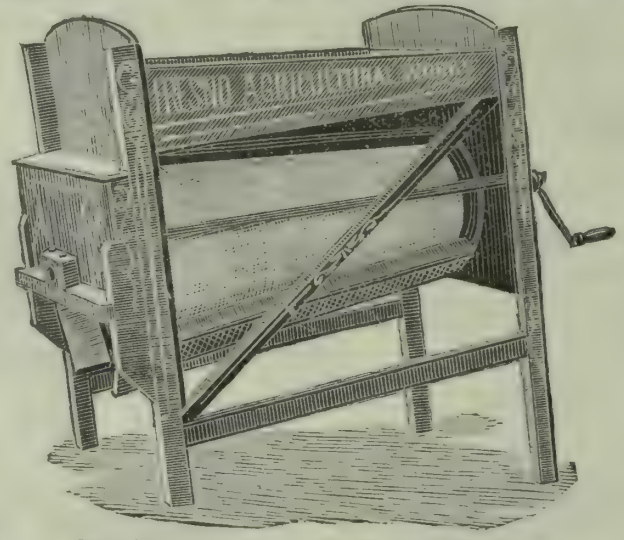
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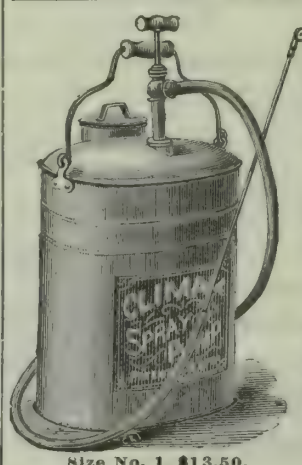
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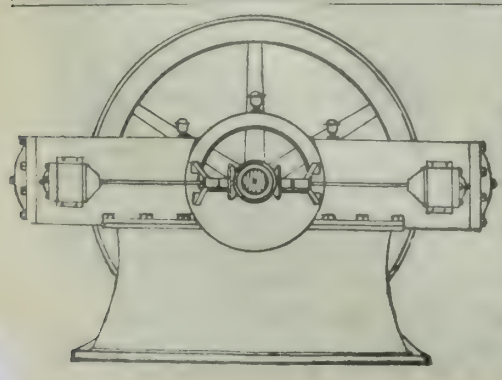
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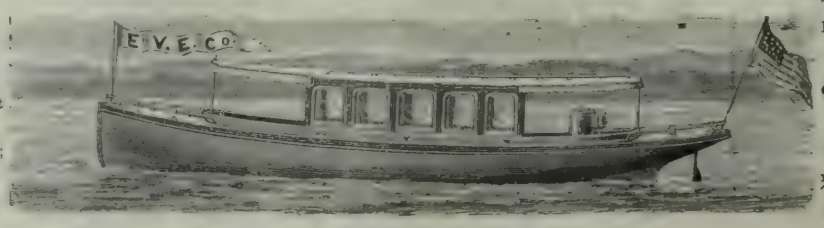
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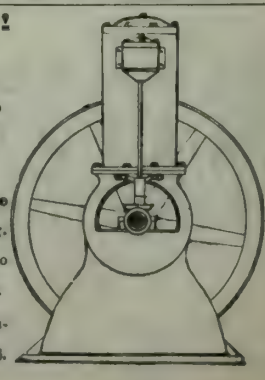
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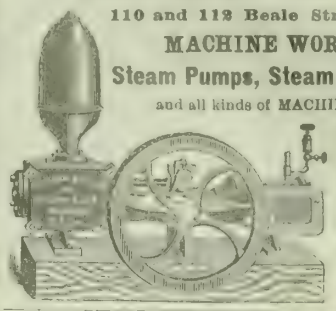
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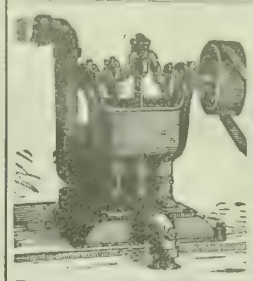
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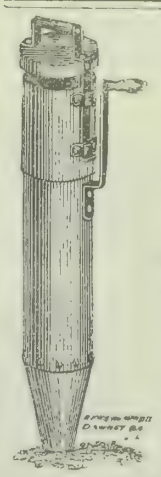
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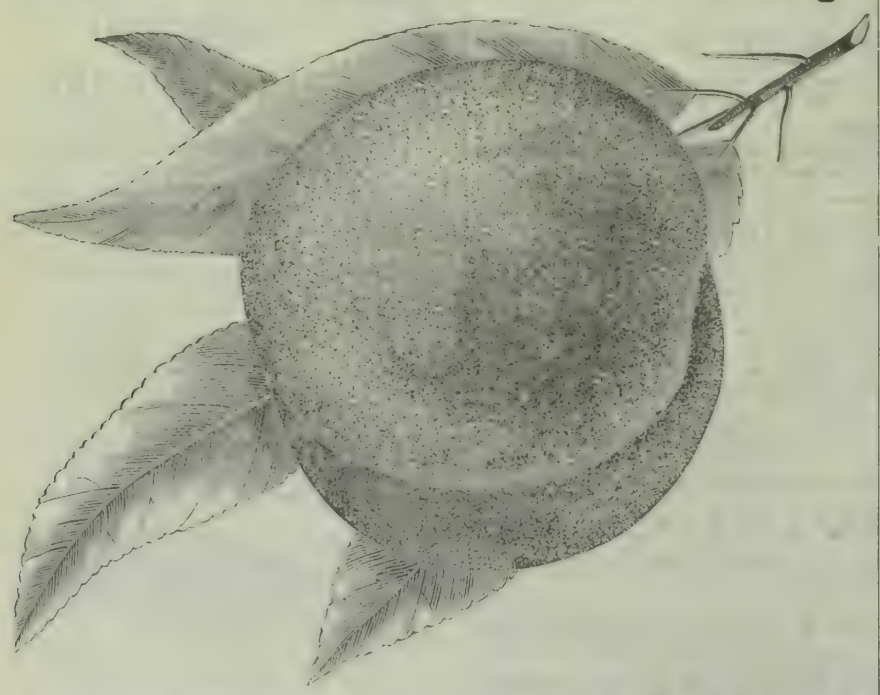
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The Whole Country Needs Fertilization

ADMONITION TO FARMERS!

GUAYMAS, MEXICO, September 9, 1890.

R. B. CUNNINGHAM, ESQ., Agent Mexican Phosphate and Sulphur Company—DEAR SIR: In answer to your inquiries as to the value of phosphates for worn-out lands, I will state that it is my opinion the lands of the older settled portions of California afford a good field for the use of phosphates These lands have been cropped for years without any restoration of the chemical constituents necessary for an abundant crop. They therefore show plainly that they need assistance artificially to produce crops good in quantity and quality, let the crop be whatever it may.

Take, for instance, San Joaquin and Santa Clara valleys, and what do you see? Many crops that are so imperfect in quantity and quality that the eye at once detects the defect. The only relief that can be resorted to must be infused into the soil to replace the chemical properties that have been extracted by previous crops, and the writer is of the opinion that a liberal supply of phosphates will accomplish this.

The attention of the cultivators of the soil is sharply turned to rotation of crops, hoping thereby to get wealth out of their lands without fertilization. Some have turned their attention to beet cultivation in soil worn out by other crops. Beet or other seeds will not grow successfully unless the soil will nourish them.

This summer I saw several crops of beets on excessively cropped lands, the majority of which showed that there was something wanting to complete the plants to ample size and in quantity that should be expected of sugar beets under favorable circumstances. If a good crop is not obtained, there is deficiency in profit. It costs as much to cultivate soil deficient in chemical properties as it does if ample nutrition was in the soil. Under the former condition a deficient crop is certain, while under the latter condition he may reasonably expect an ample crop with profit.

Fields often are allowed to go to weeds, supposing thereby to enrich the soil. This is an uncertain method and not profitable. Your weeds have grown up and seeded: the dead stems can only add a limited addition to fertilize the soil, while the seeds of the same will cause much expense to exterminate them from the future crops. Besides, while thus only weeds as a crop, no profit was realized, while if a supply of phosphates had been applied to the soil, a profitable crop of beets or corn would be had. Besides, the weeds would have been exterminated during the cultivation of the said crop. I am, Sir, your obedient servant, EDWARD PALMER, M. D.

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Ammonia	3 to 4 "	2 "	3 to 4 "

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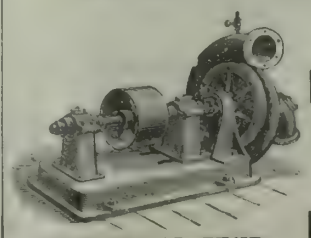
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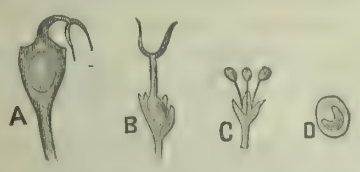
The Fig.

[By B. M. LELONG, Secretary of the State Board of Horticulture.]

The fig (*Ficus carica*) is one of the oldest of cultivated fruits on record. It is probably a native of the Eastern Mediterranean regions, but is now so widely spread throughout the warm temperate, sub-tropical and northern tropical zones that it is a difficult matter to hazard any conjectures as to its original source. It grows in the plains of Northwest India, on the Himalayas, to an elevation of 5000 feet, Afghanistan, North Persia, Asia Minor, Palestine, North Africa, and the warmer parts of Europe, ripening its fruit in sheltered situations in the south of England. It is naturalized in Australia, the north island of New Zealand, Chili, California and other parts of the United States.

The fig is a deciduous tree; it requires about the same degree of temperature as the olive to ripen to perfection, but will ripen its fruit where the olive could not. The edible part of the tree is not really a fruit, but is the hollow receptacle containing the flowers, in the pulp of which the seeds are buried.*

The flowers are very small and unisexual, the male flowers occupying the upper and the female flowers the lower part of the cavity.



[*A*. One of the fruits of the fig; *B*. One of the pistillate flowers; *C*. One of the staminate flowers; *D*. Seed with embryo; all enlarged.]

The fructification and vegetation of the fig is uninterrupted where the mean temperature does not sink below 53 degrees F.; but where the temperature descends below this mean, the leaves fall and the fruit presents a curious phenomenon. A branch only develops and ripens part of the figs borne upon it—those on the lower end, nearest the stem. The immature figs at the farther end of the branch have their growth arrested by the first cold weather and remain dormant during the winter, resuming their growth the following spring and ripening in the summer. These are known as "first figs" or "summer figs." Those which commence their formation in spring on the lower part of the branches are called "second figs" or "autumn figs." In our warm climate there are thus two crops from the same tree every year. In colder climates the "first" or "summer figs" form the whole crop, as autumn figs can only be produced in unusually warm seasons. In a warm climate the autumn crop will yield most figs, which are sweeter, less watery, and better suited for drying than summer fruit.

As to when the fig was subjected to culture by man is difficult to say, and one can only recall that mention is made of the fruit in the most ancient book of the world, that is to say, Genesis; that the Greeks cultivated it, as is evidenced by the writers of the country; and that Pliny relates how in his time there could be seen in Rome, precisely on the piazza where the people used to meet, a fig, grown there naturally, which was the object of the greatest respect, from the fact that Romulus and Remus had been suckled by a she wolf under it. Another fig, in the time of this same author, was religiously preserved in the forum of Rome, at the place where existed the abyss into which Curtius precipitated himself.

The fig is the faithful companion of the olive and the vine, and where these two plants thrive it also grows and fructifies. It is necessary, though, that the plants be never subjected to a cold more intense than 10 degrees (14 degrees Fahrenheit). If the temperature exceeds this limit it is necessary to head the fig very low, as is practiced at Argenteuil, in France.

The long cultivation to which this plant has been subjected, in greatly different countries, has given rise to a very large number of varieties, a few of which only were known to the ancients. In fact, Cato mentions but six, and Pliny, two centuries later, carried the number to about thirty. Thus, by the side of the figs of Tivoli and Herculaneum, mentioned by this writer, are indicated those from Rhodes, Lydia, Hyrcania, and others, which, like the *Liviani*, the *Pompeiiani*, got their names from their introducers and propagators.

To-day the number of fig varieties is so great that it would require a long study to be able to describe them all, and such a task would not be one of the easiest, inasmuch as a great many of these varieties possess some peculiar characters and habits, which might be observed and recognized through experience, but could not be described exactly without much difficulty. Suffren, who lovingly devoted himself to the study of the varieties of figs which were cultivated in Provence in his time, found that their number exceeded several hundreds. The figs may be classed into two large groups, the first of which comprises the varieties that yield only one crop of fruits a year, be they early or late, and the second, the other varieties which to a first yield add another, called September fruits, to distinguish them from the first, which are called flower or first figs.

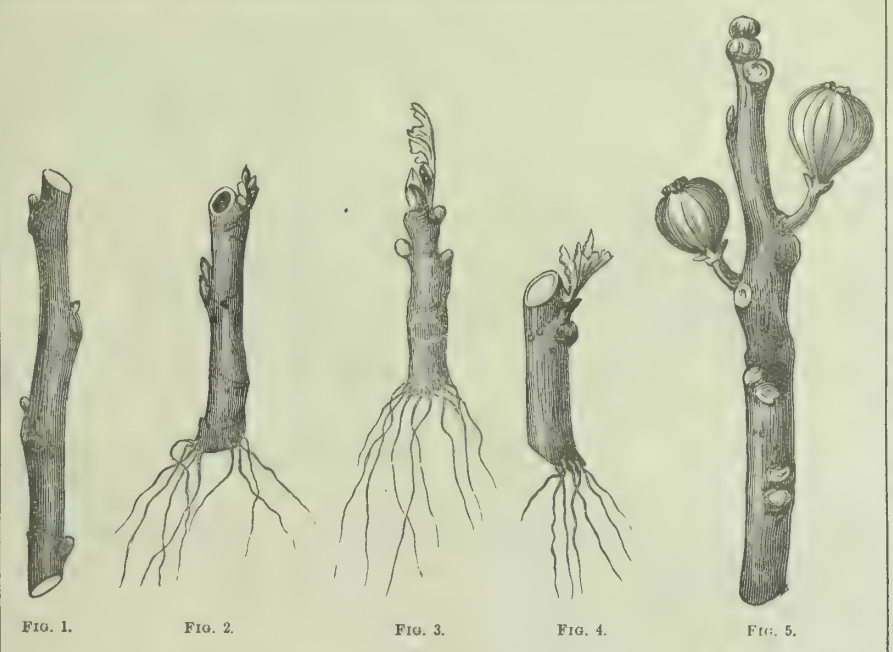


FIG. 1. FIG. 2. FIG. 3. FIG. 4. FIG. 5.

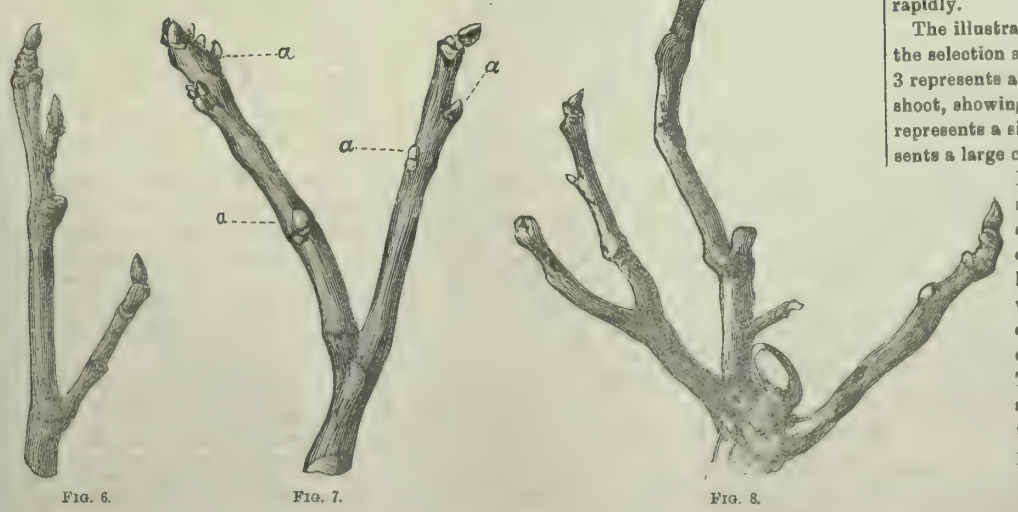


FIG. 6. FIG. 7. FIG. 8.

BLOOM, FRUIT-BEARING AND PROPAGATION OF THE FIG ILLUSTRATED.

The propagation of the fig is very simple and can be multiplied in various ways, viz.: By suckers (shoots that spring from the roots), by layers and by cuttings.

Suckers.—The young shoots that spring up from near the base or crown of the tree are called suckers. They generally contain a small portion of roots, which upon being transplanted soon form trees. The wound made on them by removing from the parent tree soon heals over. There are, however, great objections to trees produced from suckers. First among all is, perhaps, the fact that as the sucker generally contains a portion of bark from the parent tree from which many shoots or suckers put forth; also, the growth is not well formed, resembling water sprouts, having but a feeble body, and as they are required to be topped in order to branch out, put forth feeble shoots which the body of the tree cannot support. In such cases it is best to allow such trees to grow the first year without trimming to form their body, and the second year the trees can be pruned as desired; in this way they become more healthful.

Cuttings.—There is no better way to propagate the fig than by the simple method of *cuttings*, which is the most practical, and above all the best. By this method nearly every part of a tree can be utilized. The best months for the propagation of the fig by cuttings is through the months of February and March, the cuttings at this time being taken off while the trees are quite dormant. Great care must be taken that no cuttings be cut after the sap is in motion, because the milky juice which is produced so abundantly prevents the rooting of the cuttings. This, however, has no reference to young shoots in summer, which toward autumn, when the wood is ripening, root very rapidly.

The illustrations (Figs. 1, 2, 3 and 4) show the selection and preparation of cuttings. Fig. 3 represents a cutting made from the end of a shoot, showing the formation of roots. Fig. 4 represents a single eye cutting. Fig. 2 represents a large cutting, six to eight inches long. Fig. 1 represents a large cutting as it should be prepared, six to eight inches long, containing four eyes. The upper cut is made at least a half-inch above the eye, which is a protection to it, as the ends generally die back. All reduced in size for illustrating. The best cuttings are from stubby, short-jointed, well-ripened wood; they grow the most readily. One-year-old wood is generally the best age for cuttings, although two and three-year-old wood also does remarkably well, though no eyes may be visible. The long, spindling, badly ripened shoots, like water sprouts, suckers, and such as are produced where the wood is crowded, are very difficult to make grow, and those that do grow require age to become thrifty trees.

Pruning.—Pruning should be performed as soon after the fall of the leaves as possible, in whatever situations the trees may be. When trees are pruned at that season, they being then dormant, no injury is sustained; while, if the operation is delayed until late in the spring, when the sap is again in motion, there being such a volume flowing, in that event the shoots are apt to die after being cut. The

(*Continued on page 423.*)

*R. C. Haldane, "Sub-Tropical Cultivation and Climates."

The Field.

The Beet-Sugar Industry.

FIFTH PAPER.

Concentration of the Juice.

EDITORS PRESS:—The next operation is the concentration of the "thin" juice, by the removal of sufficient water to allow the sugar to crystallize.

At the beginning of this operation the juice should show not less than 5°.56 B. by the saccharometer and the concentration should continue until the syrup will show not less than 30° B. This operation is carried on in quadruple effects *in vacuo* by means of which rapid evaporation is effected and that with a temperature that does not exceed 200° F.

The now "thick" juice is next pumped into the syrup-tanks located in the fifth story of building. These tanks are provided with copper steam coils and supplied with carbonic acid gas and sulphuric acid gas. By means of the proper tests it can be determined whether there now remains any lime in the concentrated syrup, and if there should be, carbonic or sulphuric acid gas is used. At this point the "thick juice" may be further purified by the use of hyposulphite of lime in conjunction with acid sulphate of alumina, acetate of alumina, or similar substances; also the use of the combination of sugar and lime known as saccharate of lime, to produce a *magna* of carbonate of lime of sugar for the purpose of neutralizing the excess of acid which may have been used in any process.

The "thick juice" is now further boiled for the purpose of aiding filtration and is now turned into the final filter press situated just below on the fourth floor; from thence to the storing-tanks on the pan floor, third story; the liquor is now ready for crystallizing.

Vacuum Pans.

The difficulty of evaporating dense liquors without burning the sugar makes it necessary to boil the liquor *in vacuo*. This is accomplished by providing the vacuum pan. The principle on which this works is precisely the same as the quadruple effect; its results, however, are different. There must of necessity be different arrangements. In this case the object is to crystallize out the sugar, and for this purpose a cast-iron pan circular in shape, about 10 feet in diameter and 9 feet high, must be provided, and will contain about 16 tons of liquor. The pan is provided with copper coils for heating the liquor. At the top a pipe leads up and connects with a condenser, by means of which a constant vacuum is maintained in the pan. At the bottom a discharge is provided. The pan is further provided with thermometer, vacuum gauge, proof-stick, sight-glasses and test-pot. The condenser must be connected with an air-pump to maintain a good vacuum. The coils are supplied with steam from the exhaust of the various engines and tanks used throughout the mill. The condensed water is conducted from the pans into the receiver, from which it is pumped to the hot-water tank, located in sixth story, and is used in the diffusion battery. The proof-stick is so constructed that a sample can be withdrawn at any time from the interior part of the pan without interfering with the vacuum.

Working the Vacuum Pan.

The vacuum pan is operated by first starting the air-pump until a vacuum of 26 or 27 inches is obtained. The feed-cock connected with the tanks of concentrated liquor is opened, and a quantity of liquor is drawn in sufficiently to cover the first, second, third and fourth coils. It is then closed until the mass commences to show "grain." The grain is now carefully fed by admitting more liquor at frequent intervals—each time the quantity being increased. As the amount of sugar in the pan continues to augment, steam is turned on the coils that are covered, until at the completion of the charge the pan is full to the sight-glass. In this way the grain grows in size.

On conclusion of the "strike" the vacuum in the pan is destroyed and the charge of *masse cuite* is run off through the discharge valve, located in the bottom of the pan, into the sugar-mixer, where it is allowed to stand two or three hours, when further crystallization takes place.

Curing the Sugar.

The methods adopted from time to time for separating the crystals of sugar from the remaining syrup have been very crude and imperfect. The first consisted in putting the *masse cuite* in bags and allowing it to drain off. The first improvement on this method was introduced by the Spaniards and Portuguese in Cuba, and is based upon the fact that the impurities present in Muscovado sugar are much more soluble in water than the crystalline sugar itself, thus washing in water will effect considerable purification. The earliest manner of carrying this out was by placing the sugar in inverted cones with a minute aperture in the apex, which is stopped up during the filling and for 12 hours afterward. Upon the mass of sugar in the cone was placed a batter of clay and water (hence the term "claying"), the object being to insure a very gradual percolation of the water through the mass. This carries with it the uncrystallizable sugar and other impure matters imbedded between the crystals of the sugar. This results in purer and lighter-colored sugars, but the grain is very soft and the operation is very wasteful.

Spirit washing.—The very slight solubility of sugar in alcohol, coupled with the ready solubility in that medium of many of its impurities, suggested the practice called "spirit washing." The results are not perfect, however, and the cost soon caused its abandonment.

Centrifugals.

The preceding methods have been practically superseded by centrifugal machines or hydro-extractors, so called from their being first used for drying textile goods. There are many varieties, but all consist essentially of a cylindrical basket revolving on a vertical shaft. The basket is perforated and revolves within an outside case that remains stationary, with a space of about four inches between the two. The annular space thus left is for the reception of the molasses as it is driven by centrifugal force through the perforations in the basket into this space, thence it runs off into the receiving-tanks below. As the basket is driven at a high speed, the centrifugal force is very great, and any moisture is forced through the mass of sugar that may be in the machine at any one time until it finds an outlet through the perforations in the basket. As soon as the sugar has become dry the machine is stopped and the sugar is discharged at the bottom through gates that are provided. The first sugar that is discharged should equal "Golden C" and analyze 96 to 98 per cent.

Alameda, Cal. B. B. CHANDLER, M. E.

Hot Water Instead of Bluestone.

Those who are in the habit of bluestoning their seed wheat as a preventive of smut may be interested in trying hot water as a substitute for the bluestone solution. Eastern experiments, which we will describe below, seem to affirm the efficacy of the hot-water treatment, and if the farmer can save the cost of bluestone, it will be a good item. However, we do not advise those who have been trusting to bluestone to turn their backs wholly upon their own past experience, but rather to treat part of their seed this year with hot water, so that they can have an opportunity to compare the results by the two treatments.

Prof. C. H. Peck, State Botanist of New York, publishes in the *Country Gentleman* an article which gives a popular description of the smut disease and recites the hot-water remedy, and we quote as follows:

Three kinds of smut are parasitic upon wheat. They are known to mycologists by the names *Ustilago tritici*, *Tilletia fœtens* and *Tilletia tritici*. The first has been called "loose smut" and the others "stinking smut." The first converts the whole head of wheat into a blackish, dusty mass of smut loosely adhering to the shreddy remnants of the spike. This smut destroys both grain and chaff, and is very conspicuous among the sound heads. The stinking smuts are much less conspicuous. By these the interior of the grain or kernel is transformed into a dusty, somewhat odorous, smutty mass, but the head of wheat is only slightly changed in appearance. These two stinking smuts differ but slightly from each other, the microscope showing the globose particles of one to be smooth, of the other to be reticulated on the surface.

All these smuts are parasitic fungi, plants of a low order that live in and derive their nourishment from the tissues of the plant they attack. The dusty mass either of the heads or of the grains is composed mostly of the spores of the fungus, minute bodies which correspond to the seeds of flowering plants, and which like them are produced for the purpose of propagating the species. They are produced about the time the wheat develops its heads, and many of these spores become scattered upon and adhere to the sound grains, and if these grains are used for seed without first being disinfected they produce a new crop of smut, the smut spores germinating about the same time the wheat seed does, and the mycelium entering the young wheat plant and living in and growing through its tissues till the smut appears. The smutted grains themselves will not germinate, the whole interior being destroyed by the stinking smut, but sound grains on which smut spores have lodged will germinate, and it is chiefly in this way that the smut gets into the wheat-fields and is kept up from year to year. When wholly clean seed is used the crop will be free from smut. The object of the copper sulphate or bluestone treatment and of other treatments of the seed is to destroy any smut spores that may adhere to it and thereby make the seed clean.

A series of experiments, in which various disinfectants or fungicides were employed for the prevention of smut in wheat, has recently been tried at the Kansas Agricultural Experiment Station. The results of these experiments and the conclusions reached are published in Bulletin 12, for August, 1890. It is there decided that the Jensen hot-water treatment is, upon the whole, the best and most available for ordinary and general use. While it is nearly if not quite as efficient as any other, it has this advantage, that it does not weaken the germinating power of the seed, and thereby diminish the product, as the copper sulphate and other treatments do. It reduced the amount of smut in the experiments to less than one per cent, and it may be employed with equally good effect against either of the three smuts of wheat or the smut of oats.

The following directions for its employment are quoted from the bulletin already mentioned:

Provide two large vessels, as two kettles over a fire, or boilers on a cook-stove; the first containing warm water (say 110° to 120°) the second containing scalding water (132°).

The first is for the purpose of warming the seed preparatory to dipping it into the second. Unless this precaution is taken, it will be difficult to keep the water in the second vessel at a proper temperature. The seed to be treated must first be placed in a barrel or other large vessel filled with water and be stirred till all the grains are wetted, and the smutted and imperfect ones rise to the surface. These must be removed by skimming. The grain may remain in the water 15 minutes to half an hour. Then it must be removed and placed, a half-bushel or more at a time, in a vessel that will allow free entrance and exit of water on all sides. For this purpose a bushel basket made of heavy wire could be used, over which stretch wire netting, say 12 meshes to the inch, or an iron frame could be made at a trifling cost, over which the wire netting could be stretched. This would allow the water to pass freely, and yet prevent the passage of the seed. A sack made of loosely woven material (as gunny sack) could perhaps be used instead of the wire basket.

Now dip the basket of seed in the first vessel; after a moment lift it, and when the water has for the most part escaped, plunge it into the water again, repeating the operation several times. The object of the lifting and plunging, to which might be added also a rotary motion, is to bring every grain in contact with the hot water. Less than a minute is required for this preparatory treatment, after which plunge the basket of seed into the second vessel. If the thermometer indicates that the temperature of the water is falling, pour in hot water until it is elevated to 132°. If it should rise higher than 132°, add small quantities of cold water. This will doubtless be the most effectual method of keeping the proper temperature,* and requires only the addition of two small vessels—one for cold and the other for boiling water. The basket of seed should, very shortly after its immersion, be lifted, and then plunged and agitated in the manner described above; and the operation should be repeated eight to ten times during the immersion (which should be continued 15 minutes). In this way every portion of the seed will be subjected to the action of the scalding water. Immediately after its removal dash cold water over it, or plunge it into a vessel of cold water, and then spread out to dry. Another portion can be treated similarly, and so on till all the seed has been disinfected.

The important precautions to be taken are as follows: 1st. *Maintain the proper temperature* of the water (132° Fahr.), in no case allowing it to rise higher than 135° or to fall below 130°. This will not be difficult to do if a reliable thermometer is used and hot or cold water be dipped into the vessel as the falling or rising temperature demands. Immersion 15 minutes will not then injure the seed. 2d. See that the volume of scalding water is much greater (at least six or eight times) than that of the seed treated at any one time. 3d. Never fill the basket or sack containing the seed entirely full, but always leave room for the grain to move about freely. 4th. Leave the seed in the second vessel of water *fifteen minutes*.

*Steam, conducted into the second vessel by a pipe provided with a stop-cock, answers very well both for heating the water and elevating the temperature from time to time.

The Vineyard.

Future of the Wine Interest.

EDITORS PRESS:—In a recent number you reprint an interview with Mr. Dresel on resistant vines. In this interview, Mr. D. is made to say that he advises vineyardists who have lost their vineyards through phylloxera to replant with resistant stock, notably *riparia*, and gives as a reason that there is a great improvement in the price of grapes. There undoubtedly is, if common Zinfandel brings $15 to $17 in his market, and at this price they will pay a fair profit to the grower. Gutedel and Riesling he quotes at $16 to $20, which is certainly very cheap; and to raise Cabernet Sauvignon at $27 per ton, there is an absolute loss. Zinfandel in the Santa Clara valley sold this season at $10; white grapes and Pinots at $11 to $12. Where does the profit come in at that? People in our valley talk about pulling up their vines in spite of the apparent improvement in the market of $2 per ton over last year. Now let us see why this slight improvement.

What would growers in Sonoma have realized for their grapes if the so-called Los Angeles disease in the South and phylloxera in Napa and Sonoma had not killed out thousands of acres of vines? What if a sudden demand for dried grapes, on account of the total failure of the fruit crop in the East, had not sprung up? What if the passage of the Sweet Wine bill had not stimulated the brandy market? Hogs would have been turned into thousands of acres of Zinfandel, Gutedel and Riesling. In spite of all the above, grapes sold hardly at a living price this season.

Now let us see if we can reasonably expect an improvement hereafter. Our surplus production of wine has been about 5,000,000 gallons in 1888 and nearly the same in 1889. During the last fiscal year, the United States imported less than 2,000,000 gallons from all countries. If prices are again to come back to a paying basis, it is clear that we must find a market outside of the United States or teach our people to drink more wine. Unless either of the two or both can be done, we have made more wine this season than the United States consumes in a year. Prices have gone down because there is an overproduction, a glut in the market.

Can we hope for a great demand for dried grapes a year hence? Hardly, unless the Eastern crop is again a failure. The so-called Los Angeles disease is said to have been checked. If that is so, Southern California will in the near future make more raisins than the market will take. The first thing that will happen, then, is to cut off the dried-grape industry of the North. Raisins will go down so low that the northern dried grapes will be worth but very little. Besides this they will cut us off from making brandy and sweet wines and oblige us to throw our entire production into dry wines.

To plant a vineyard on resistant stock costs considerable. Rooted Riparias are $15 per 1000; grafting is worth $16 per 1000, not including scions. All roots don't grow, and all grafts don't take, and replanting and regrafting is troublesome and expensive.

When I set out my vineyard three years ago, the wine industry was not flourishing, but I was told that there would be a decided improvement almost immediately. The only improvement I have been able to discover is lower prices for grapes and wine. Let those who contemplate planting new vineyards first look up statistics as to our present production and consumption, and figure whether it will pay them to put a fortune in vines and wait five years or more before any returns are possible, and if they are determined to go into the business, why not buy out somebody who is unwilling or unable to stick to his vineyard? There are plenty of vineyards for sale in districts where the phylloxera has not yet appeared, and they can be bought for very much less than it will cost to set them out and care for until of age. WILLIAM WEHNER.

Evergreen, Santa Clara Co.

[These points are commended for comment by readers who see a better outlook for the wine-grape interest, and probably no one would be better pleased than Mr. Wehner to have his position successfully assailed.—EDS. PRESS.]

The Garden.

Onion Culture in Southern California.

S. J. Murdock of Westminster, Orange county, writes for the *Rural Californian* as follows: On good seed more than any one thing depends the success of the onion crop, and possibly to a greater extent than any other vegetable unless it be the cauliflower, which requires also honesty and confidence on the part of the grower.

Good and Poor Seed.

Onion seed should be of the best possible strain and strictly fresh, as it soon loses its vitality. It should be procured of a reliable grower or seedsman. Cheap or high-priced seeds or new-named novelties I generally let alone or test them before planting extensively. It has been my experience that the novelties of the catalogue are generally more for the benefit of the originator and dealer. Nevertheless once in awhile the producers do get hold of something that is a source of profit. Cheapness in seeds of any kind carries with it the stamp of inferiority. The value attached to good seed by experienced growers often is a source of wonder to the inexperienced, and is frequently overlooked by the beginner, and there is no doubt in my mind that poor seed has caused many a novice and corbstone rancher to quit the business in disgust.

I will try and explain why cheap onion seed is not cheap and how the seed is produced. The onion top grows from 15 to 24 inches high, according to the variety and the fertility of the soil. As the onion develops and the crop begins to mature, the stalk or top dries and shrivels up near the bulb and falls over; this forms a ripe onion; but a portion of them, according to the purity of the seed used, will remain large and stiff just above the bulb. This constitutes a scallion or stiff neck. The scallion, although good to eat, does not keep well. It is an inferior product. The onion, like most other vegetables, is susceptible of being bred up to a high degree of perfection. If we should select and grow seed from scallions for a few years, we would soon have a strain of seed that would grow scallions to a certainty.

On the other hand, if we select the earliest and best-shaped bulbs with small necks to propagate our seed from and continue this from year to year, we would soon have a strain of seed that would produce but few scallions, which, with proper treatment, would insure a good crop of fine quality. While the unscrupulous grower will sell all his marketable product and reset his scallions and grow a crop of worthless seed whereby the purchaser not only loses the cost of the same, but invariably his time and labor, experience with poor seed all goes to show the importance of selecting only the very best.

Another disreputable practice among the

seed-dealers is to buy up the seed still on the market at the close of the season and hold it over until the following year. This is a shrewd practice on the part of the dealers, as they buy at a low figure and sell at a profit, but it is very unsatisfactory to the producer planting it. Good, reliable seed is the key-note to success in onion culture; if we go wrong here, all is lost. Remember this, that unless your seed is fertile and in every way first class, your crop will at best be but a partial success.

Planting and Cultivation.

The preparation of the seed-bed should be thorough, but not too deep. The plat should be brought to the finest state of cultivation—as smooth and level as possible and free from all rubbish. The onion will succeed in a greater diversity of soils than is generally believed, but the more humus the better. I prefer for a large crop of solid onions a rather heavy soil well drained, yet for an extra early crop would plant on rich sandy loam. It should be protected from heavy winds, but avoid all shade, as the onion likes sunshine at all stages of its growth. Well subdued and well-drained muck land offers every condition of success.

Planting is generally done with a seed-drill, of which there are several patterns. I find the Planet Jr. a reliable tool. Care should be taken to start the first row straight, as following rows are ganged by it. Not only are regular rows the pride of the practical gardener, but a great help in after cultivation; the straighter the rows the closer can the operator work with a wheel hoe. The rows should be 12 to 16 inches apart according to the variety grown—the larger the variety the greater the distance. On moist, heavy land the seed should be drilled just deep enough to fairly cover it; the lighter and looser the soil the deeper the seed should be put to prevent it drying out before striking root.

The proper time to sow the seed varies with different varieties. To cover the entire year I have sown onion seed every month, and have been successful in maturing my crops. However, they are not harvested at regular monthly periods, as it requires warm weather to mature.

As to varieties, I shall mention only two, the White Italian and Yellow Danver. The first is the best early onion I have ever grown, and from what I can learn, it seems to do better in my locality than in other sections. So far as my observations go I am the only one growing this particular variety in Southern California and perhaps on the coast. It is a quick grower, a fair yielder and the best selling onion I ever put on the market. Three years ago, when I first offered it, I could scarcely find a buyer, but when its superior qualities became better known, the trade gave it the preference over all others. Last year and this I could not supply the demand. For a summer crop the Yellow Danver stands pre-eminent. It is a good yielder and the best keeper and shipper grown on the coast. The proper time to sow the seed is about the middle of February, or as soon after that date as the soil can be got in good condition. The seed should be drilled at the rate of four pounds to the acre. After seeding, thorough but shallow cultivation is essential. Do not wait until the plants are up before beginning; from four to eight days after sowing (when the seed shows signs of germination, which can be ascertained by carefully brushing the soil from the drill row) will be proper.

I put the curved hoes on my wheel hoe, with the straight ends of the hoes pointing inward and lapping about two inches, and hoe right over the seed rows but not deep enough to disturb the seed. I find this saves a great deal of hand-weeding by killing the weeds just starting to grow in the rows. As soon as the onions are up sufficiently to follow the rows, I reverse my hoes with the curved ends next to the rows and just far enough apart so as to hoe as close as possible without cutting the young onions by running astride the rows. This operation hoes both sides of the row at one trip of the machine. Follow this by hand-weeding on hands and knees astride the rows, and pulling every weed in sight; repeat as often as any weeds are to be found, and under no circumstances allow the weeds to grow above the onions.

Harvesting.

When the tops have turned yellow and dried up, the crop is ripe and ready to harvest. If on moist land, they should be harvested at once, for if left long in the ground the moisture from below and the heavy fogs will soon cause them to throw out new roots and start a new growth of top which would soon spoil the whole crop. On dry land, however, the summer crop can remain quite a while without injury. Harvesting a mature crop is done by pulling two or more rows, lay the onions to one side and when across the field turn round and pull a like number of rows, putting the onions with the first rows; this forms a continuous pile through the field which leaves them conveniently for topping, which is done with a knife. The crop is then thrown into heaps ready for sacking to store away or market. It is best to sack and haul from the field while the sun shines to insure the onions being perfectly dry.

The yield per acre varies with different varieties and on different soils. Two hundred centals is an ordinary yield of the small varieties, yet it is not uncommon to raise 300 and 400 centals per acre, and I know of one instance (which is certified to by witnesses) of one single acre yielding 660 centals, and that I am proud to say was done on Southern California soil. The price received is about as variable as the mercury is in the Eastern States during April. This time last year onions were a drug on the market at 30 cents per cental, while last April they sold at $10 in San Francisco. I have never seen a year in this State (and I have been a resident for 20 years) but that onions have sold for $3 or more per cental wholesale. I have found the business a profitable one, but let no one suppose that success can be attained otherwise than by steady personal application. A great mistake with many is to attempt too much at the start. Without the necessary experience and insufficient help a failure or at best but a partial success is the result.

A friend and neighbor of mine, a few years ago, conceived the idea of clearing off a mortgage on his farm by growing a crop of early onions. He put in nearly five acres on land that was well seeded with weeds, and got along very well until he got his onion seed all sown. At this stage of the game it began to rain, and his soil being rather heavy, the weeds got the start of him; he was not prepared to hire much help, and the outcome was a total failure. I believe he has not raised any onions since, nor his mortgage either.

FRUIT PRESERVATION.

Water-proofing Cloth for Fruit Protection.

EDITORS PRESS:—Yours of the 27th ult. received, in which you request me to write up fully my experience in waterproofing cloth according to a recipe furnished by Prof. Hilgard. I will do so with pleasure.

This recipe, together with others, was sent to me in September, 1886, and as you will see by the following copy of a letter which I had published at the time in our local paper, knowing that others here were interested in the subject and would probably like to experiment also.

Prof. Hilgard's Letter.

BERKELEY, Sept. 15, 1886.

J. W. Osburn, Orange—DEAR SIR: When I looked up the subject of waterproof cloth, after last writing to you, I found it more "mixed" than I had anticipated; and being called away for an absence of several days, from which I have just returned, the matter has unavoidably lain over. The difficulty arises not so much from the lack of processes, but from the difficulty of finding one that will suit your present needs, so that you can carry it out quickly. From that point of view I came back to my original idea: Dip your cloth in white paraffine, melted and kept pretty hot, until it is fully permeated, then wring it out thoroughly, so as to take all the surplus possible, which you can do more effectually afterward by ironing it after laying it over another piece of stuff to be treated.

This being well done, you have a cloth that will not allow water to pass, but is readily permeated by air and vapors, and is entirely inodorous. I use paraffine constantly for sealing wine-bottles, cask-bungs, etc.

The objection to this process is only that when creased the paraffine gradually crumbles off. But for your purpose it seems to me it would answer well enough anyway.

Hereafter it may turn out that the "maltha," of Ventura, is good enough for this use, and it would be cheaper. Still, even refined paraffine does not cost a great deal.

Now for the other sort of waterproofing of which I spoke. Here is a good example of how it is done: "Soften 4½ ozs. of glue in 8¾ pints of water, cold at first; then dissolve in, say a wash-boilerful, of warm water, with 2½ ozs. of hard soap, and boil for an hour, wring and dry; then prepare a bath of a pound of alum and a pound of salt, soak the prepared cloth in it for a couple of hours, rinse with clear water and dry." Another, and a good way, too, is to make a bath of alum and commercial acetate of lime, or acetate of soda; steep the stuff in this, warm, for several hours, then wring and dry over a warm stove, or, after drying, iron it; then rinse once more in clear water, and dry.

The principle of all these methods is to prepare a cloth imbued with alumina or one of its compounds that, like the one made with soap, sheds water. It is the same in substance as that in which sugar of lead is used, in which really the sulphate of lead cuts much less of a figure than the acetate of alumina, which is formed when the mixture is made. The lead is superfluous, and only renders the cloth heavy and otherwise objectionable.

If you have a dyer down there who understands his business, and knows how to make acetate of alumina for use as a mordant for his colors, he can make the cloth for you; for cloth so mordanted and then dried is just what is wanted.

However, for present use, I recommend to you the paraffine process, then for another season set somebody to work to make the other sort.

Very respectfully, E. W. HILGARD.

Partly because my attention was otherwise directed and partly because the raisin industry here immediately thereafter collapsed, I did not make to Prof. Hilgard the report which was undoubtedly his due. But now that serious loss has this season been sustained by raisin-producers in Fresno, El Cajon and other places, the question of a good, cheap and convenient covering for raisins again assumes importance. I contend that every raisin-producer should, no matter where located, provide himself with the best sort of covering and put it over his drying beds nightly as a preventive against the dews and occasional showers which may occur during September and October in this State.

With a covering, the beginning of picking may be delayed a week or ten days and that much additional time afforded the grapes for the accumulation of saccharine material, to the great improvement of the appearance and quality and increase in the weight of the product.

The interest on the cost of such covering as I prepared, added to the annual expense of caring for and using it, together amount to what is practically an insurance on the crop, and I found it to be about one-third of a cent per pound for each pound of raisins. This is a cheap insurance and one which the experience of the present year shows the raisin produced can ill-afford to do without.

One of the things suggested for waterproofing was paraffine, and paraffine is good if the cloth is to be stretched on frames. But paraffine stiffens and renders the cloth unmanageable unless it is on frames, and frames, or any kind of wooden or other light, inflexible covering, are blown around and battered up by winds and on that account are objectionable. Piling up trays is too slow and laborious.

Making a Cover and Supports for It.

Before we can know what kind of waterproofing is needed we must first know what arrangement for covering is best. The best and most convenient in my judgment is made as follows: Take three bolts of "Cabot A" sheeting and sew them together longitudinally; then hem the two outside edges and slip a wire into each hem. The cloth will be about 66 feet in length and the wires about four feet longer, as each wire ought to project about two feet beyond the cloth at each end. Now take 20 strips of cloth two inches wide and six inches long. Sew their edges together lengthwise, and, beginning at each corner of the large cloth, fasten these little strips along the edge, at intervals of nine feet, by sewing their ends together around and above but close to the wire so as to form a loop below and to bear on the wire above.

Sink four 2x3 posts two feet long 20 inches into the ground for the corners of the bed. They should be 8 feet apart one way and about 70 the other. Half-way between—the short way—sink at each end one 2x4 post 4 feet long two feet into the ground and stretch a wire across their tops and place under it a few props for support. This wire will serve as a ridge-pole; then between the corner posts drive at intervals of nine feet stakes to correspond with the loops before described. Into the top of each stake drive a staple such as is used for fencing and fasten under each staple one end of a piece of bailing rope about seven inches long.

The beds ought te extend east and west. The ropes on the north edge are tied to their corresponding loops and remain tied during the season, the ends of the wire on that side being stapled down to the corner posts. The two ends of the wire on the south edge are so looped that they can be conveniently held in the hand and drawn over the projecting ends of the two corner posts. Such beds can be covered and uncovered by two men almost as fast as they can walk. The wire should be kept taut between them and carried over the ridge-pole evenly. While the bed is being covered, the air fills in under the cloth, and the cloth comes over without dragging.

From the foregoing it will be seen that no preparation for waterproofing that makes the cloth less pliable will do. It will also be seen that with this or some similar arrangement of the covering the cloth when extended over the bed is shaped like a roof and has a considerable slant, and that, therefore, it does not need to be so perfectly waterproofed as it would were the cloth simply spread over the ground.

Now for the process. The recipe as given by Prof. Hilgard in his letter printed above is as follows:

Soften 4½ ounces of glue in 8¾ pints of water, cold at first; then dissolve in, say a wash-boiler full of warm water, with 2½ ounces of hard soap, and boil for an hour, wring and dry; then prepare a bath of a pound of alum and a pound of salt, soak the prepared cloth in it for a couple of hours, rinse with clear water and dry.

I tried this first on a small scale and found the cost of the materials very small—less, if I recollect, than half a cent per yard. A number of times I bagged the cloth in places and poured in half a bucket of water and found that little or none came through, while cloth not so processed allowed the water to run through in streams.

It was then inconvenient to put all of my cloth through the process, as it was in use. But at the end of the season most of my cloth had become more or less mildewed, and I decided to put all of it through the process at once, so as to kill the mildew before storing it away, and have it ready prepared for another season. The small amount which had been processed remained perfectly free from mildew, though exposed in the same manner as the other.

So I put all—1300 yards—through and in the same manner as the small pieces previously waterproofed.

The recipe says a "wash-boiler full of warm water." I took that to mean six gallons. Ten yards will soak up about one gallon. So for 650 yards—half the cloth—there would have to be 65 gallons. I put three pounds of glue into 11½ gallons of cold water and allowed it to soak for 24 hours. Then this, together with 1½ pounds of hard soap, was put into a boiler containing, if my memory serves me, 53½ gallons, making in all about 65 gallons. I found that only 325 yards would boil conveniently in about 65 gallons, so that many yards were boiled for an hour, wrung and dried, and then 325 more were put into what remained of the 65 gallons and treated in the same way. Afterward a fresh quantity of liquid was prepared, and the other half of the cloth—650 yards—was put through it in two lots in the same manner as the first half.

Next, 22 pounds of alum and 22 pounds of Liverpool salt were put into a barrel containing 60 gallons and the same filled up with water. After dissolving, 24 gallons of this mixture and 36 gallons of water were put into the boiler, warmed but not heated (this warming was not authorized by the recipe, and was perhaps a mistake, as the glue may have melted) and 325 yards placed therein and soaked for a couple of hours. Then the cloth was raised and placed upon cross-bars and permitted to drain back into the boiler. To this drainage the 12 gallons of the mixture from the barrel were added as well as 18 gallons of water and another 325 yards soaked as before, which process was repeated twice after that—12 gallons of the mixture and 18 of water being added each time and 325 yards soaked. After draining, one end of each piece of cloth was thrown into a flowing stream of rather clear water and rinsed in that manner for four or five minutes, and then hung up on wire and dried.

When the salt and alum mixture and water were put into the boiler, the contents of the boiler seemed so cold that I thought part of the chill might be taken off, but to what extent this was done I did not make a note of, and cannot now recollect.

History of the Cloth.

The following season, having no need of this cloth, I sold it to Mr. C. L. Leslie. He having some raisins badly rained upon, used it at once by simply spreading it on the ground over his beds, in which position no such cloth could be expected to afford perfect protection. As to the usage it has received since, I know very little. I asked Mr. Leslie once, who is very little about Orange himself, how the cloth had kept, and he did not seem to know. But last summer, being down at his extensive drying-grounds, near here, I noticed some of this cloth was in use for spreading over apricots. Examining it, I found that it was as strong and the same in appearance as when I sold it, which leads me to think that the salt in it has had, perhaps, a preservative effect. I noted the condition of the cloth carefully, because I once saw some cloth which had been waterproofed by a certain application of, as I remember, soap and alum, and though it had been kept under cover when not in use, had deteriorated greatly, tearing easily if stretched. The amount of soap used in preparing it was, I think, considerable, and possibly not of the best kind.

I trust the above will be of service, and I would like to hear from others what success they have had in the use of covers for drying fruit and raisins. J. W. OSBURN.

Orange, Cal.

[This communication is exceedingly interesting, and we trust that the invitation for a general discussion of the matters involved through the columns of the RURAL may be generally accepted. Growers can help each other greatly by such discussion of arrangements and contrivances.—EDS. PRESS.]

PUGET SOUND LUMBER.—A lumber-pile made of boards each 100 feet long and six feet in width would be an unprecedented sight in the East, says the Philadelphia *Press;* but a gentleman recently returned from a visit to the Northern Pacific ocean says that piles of timber such as that are common at the mills of Puget Sound. "Boards 100 feet long and six feet wide, without a knot in them," he says, "are common cuts from gigantic fir trees of the Puget Sound forests." These trees grow to the enormous hight of 250 feet, and the forests are so vast that although the sawmills have been ripping 500,000,000 feet of lumber out of them every year for ten years, the spaces made by these tremendous inroads seem no more than garden patches. Puget Sound has 1800 miles of shore line, and all along this line and extending thence on both sides miles and miles farther than the eye can see, is one vast and almost unbroken forest of these enormous trees. An official estimate places the amount of standing timber in that area at 500,000,000,000 feet, or a thousand years' supply, even at the enormous rate the timber is now being felled and sawed. The timber belt covers 30,000,000 acres of Washington, an area equal to the States of Vermont, Massachusetts, New Hampshire and Connecticut.

RAILROAD EARNINGS IN THE U. S.—The gross earnings of 151 railways for the month of September, according to statistics collected by the *Financial Chronicle*, are $43,381,520, as compared with $40,407,531 for the same month of 1889, an increase of 7.36 per cent. The increase is quite general in all parts of the country, and is especially significant of the prosperous condition of the railway transportation business, since the September earnings of 1889 showed a large increase over the same month of the previous year. One of the most noticeable things in the detailed list is the strikingly favorable results shown by Southern roads. Of 46 roads reporting from this section, only three report decreases.

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

Past Master Hale.

We had the pleasure of another visit from Past Master Hale of Connecticut on Monday. He had a pleasant meeting with the Patrons at Lodi on Wednesday, Nov. 5th, Stockton on Thursday, and San Jose on Saturday. Monday he visited the State University, and Tuesday looked in on the Board of Directors at the Grangers' Bank while in session. Tuesday evening he started for Los Angeles, expecting to return as far as Tulare by 10 o'clock A. M. on Thursday, Nov. 20, leave at 10:10 A. M. Nov. 21st for a hasty visit to Merced, arriving at 2 P. M., and leaving on his return to the East at 10:25 P. M. We feel confident the Patrons of Tulare and Merced will give him a good reception.

We received a telegram on Tuesday from Past Master Coulter, inquiring when Bro. Hale could visit Santa Rosa. Bro. Hale was very sorry to have to decline visiting the home Grange of Worthy Master Davis, Past Master Coulter and other good Patrons.

The visitation of the wide-awake Past Master from Connecticut has afforded a real benefit to many Patrons and farmers on this coast. He leaves with much regret at not being able to remain and visit and confer with many other quarters who were too late in speaking for his services.

Bro. Hale's time is limited in this State on account of engagements to speak four days to Farmers' Institutes in Massachusetts in December and some two weeks of similar work in Pennsylvania during the month of January.

Forging Ahead.

Returns from the election in the Eastern States seem to indicate that a reform in Government officials has commenced. The Farmers' Alliance, backed no doubt by many Patrons and other independent farmers, is being heard throughout the land. No doubt some of the seed planted in the early days of the Grange, when the great uprising took place from '73 to '75, nurtured by many of the true and faithful since, is now fruiting.

While the Grange holds that conservative position which has kept its organization firm, steady and thoroughly entrenched for the work, and is constantly developing, we have only to say to the Alliance: "Boys, go it cross-lots when necessary, and as opportunity may offer, and as often as you can see your way to 'get there.'" In fact it looks as if the "boys" were getting there by one route or another, and in a manner which cannot but be pleasing to observe by every agricultural and industrial producer and honest deal loving citizen.

Bro. Hale at Tulare.

Connecticut's Past Master Will Speak to the Grange and Alliance.

The Grange and Alliance at Tulare will join in receiving Past Master Hale on Thursday, November 20th. The subject of the meeting will be the organization of a Farmers' Institute and taking the preliminary steps therefor. The U. S. Experiment Station being established at Tulare, this movement is appropriate and timely. Not only every farmer in Tulare and adjoining counties, but every other industrial and business man is interested and should favor such a movement.

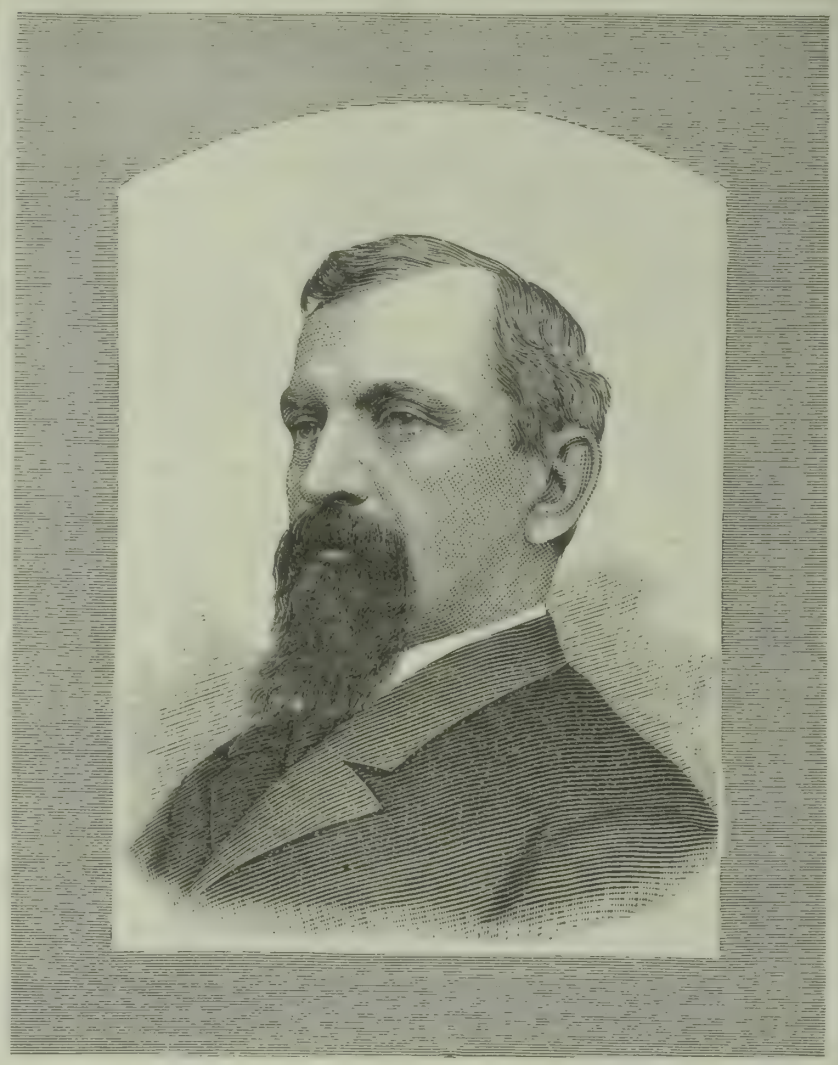
Few if any men in the United States could have been employed to speak upon this subject at the present time, we believe, more interestingly and effectively than Bro. Hale. We congratulate the farmers of Tulare upon their prompt moving in this matter and hope that they will have a successful meeting.

More complete mention of the meeting will doubtless be made in the Tulare county papers.

Twenty-third Birthday.

On the 4th of December the Order of Patrons of Husbandry will have reached its twenty-third birthday, and it is but proper that some recognition be made of the event. The Order has grown more during the last year than in the preceding 12 years, and we should do something to commemorate the birth of the Order, and to increase our love and appreciation of its services. Open meetings, public addresses and many other features will do much in reviving Grange spirit and in increasing our membership. We have plenty of good speakers within our ranks who are ever willing to assist their brothers and sisters in any Grange doings, so let them be invited to join in the festivities and add to the occasion by their presence and their counsel. Work is required, so do not be idle.

THE NATIONAL GRANGE commenced its sessions on Wednesday at Atlanta, Ga., and we expect to have some interesting reports soon through Worthy Master Davis and Treasurer Cressey.



LEONARD RHONE, GRAND HIGH PRIEST AND MASTER OF STATE GRANGE OF PENNSYLVANIA.

[From Our Recent National Grange Edition.]

Leonard Rhone.

The able and faithful Patron whose life-like portrait appears herewith is one of the strongest good men who attended the National Grange session last year at Sacramento, Cal.

His reputation as the head of the Pennsylvania State Grange (considered by many the best organized of any State Grange for business, if not also for social and educational advantages) preceded him, and no member was oftener called upon by Patrons of the Pacific Coast for information and advice during the sessions and excursions of the National Grange in California than our plain, candid and practical friend, Leonard Rhone.

At the same session he was popularly elected Grand High Priest, the presiding officer of the degree of Ceres (seventh).

In rank, it is the highest office in the Order of Patrons of Husbandry.

To the *Farmers' Friend*, published at Mechanicsburg, Pa., by Bro. R. H. Thomas, we are indebted for the following interesting statement of Bro. Rhone's life:

Leonard Rhone was born on the 21st of July, 1838, on the farm on which he now resides, part of the old Manor of Nottingham, once owned by the Penns. He was one of the sons of Jacob and Sarah Rhone, and during his early life worked upon his father's place during the summer and attended a public school in the winter, thus acquiring a taste for farm life, to which he is devotedly attached, and at the same time obtaining the rudiments of an education which he has not failed to vastly improve.

His father died in 1853, and Leonard remained on the farm with his mother, who, with true womanly courage, continued to carry on its operations, keeping the family together and securing for them all the educational advantages the neighborhood afforded until its members arrived at a proper age to enter upon higher courses of study at seminaries and colleges.

In 1857, Mr. Rhone served a voluntary apprenticeship of some months in a coachmaker's shop, in order to acquire a more practical knowledge of mechanic arts to aid him in farm management. But deeming a better education in the science and learning of the schools of great importance to his success, in Nov., 1857, he entered Kishacoquillas Seminary as a student. When asked by Mr. Alexander, the principal, what pursuit or profession he proposed to select for life, he promptly responded, "that of a farmer."

During the winter of 1858–59 he taught school, thus firmly grounding his knowledge in efforts to instruct others, and at the close of his school returned to his home and assisted his mother on the farm.

In 1864 Mr. Rhone was married to Miss Maggie Sankey, daughter of James Sankey of Potter's Mills, a lady of extraordinary energy of character and rare mental worth. His mother relinquishing charge of the farm, he became the lessee of the old homestead, and in May, 1865, upon a sale of the place, on mutual agreement of the family, he became sole proprietor of his father's property.

During these years of farm-life, while actively engaged in his favorite pursuit, he began to see the importance and necessity of some organization among farmers of a social and educational character, for the purpose of breaking up the monotony of rural life and cementing the tillers of the soil together in one fraternal brotherhood. This was not only a theory with him, but a real principle. He felt it, and as he pondered over the situation the idea burned itself into his very soul and he longed for the day when the isolation of the farmer and his family should be broken up and they could meet upon a fraternal platform for mutual benefit and protection. He saw other pursuits and professions banding together for like purposes, realizing the benefits of combined efforts to their respective classes, and earnestly desired to see the same principles introduced among farmers. While absorbed with the thought, the Patrons of Husbandry began to formulate their ideas in the same direction. He discerned the wisdom of the new organization and its adaptation to the wants of the agricultural people and at once entered into the work, and, in connection with a few of his neighbors, made application for a charter, and on the 3d day of February, 1874, Progress Grange, No. 96, was duly organized at Centre hall, he being a charter member of the first subordinate Grange instituted in Centre county.

Once inside the gate, he saw still more clearly the power of the organization for good. He applied himself with great zeal and energy in the new field. So faithful and earnest were his efforts that on the 9th of April following he was commissioned by D. B. Manger, the Worthy Master Pennsylvania State Grange, Deputy for Centre county, which position he continued to hold by consecutive annual appointments for seven years, during which time he displayed most untiring activity and performed an immense amount of labor in behalf of the organization; and so successful were his labors that the organization in Centre county to-day is admitted to be more complete than in any other county in the State.

At the organization of Centre County Pomona Grange, No. 13, Sept. 15, 1875, he was elected Master for one year, and re-elected five consecutive terms. In December, 1877, he was chosen Master of his own Grange, No. 96, and served his term with great acceptability.

In December, 1878, he was elected Overseer of the Pennsylvania State Grange, which position he held for two years, and at the close of his term at the session of the State Grange, held in Greensburg, in December, 1880, was unanimously chosen Master, to succeed Colonel V. E. Piollet, and is now serving as Master of the Pennsylvania State Grange, having been re-elected for five consecutive terms. In his administration of the State Grange he has displayed great skill and executive ability in the organization and management of its affairs; perhaps no organization ever had a more popular and successful leader.

In June, 1880, he was elected a trustee of the Pennsylvania State College, and re-elected in 1882.

In 1882, Governor Hoyt appointed him a delegate to the National Agricultural Convention, held in the City of New York.

In December, 1883, Governor Pattison appointed him one of the seven Building Commissioners of the Huntingdon State Industrial Reformatory, and in 1884, Governor Pattison appointed him a member of the State Board of Agriculture.

In November, 1884, the Democratic party of Centre county nominated and elected him to the State Legislature, and in 1886 he was re-elected, serving with distinction and acceptability.

In 1889 he was, by an Act of the Legislature, selected by the State Grange as one of the seven Revenue Commissioners, appointed to revise the "tax laws" of the State.

In stature Mr. Rhone is five feet eight inches high, erect, compactly built, capable of great endurance.

Intellectually Mr. Rhone is a plain, practical thinker, only arrives at conclusions after mature consideration. His enthusiasm is always tempered with good and careful judgment. He may justly be considered a safe counselor.

His administration of the State Grange and public official duties have been eminently successful. As a presiding officer he is calm, courteous and firm, and wields the gavel with grace. As a speaker he is earnest and enthusiastic, fortifying his positions with facts and figures.

Personally Leonard Rhone is a warm-hearted, generous and true man, never forgets a favor or forsakes a friend. Appeals to his generosity are never made in vain. His moral character is unsullied and his Christian conduct above reproach. In a word, he is one of "nature's noblemen."

West San Joaquin Grange.

TRACY Nov. 10, 1890.

A. T. Dewey—DEAR SIR AND BROTHER: On the first Saturday in this month I visited this place by request of the Deputy of this district, he having been invited, by the Secretary, to visit this Grange, but could not come, and requested me to fill his place. At that time I made arrangements with Bros. Stocking and Kerlinger to come again at my earliest convenience, and try to work up a class.

As the weather continued dry, I could not plow, and wrote to Bro. Stocking that I would be here on Saturday, the 8th, at 2 P. M., and requested him to meet me with a good team, and we would see what could be done in the way of canvassing from house to house.

On my arrival I met Bros. Kerlinger and Stocking, and we were soon off on our mission. By dark we had four applications. I staid with Bro. Stocking over night and afterward canvassed with good success, returned and staid last night with Bro. and Sister Stocking. This morning we started early, stopped with Bro. and Sister Kerlinger for dinner, and have been riding all the afternoon.

We can now report our success, having received 25 applications, and will initiate the class on Saturday, 22d, at 2 P. M. I have promised to be present with as many assistants as I can bring with me, and shall invite Bros. Flint, Hoffman, Norton, and some from Waterloo Grange to come.

I expect soon to be called to Bellota to canvass for a new Grange, if the weather continues fair.

The members of this Grange intend adding an ante-room, preparation-room and children's room to their hall. The bill of lumber has been made out, will be ordered at once, and the work completed before the class is initiated.

Yours fraternally, W. L. OVERHISER.

Anniversary at Sacramento.

EDITORS PRESS:—On the 4th of December Sacramento Grange will celebrate the anniversary of the Order by appropriate exercises and banquet.

We send a general invitation to all Patrons of Husbandry and hope to see a goodly number of visiting members. We hope to see all who read this and can arrange to be with us that day. Exercises commence at 11 A M Fraternally yours, ALICE L. GREENLAW, Sec'y.

Sacramento, Nov. 10th.

North Butte Grange.

Brother D. A. Hedger, Secretary, writes us from Live Oak, Sutter county, Nov. 8th, announcing that a class of 15 is expected to be ready for instruction in the fourth degree on November 29th, and that a Harvest Feast will be held on that occasion. The Grange has requested that some officer of the State Grange shall be present. We are in correspondence with several able speakers, and will, no doubt, succeed in having some one present to fill out a good time with North Butte on so encouraging an occasion.



MAP OF A PORTION OF FRANCE, SHOWING BORDEAUX AND THE PRUNE REGION OF AGEN.

The Prune Region of France.

California prune-growers will look with interest upon the map upon this page, which shows clearly the great prune district of France and its situation with reference to salt water and the great prune-shipping point Bordeaux. For this map we are indebted to the thoughtfulness and courtesy of Albert Montpellier, manager of the Grangers' Bank, who is both a careful student and a practical participant in the horticultural progress of California.

The scale of distance on the map is about 20 miles to one inch. Beginning, then, with the upper left-hand corner of the engraving, one notices, first, the Gironde, extending inland from the Bay of Biscay, which is, of course, a part of the Atlantic ocean. The Gironde is really an arm of the sea and is navigable for great ships. Bordeaux, the great shipping point, is about 60 miles as the ships go from the ocean, though but about half as far from the coast as the bird flies. The Gironde receives the waters from two great rivers which flow together below Bordeaux, much as the great Sacramento and San Joaquin rivers flow together into Suisun bay. So far, then, there is a resemblance between the meeting of fresh and salt water in the Bordeaux district and in California.

Proceeding inland along the Garonne river, one comes at length to Agen, the great prune center, whence comes the *Prune d'Agen* or the *Prune d'Ente* of Bordeaux. Clustering around Agen in the district Lot et Garonne are many villages, shown in the map, which are regular market-places where on certain days prunes are sold to the Bordeaux buyers. This district of Lot et Garonne produces about one-half of the prune crop of France. The district has an area of 1,282,560 acres and a population of 336,920. It has about one and a half times as great area and six times the population of our Santa Clara county, which produces perhaps two-thirds of the present prune crop of California.

The situation of the Agen region in distance from the seacoast may specially interest those who are developing the prune industry in our interior valleys. Distance from the coast is, of course, only a single factor in the problem, but still to that extent important.

The map of the country tributary to Bordeaux will interest our wine as well as our prune producers. It may also be suggestive to Californians who have recently visited this region and who have not yet written for our readers any account of their observations and experiences.

An Early Transaction in Cabbages.

EDITORS PRESS:—Mr. J. Hutchison having given his reminiscence of a transaction in the flower line in the issue of November 1st, I will venture one of mine of a *greener hue* that did not result quite so satisfactorily.

In the fall of 1852, vegetables were scarce and high in San Francisco, and knowing of about an acre of cabbages standing in a field at Suscol Ferry, I proceeded thither and purchased the lot for $100.

Next day (about Dec. 1st) it commenced raining and continued for a week, making teaming difficult, but I got them to the landing.

Obtaining a horse, I went to Napa and engaged the schooner Waterwitch to take them to the city at three cents per head. On arrival there, heaps of cabbages were in sight all around on the wharves and vessel decks, producing a decided glut in the market, and the best offer that I could get only paid for freight, so that I was out of pocket the investment, cost of hauling, two weeks' board at McCoy's tavern, etc. The charge for board was $14 per week, and not a very choice bill of fare.

After that experience, I let agricultural pursuits severely alone, doing all my plowing on the bay and ocean, which, being more in my line, was attended with more profitable results.

Oakland. M. S. PRIME.

ANOTHER IMPORTATION BY MR. SKILLMAN.—Many readers of the RURAL will be interested in the announcement in our advertising columns that Theodore Skillman has arrived in Petaluma with a fresh lot of carefully selected young stallions of several popular breeds. Mr. Skillman is a veteran in this business and his horses are in all parts of the coast. His latest importation should be looked after by horse-buyers.

The State Floral Show.

The fall show of the State Floral Society was held, according to announcement, in the New Academy of Sciences building on Market St., S. F., during the last three days of last week It was essentially a chrysanthemum show, and the wealth of the display and the excellence of individual specimens was a surprise to the public and a delight to the connoisseur. The collections were large and included the best named varieties and a few notable new kinds. The general arrangement of the show-room is described by a lady reporter for the *Chronicle* as follows:

The unfinished room in the Academy building was put in order and decorated under the direction of Timothy Hopkins and Miss Mary D. Bates. Along the side walls the place of a dado is supplied by the floral exhibits. Above is a regular series of immense fan palm leaves, arranged to suggest panels, separated by graceful, upright stalks of bamboo. At the far end of the room, to form an effective background, is a group of growing palms, tree ferns and potted foliage plants, Just within the entrance stands a tall, feathery palm tree, Seaforthia. A low sago palm is placed outside, and the temporary front is decorated with bamboo, to correspond with the walls within. The ceiling of the room is adorned with enormous Japanese umbrellas and festoons of a pink Oriental fabric. Along the left-hand wall is a raised framework, like an extended desk, covered with green moss and stuck full of a bewildering array of cut flowers. A similar arrangement occupies the opposite side of the room, for a short distance along the middle. At each end of this display stands a handsome tree fern. From the forward tree fern to the door is a magnificent show of the chrysanthemums in pots. From the other to the back of the room on the right is a vision of fairyland in chrysanthemums, violets and pinks, massed with lovely ferns, rough pieces of bark and the misty foliage of the dainty asparagus tennissimus. Another handsome tree fern stands out in the floor, and in front of the background of growing palms and foliage plants is a gorgeous group of growing chrysanthemums. Altogether, the whole arrangement of the room is as exquisitely beautiful as could well be imagined. The color effect is wonderful.

The ferns and foliage plants used in the decoration are the property of Timothy Hopkins. The growing palms came from Woodward's Gardens. The tree ferns were loaned by E. Relmur. The cut palm leaves and bamboo were contributed by John Rock of San Jose. The maiden-hair ferns belonging to Mr. Hopkins are particularly fine. The exhibit is in charge of J. H. Gardener of the Golden Gate Park conservatory.

The committee decided to offer a few prizes of considerable value rather than many small premiums, and they were offered as shown in our issue of October 25th, in three classes, viz.: First, for amateurs; second, for amateurs employing skilled labor; third, for professionals. Under the various heads the premiums were given as follows:

To Mrs. Copeland, amateur, for cut flowers, first prize, gold medal.

To William Babcock of San Rafael, who employs skilled labor, for cut flowers, first prize, silver medal.

To Timothy Hopkins of Menlo Park, who employs skilled labor, best general display of chrysanthemums, ferns and violets, silver medal.

To Timothy Hopkins, best collection of plants in bloom, first prize, silver medal.

To John H. Sievers, professional, largest and best collection of plants, first prize, gold medal.

To H. Yoshuke of Oakland, professional, cut flowers, first prize, silver cup.

Special mention was made of B. M., S. A. and M. B. Pratt of Fruitvale for a fine assortment of cut roses grown without irrigation.

The show was a credit to the society and was handsomely patronized. Most energetic and faithful work was done by the Committee of Arrangements, composed of Timothy Hopkins, W. B. Ewer, Mrs. E. M. Crane, Mrs. M. S. Sperry, Mrs. W. E. Loy and Mrs. T. L. Walker, and to their efforts is undoubtedly due in great measure the success of the exhibition.

A COMMITTEE of ladies recently raised $100,000 to open the Johns Hopkins Medical School to their sex.

POTATOES are now held at $1 a bushel in Massachusetts, and there is a short crop.



Innovation.

Tie my wrists with hempen strands
While brazen force around me stands—
You cannot with your fetters bind
The daring impulse of the mind,
Nor quench the lightning sparks of thought
That upward from the scaffold leap,
To live and wait through slavery's years
Till Destiny's firm web is wrought,
To bide their time while tyrants sleep
And prisoners pace their cells and weep,
Then burst with power, in bolt and flash,
And roaring flood and thunder crash
In answer to the exile's tears
To work their will, above control
Of human customs, courts and laws;
So leaped the fires of Emmet's soul,
To burn anew in Freedom's cause
Wherever blades for Freedom's rise,
Wherever Freedom's banners stream,
Wherever Freedom's thunders roll,
Wherever Freedom's lightnings gleam
And man for Freedom strikes and dies!
Still my pulse and stop my breath!
Who works with Truth may play with Death,
Hang me quick and hang me high!
So hung the form of Old John Brown,
And though they cut the body down,
The shadow broader, higher grew,
It met the seas, it reached the sky,
And darkened mountain, lake and town—
Wherever Freedom's eagle flew,
Wherever Freedom's breezes blew
From frigid North to fervid South,
From Maine to broad Columbia's mouth—
The shadow towered above the world
Where Freedom's stars in shame were furled,
It turned the stars and sun to blood,
And poured on earth a crimson flood.
The Nation quaffed the bloody rain
And all her first-born sons were slain.
Let me die! my work is done!
The dying stars proclaim the sun
That weaker eyes could not behold
And lower lights had not foretold,
Then die upon a bed of gold,
Because the grander light is born!
The highland rills that seaward glide
May vanish in the mountain-side
And, sinking through the voiceless earth,
Within the cold, dark caves abide;
But naught can stay their "second birth"
Or dim their resurrection morn;
Some time, somewhere, in stronger tide,
And warmer light and broader sweep
They rush to swell the distant deep
That turns its awful palms to heaven,
That girdles with its mighty bands
All kingdoms, empires, realms and lands—
Within whose all-embracing rim
The fleets of Nations sink or swim
Like fire-flies in the mist of even,
And on whose all-receiving breast
The Ages lay their dead to rest.
Lead me forth! I'm ready now!
Pull the black cap o'er my brow—
You cannot blind my inner sight—
I see the dawn behind the night,
Beyond the dawn I see the day,
And through the day I see the Truth
Arising in immortal youth!
The sunbeams on her forehead play,
The lilies in her tresses twine,
The Peace of God dwells in her face
And rolls the clouds of war away;
Around her feet the roses grow,
Her tender bosoms swell and flow
With healing for the stricken race
And in her eyes seraphic shine
Faith, Hope and Love and every grace—
The Old recedes, the New descends!
Earth clasps the hand that Heaven extends—
The Lion and the Lamb are friends!

—*Jas. G. Clark.*

A Protest.

[Written for the RURAL PRESS by MAUDE S. PEASLEE.]

In a recent issue of the RURAL PRESS I found an article two columns in length entitled "Cooks of the Future."

I have read this article over several times, and although at first I thought I would forget it by the next day, I find I just *can't*, and *must* relieve my feelings on the subject in some way.

I will not, as is too often the case in similar discussions, pick the argument to pieces step by step, nor in anger or contempt endeavor to refute each statement. I must, however, note the various heads in order to more effectually present my side of the question.

With the truly thoughtful author of the aforesaid article, I agree in condemning the statement in reference to cooking: "Upon a thorough knowledge of cookery depends the happiness of the home."

"Of the earth, earthy" indeed is the man who would find home happiness in the gratification of his appetite alone.

Perhaps my friend, if she will permit a fellow-worker to use the title in designating her, is right in saying that "the girls of to-day, generally speaking, are *not* proficient cooks." My experience, extending over a number of years spent in the various States between Indiana and our own sunny shores, has given me different impressions.

I have invariably found that the best bred, best educated, most advanced and highly cultured among my lady friends were also the best cooks and housekeepers. I do not assert that they spent their time over the cook-stove or wash-bench; most of them were so situated that they could and did hire needy but capable women in their kitchens.

There is so much of good, so much that I truly admire in my friend's able essay, that I could wish it were practicable to pause and shake hands with her across the columns of the RURAL PRESS in token of my hearty concurrence in some of her statements. The space in these columns is, however, too valuable to be used in the formation of mutual admiration societies, so I will refrain. I will only say that I was interested in the same train of thought soon after reading "Looking Backward." I wonder if my friend has read it.

However, it never occurred to me to assign this work to the men. Right here let me say that although I have not cooked much for a long time, I really like to cook and have been called a good housekeeper. On the other hand, the *man* side of the question, I want to say that my husband was a good cook when I married him, even to the extent of good, light bread. You see he was a cattleman and had camped on the summer range.

If Lady Mary Wortley Montague's husband would not have gladly prepared the dinner for her if circumstances demanded it, he was not worthy of her. I know one man in a much humbler position of life who would have done, nay, has done, it.

Yes, dear friend, I, too, say "let us have perfect reciprocity." If the Lady Mary or any one else would have her husband take her place in the house, she must be equally ready and efficient to take his duties in the counting-house, office, store or mine upon herself. She must be ready to assume the cares, worries and obligations of the conscientious business man who feels the responsibility of the head of the house—the provider, the father, the husband. By all means let us have reciprocity.

No work which tends to the comfort of the home is in my eyes unwomanly, neither can I call it unmanly; and there again I agree with my friend that boys should be taught domestic science quite as much as girls. It need not make "molly coddles" of them, either, but will certainly make them understand the mysteries of housekeeping so well that they will be reasonable in demands upon a wife's strength and endurance, and will expect to hire the heavy work done in cases where it is practicable, in all cases laying no unnecessary burdens on her shoulders.

At the same time, to be broad-minded and impartial, why not teach a girl the various principles of the different kinds of business life if you would have a man conversant with the duties of home life? Let us be consistent, my friend.

The Philadelphia club of gentlemen who like to cook would find much to deride in an organization of young ladies in bloomers who reveled in a game of ball. Such muscular games are growing in favor among the girls of the present generation, but if "woman's mission is intellectual and spiritual" only, she will have little or no time for physical development.

It's all very well for a man to be unwilling to have his wife to stand over the hot stove cooking hot cakes while he eats; but why should not the gentleman who "would stand by the stove, too, until there were cakes enough for both" use his strength and time on the wood-pile until his wife called him to breakfast?

While I greatly admire the spirit of progress evinced in this article on the "Cooks of the Future," it would be well to remember that in all innovations the greatest good to the greatest number should be considered. The principles of this same article would, if put into practice, ruin the homes of the middle classes.

The world is not yet ripe for Bellamy's theories, and until it is our farmers will personally do or superintend their work, and their wives will perforce do the same. It is certainly to the working classes that the RURAL PRESS is of the greatest value. Let us hope for help and instruction from its pages instead of articles that puzzle and bewilder those who know not the easy gradual way that leads to such principles. We cannot jump at a single bound to Nationalism, nor has co-operative housekeeping spread far enough to be widely known. Little by little, step by step, these advances must be made.

"But in the meantime?" asks the tired housewife, who perhaps *is* "tied down to the cook-stove."

In the meantime, take care of your health, that you may better serve those you love; let your aim be to save yourself all unnecessary steps. Do not be "tied" to any kind of work. It is only the ignorant and narrow-minded who will permit themselves to be. The best educated, either in school or at home, will be posted on all the advanced theories of the age, and will adapt these ideas to every-day life. Of what use are the excellent essays to be found in many of the papers and journals, easy of access to all our working classes, if we cannot put the theories in practice?

True *some* of them are, *as yet*, beyond our reach, but we can glean among them, and so, working surely if slowly upward, be ready for *any* great change that comes.

In the meantime, I think we who have daughters to raise need have no fear in training them to be good cooks and housekeepers. I do *not* believe in allowing them to dabble in it, to be mere "amateurs."

The knowledge of it need not cause them to practice it if, in the meantime, they show talent and liking for something else.

Up to a girl's fifteenth year she is incapable of persistent, deep study. Those years, which should in any case be spent under the careful training of a judicious mother, can easily be made to suffice for all she absolutely needs to know of housework.

Some change is necessary for her physical growth. She would fare ill if kept in a mental hotbed and made a fine scholar of at the expense of her health.

She should not find such training at all irksome; neither will her brother, if the requisite steps are taken to quiet his notions that it is unmanly. The first step would scarcely be to tell him cooking and housework in general is *unwomanly*.

Let us work together gradually, moderately, for the time when all heavy work may be done outside the house by systematized labor, and in the meantime abstain from fretting, from vainly beating our wings against the bars that have, it is true, encircled us. Be patient. "All things come to those who wait" *and work!*

In conclusion, I would add a good old motto:

"Be not the *first* by whom the new is tried,
Nor yet the *last* to lay the old aside."

A Beautiful Incident.

A short time before his death, the renowned engine-builder, Corliss, found it necessary to enlarge his great machine-shops, and set a squad of men at work to prepare the material for building.

One morning, after some progress had been made in the preparation, he visited the quarry from which the stone for the foundation was being taken. While the masons were arranging to blast a huge rock, a workman, pointing to a bird hovering over a ledge high up in the rock, said:

"That bird will have to change its nesting in short order if it wants to save its neck."

"Are there eggs in the nest?" inquired Mr. Corliss with evident interest.

"Yes, four little speckled fellows over which the mother-bird has been fussing ever since we began to work," replied the man. "The young birds will soon be peeping through the delicate shells."

"Then let the work stop until the birdlings are ready to fly," was the great-hearted man's command.

"You are surely not in earnest," exclaimed the foreman who was directing the preparation for blasting.

"I surely am," was the quick reply. "I have no right to break up the home of even the smallest of God's creatures, and those parent birds have rights that I am bound to respect."

"You are aware, sir, that the workingmen are all on hand, and that everything must stop if we carry out your orders," urged the man anxiously.

"I understand all this, my friend, yet I can not conscientiously do otherwise than adhere to my first command. What right have I to build up my fortunes upon the ruins of even a bird's home?"

"The men will be dissatisfied, sir; they feel that they have rights, too," retorted the man, a dark frown stealing over his honest face.

"I recognize their rights, also, and their pay shall go on just as usual during these waiting days. Send them to their homes and let them spend the time in improving their own homes and garden patches."

The sullen looks that had been gathering on the faces of the men vanished suddenly at his words, and instead of bitter imprecations and muttered curses, the air was filled with cheers and benedictions that almost overwhelmed the modest proprietor, who never thought of being applauded for simply obeying the dictates of his conscience.

At the close of a week four little birds were seen bobbing up and down in the nest away up in the cliff, but fully two weeks more passed before the young fledglings were able to leave their mossy homes in the crevice of the rock. Instead of becoming irritable at the long delay, the great engine-builder seemed to enjoy the days of waiting and frequently visited the spot to see how the feathered songsters were growing. His devotion to the rights of the little creatures won the admiration of the men, and when, after three weeks of rest, the gigantic business was again set in operation, they all felt constrained to do their utmost to help repair the loss that their noble-hearted employer had so willingly suffered.—*Belle V. Chisholm in Ploughman.*

A PREHISTORIC CITY.—An interesting bit of news comes from Mineral Bluffs, in the copper region of Polk county, Tennessee, announcing that laborers have unearthed a prehistoric city in that vicinity. The first discovery was that of an ancient stone wall, which the workmen traced for one mile. Remnants of dwellings and pottery were also found. An extensive mining operator, from the scene of the discovery, and who has visited the buried cities of Arizona, recognizes parallel characteristics revealed in Tennessee. The work of excavation will be continued. The improvements and industries of the age are uncovering many hidden secrets of the ancients. Even in North Chicago, last week, numerous relics of Indian manners and customs were unearthed.

Putting Trust in the Lord.

"No," said the lawyer, "I shan't press your claim against that man; you can get some one else to take the case, just as you think best."

"Think there's any money to be got out of it?"

"There would probably be some money in it, but it would come from the sale of the little house the man occupies and calls 'home,' but I don't want to meddle with the matter, anyhow."

"Got frightened out of it, eh?"

"No, I wasn't frightened out of it."

"I suppose the old fellow begged hard to be let off?"

"Yes, he did."

"And you caved?"

"No, I didn't say a word."

"Oh, he did all the talking, eh?"

"Yes."

"What did you do?"

"I believe I shed a few tears."

"The old fellow begged you hard, you say?"

"No, I didn't say so; he didn't speak to me."

"Well, may I respectfully inquire whom he did address in your hearing?"

"God Almighty."

"Ah! he took to praying, did he?"

"Not for my benefit, at least. You see I found the place easily enough and knocked at the outer door, which stood ajar, but nobody heard me; so I stepped inside and saw through the crack of the door a cozy sitting-room; and there on a bed with her head high on pillows was an old lady who looked for all the world just as my mother did the last time I saw her on earth. Well, I was on the point of knocking, when she said, 'Come, father, now begin,' and down on his knees by her side went an old, white-haired man, still older than his wife, I should judge; and I could not have knocked then for the life of me. Well, he began; first he reminded God that they were still submissive children, mother and he; no matter what He saw fit to bring upon them they shouldn't rebel at His will; of course it was going to be very hard for them to go out homeless in their old age, especially with the poor mother so sick and helpless; and oh, how different it might have been if only one of their boys had been spared to them. And then his voice kind of broke, and a thin, white hand stole from under the coverlet and moved slowly over his snowy hair; then he went on to repeat that nothing could be so sharp again as the parting with three sons—unless mother and he should be separated; but at last he comforted himself with the fact that the dear Lord knew it was through no fault of his own that mother and he were threatened with loss of their little home, which meant beggary and the almshouse, a place they prayed to be delivered from entering if it could be consistent with God's will; and then he quoted a multitude of promises concerning the safety of those who put their trust in the Lord; in fact it was the most thrilling plea to which I ever listened; and at last he prayed for God's blessing on those who were about to demand justice," the lawyer continued more slowly than ever. "And—I—believe I'd rather go to the poorhouse myself to-night than to stain my hands with the blood of a prosecution like that."

"Little afraid to defeat the old man's prayer?"

"You couldn't defeat it," said the lawyer. "I tell you he left it all subject to the will of God, but of all the pleading I ever heard, that beat all. You see I was taught that kind of thing myself in my childhood, and why I was sent to hear that prayer I'm sure I don't know, but I hand the case over just the same."

"I wish," said the client, twisting uneasily, "that you hadn't told me about the man's prayer."

"Why so?"

"Well, because I want the money the place would bring. But I was taught the Bible straight enough when I was a boy, and I'd hate to run counter to what you tell about. I wish you hadn't heard a word, and another time I wouldn't listen to petitions not intended for my ears."

The lawyer smiled. "My dear fellow, you are wrong again," he said. "It was intended for my ears and your ears too, and God Almighty intended it. My old mother used to sing of God's moving in a mysterious way, I remember."

"Well, my mother used to sing it, too," said the claimant, as he twisted the claim papers in his fingers. "You call in the morning, if you like, and tell 'mother and him' that the claim has been met."

"In a mysterious way," added the lawyer.—*Selected.*

MARVELS OF MECHANICAL SKILL.—Among the marvels of human skill and ingenuity exhibited by the London Mechanical and Scientific Society may be mentioned an instrument loaned by the great Armstrong Gun Works, which accurately measures thicknesses down to the one-thousandth of an inch; a similar instrument by a rival mechanic which grades thicknesses one-millionth parts; a scale by Oertling, the world-famous balance-maker, which turns with the one-thousandth of a grain while loaded with 3000 grains; and an engine by a Paddington watchmaker which contains 122 pieces, not including 32 bolts and screws, and can be hidden in a lady's No. 7 thimble.

A New Game with Letters.

A new game, which affords a good deal of amusement to many people, and also imparts considerable instruction to the young in the formation of words, is played in the following manner with the letters of the alphabet: Half a dozen sets of all the letters of the alphabet are provided, each letter on a small piece of pasteboard or wood. One player then gathers all the letters before him on the table, and the other players sit around the table as at cards. The player who has all the letters then turns them face downward, and proceeds to deal them out, one by one, to the others, beginning with the player sitting at his right hand, and continuing around the table in order.

As he deals a letter out he turns its face up, so that all may see that it is "n" for instance. The next player gets an "o," suppose, and he quickly sees that his letter, joined to the "n" received by the first player, will form the word "no." He announces that fact and claims the "n." This is surrendered to him and he forms the word "no" on the table in front of him, and must leave it there undisturbed until some other player gets a letter, which, added to the word "no," will form some other word.

Suppose, for instance, that the third letter dealt out is a "w." Then the owner of the "w" may claim the word "no," and adding his "w" to it make it "now." The fourth letter turned up may be a "y," and the owner of "now" breathes a sigh of relief as he thinks he will hold on to his word for a little while anyway, for the "now" and the "y" don't seem to make anything. Perhaps several letters follow out of which no combination can be made which will spell a correct word, until some one gets an "s." This letter, in connection with "now," will spell "snow," but if the lucky owner of the "s" is sharp enough, he will also claim the "y" from his other rival and spell "snowy."

The examples given here are sample words, as they show more clearly to young minds how the game may be played easily, but when a number of letters have been dealt out the most skillful spellers may find scope for their abilities, and many are the combinations which will escape the notice of all who are gathered around the table for a time, until some one discovers them, as if by accident, and then the wonder will be that they were not seen before.

One player may not claim from another any letter or letters which have been worked up into a word without taking that whole word and using it all, though its letters may be entirely transposed to make a different word. The range of words may wander over half a dozen languages if the players so agree, and then the game becomes difficult enough for a Boston blue-stocking or a college professor.

The winner of the game is the player who has the most complete words spread out on the table in front of him when the dealer has turned up the last letter he has in his pile. Long words count no more than short words, and if two players "tie," they set to work breaking up their long words into short ones, and this disposes of the tie nine times out of ten. For a large number of players a large number of letters is, of course, required, but two people will often play the game for half an hour before exhausting a half-dozen complete alphabets.—*N. Y. Tribune.*

Chaff.

"How can I get rid of superfluous hair, Mr. Druggist?" "Get married, sir."—*Boston Courier.*

WHATEVER may happen to P. T. Barnum in the next world, he can't complain that he has had no show in this.—*Washington Hatchet.*

"THERE is one thing I like about the vulture," said Cynicus to a physician who had overcharged him. "And that?" "He doesn't present his bill until the patient is dead."—*Harper's Bazar.*

MRS. WICKWIRE—If you go first, you will wait for me on the other shore, won't you, dear? Mr. Wickwire—I suppose so. I never went anywhere yet without having to wait for you at least half an hour.—*Terre Haute Express.*

A DOG was barking at the moon when a sage inquired why he did so, adding that he could not possibly affect the great luminary one way or the other, and that it seemed a useless waste of energy. "Oh, it isn't that it makes any difference with the moon," replied the canine; "but I want the other dogs in this neighborhood to know that I'm not dead." Moral—We never know that some men are buried until we miss their bluster.

BEFORE election the people think their candidate is a lion. After election, when they take the inventory of broken pledges, they know that he was a lyin'.—*Western Plowman.*

THE BOSTON FRANKLIN FUND IN DANGER.—In his will, Benjamin Franklin bequeathed $4000 to the cities of Boston and Philadelphia, to be loaned at 5 per cent to young mechanics. At the end of 100 years the cities were to divide the amount, which was figured to be $665,000 for each trust fund. The 100 years have expired, and Franklin's heirs have commenced suit to recover the money, alleging mismanagement on the part of the cities, Boston's fund having reached only $400,000 and Philadelphia's fund only $100,000.

YOUNG FOLKS' COLUMN.

Pretty Rosie.

[Written for the RURAL PRESS by ALICE KINGSBURY COOLEY.]

Pretty Rosie Waterford stood drumming on the window panes. Without, all was cheerless and desolate, the rain falling in that steady, dreary way that makes one feel it will never stop, nothing of the lightning and thunder and dashing style that is as fearfully magnificent and exciting as a human being in a grand, towering passion. Only the steady drip, drip of the rain falling off the stable and cow-house, and even the roof of the pig-pen making little furrows in the yellow earth that wandered away filling up each depression, making puddles everywhere.

Rosie yawned, then sighed, then turned away in disgust. She had lately returned from a fashionable boarding-school, to which her mother had sent her for six months, after worrying her poor father's life out to gain his consent.

"Well, Rosie's got to have more advantages than I ever had. This 'all work and no play' that I've had on a farm for all these years, till I joined the Grange, shan't be her lot."

But Rosie had only gained knowledge enough to make her discontented, not to enable her to look at life in a sensible manner and make the best of everything that fell to her lot, and thereby raise the standard of happiness all around her.

"This is beastly" (she had caught the "English you know" expressions). "Can't go out even to feed the pigs." (Rosie knew she never thought of doing such a thing, except perhaps to throw an apple to them as she passed by.) "Heigh-ho! I wonder what Gwendolin and Gladys are doing, but then they have such pretty homes it must be a pleasure to stay in them." Then she looked around on the rag carpet and the almost bare walls of the living-room. There was a large certificate of membership in a narrow, black frame, and a poor engraving of a group in which Webster was prominent, with a very big head. There was nothing bright or cheerful anywhere.

"What an ugly place! How could ma live in it all these years?" Then she went into the parlor; that gave her a worse chill still, with its blinds drawn down tight and its horse-hair covered furniture. From very restlessness she strolled into the kitchen. Ah! here was warmth and light, at least, and how nice the cooking smelt! Her mother was making pies and cakes—the strongholds of cooking in the country. Rosie watched for awhile in silence, but the sight of her mother's busy fingers soon affected her.

"Let me place the little cakes in the pan. I can't go out."

Her mother looked up in smiling surprise.

"Well, Rosie, put on this apron over your nice dress and tuck up your sleeves."

"Oh bother, I—" she was about to make a remonstrance, but as her mother fetched the apron and tied it on, and tucked up her sleeves, she said no more but went to work.

Soon a pan of the cakes was baked and Rosie was told to try them.

"They are real nice, ma; much better than they made at our cooking class. I knew you wanted me to learn other things, so didn't pay much attention."

Mrs. Waterford looked surprised.

"Why, Rosie! How would we live with bad cooking? Why, your father would run out of the house if the potatoes were hard or watery, or the bread sour, to say nothing of the indigestion it would cause. Good cooking is one of the bulwarks of good health, Rosie. Don't forget that."

Rosie had never thought of it in this light before, when she used to help mother a little before she went to the grand school; it seemed a disagreeable necessity to be got through with as soon and as easily as possible.

"I want to get up a good dinner for your father, for he'll be wet and cold when he comes in."

As this seemed the only pleasant place in the world (her world) on this dreary day, she became mildly interested in the preparations for dinner.

"What are these pretty purple things in the closet, ma?" she called.

"Egg-plants, dear; a neighbor gave them to your father."

The Waterfords were like many other farmers—too short-sighted to bless themselves with a variety of vegetables; so egg-plants were something new to them.

"Are you going to cook them for dinner, ma?" she called, still in the closet.

"I don't know; look in the almanac, see if there is a recipe."

Rosie did so.

"Egg-plant; peel, cut in slices, lay in salted water for half an hour; wipe dry, dip in beaten yolk of egg, then in grated cracker; fry in boiling lard."

"Is that all?" asked her mother.

"No; here is another."

"Parboil in salted water, cut in slices, dust with cornmeal, flour or cornstarch."

"Is there no other?"

Rosie shook her head.

"I remember once dining with a Southern lady years ago who had an old 'Aunty' for a cook," said Mrs. Waterford, "and the egg-plant cakes made such an impression on me that I have never quite forgotten them."

"Now try to remember everything, ma, and *I'll* make them accordingly."

"Well, let me see; you peel them, of course, and I think let them stay longer in rather strong salt and water than half an hour; cut the slices rather thick—there, that's about right; now, not to notice the time of waiting, go busy yourself about something else."

But that was not so easy for Rosie, who had become interested and wanted to finish the job, but to wait, oh!

"All right, ma," she said, cheerfully, and ran up to her room.

"Now I am going to make that ugly dining-room look more cheerful; let's see what my trunk will yield for the general good."

After removing some wearing apparel, she came to her treasures, some pretty tidies the girls had given her in return for the gifts of fruit and cake that she used to distribute when they arrived from home. Then there was several yards of cheap but bright drapery that she had bought with the idea of beautifying her own room. "Oh, yes! and my two paintings with which I intended to surprise ma and pa on Christmas; but I'll surprise them to-day, and do something else for that occasion." Then she drew out some water-colored flowers. "I'll tack these up, too, for the flies are all gone, and the rain has thoroughly laid the dust."

She ran down the stairs, and soon the sound of the hammer reached the kitchen, which brought her mother to the door.

"Oh, don't come in. I'll set the table and all," so her mother went back to work, pleased that Rosie was not quite spoiled, as they had both feared since her return.

She hung the drapery over her pictures in place of frames; she utilized the tidies for the mantelpiece and corner-shelf, and tacked up the watercolors to the best advantage.

"I don't think that looks so bad; it is rather the reverse, if anything. Now I'll light a fire—ah! a cheerful fire in a grate is what I love—and won't they be astonished!"

When the fire was started her mother called her.

"Oh, I had forgotten all about the egg-plants," so she hurried to the kitchen.

"I saw you were busy, dear, so I just put them on to 'boil.' You see they are quite tender; now take them up and mash them in a pan with a fork; now beat up a couple of eggs while it is getting cool; now put in sugar enough to make it sweet and a very little milk; now sift a couple of cups of flour and a heaping spoonful of baking powder; now beat it well together and it is ready to cook. Put a little of that nice dripping from the roast beef and a little butter—it tastes better than lard. Have it good and hot—ah, don't make the cakes too thick; now let them cook rather slowly to a nice brown; they are not good undone."

How nice and grateful the odor! Rosie's mouth watered to taste them.

"Why, mamma, this is almost as interesting as china painting, one looks so anxiously for the result and one cannot always tell how nice it is going to be."

Her mother soon relieved her, telling her to set the table, as she dared not go in.

Mr. Waterford now came in, changed his damp clothes and was soon ready for dinner. Rosie carried everything to the table, and when all was complete she threw open the door and cried:

"Entrez vous!"

They walked in, laughing heartily, then looked around in a pleased surprise.

"Well, daughter, where did you get all these things?"

"Doesn't it look nice, Fred?"

"Well, well, well!"

"My work—I wanted to surprise you, but wait until you taste the egg-plant cakes. Oh! I can cook, too, can't I, ma?" and from that time Rosie became a help and a comfort to her parents, and found out that good cooking and beautifying her home was not incompatible with her painting, reading and other studies, and that her life was fuller and happier the more she increased the happiness of others.

San Francisco.

SALT AS A PRESERVATIVE.—A correspondent of the *Scientific American* writes to that journal as follows: "Thirty-four years since, I set four 4½ by 4½ inch oak hitching-posts near my residence, 3½ feet deep in the earth, having first bored one 1-inch hole into same some 3 inches above, and another hole of like size some 4 inches below the earth's surface, and partly filling each hole with salt, and then plugging same with a dry oak plug. The posts are to-day sound and strong. Draw your own inference."

MICROSCOPICAL SCREWS.—It is stated that a lady's thimble of the ordinary size, No. 7, will hold 1,000,000 of the smaller little brass screws used in the manufacture of fine small watches. These screws are so small that to the naked eye they look like specks of brass, and it requires a magnifying glass to show their real character.

AN "INCH OF RAIN" means a gallon of water spread over a surface of nearly two square feet, or a fall of about 200 tons to an acre of ground.

DARWIN defines the wag of a dog's tail as "an escape of nervous force restrained for the moment from other modes of expression."

DOMESTIC ECONOMY.

Apple Cellar and Grape Press.

EDITORS PRESS:—Is it believed to be dangerous to human health to have apples stored in a dry, airy cellar under the general family sitting-room? Match boarded ceiling to cellar, good boarded floor and linoleum floor cloth over.

Is it easy and inexpensive to procure a small press or squeezer to express the juice of grapes for immediate drinking?

Answers to above can hardly fail to be of interest to many of your numerous readers.

Santa Cruz. "AN OLD RURALIST."

[There is decided objection to a vegetable cellar under a living-room, but to such a fruit-room as you describe, we can see no objection.

We would like to know what device any reader has found useful for grape pressing to obtain fresh juice for drinking. We have been asked the question before and cannot answer it.—EDS. PRESS.]

PUMPKIN PASTY.—Boil a pumpkin and mash it up. Season with pepper and salt to taste and add a teaspoonful of cream. Make a pudding paste to put round it. Bake thoroughly.

STEWED PRUNES.—Wash, drain, cover with cold water, let soak several hours or over night. Stew in this water, add sugar to taste, with just enough water to cover. Fine; served very cold, with any forms of bread given, are highly nutritious and gently laxative.

POTATO SOUP.—Three pints of rich milk, one pint of mashed potato, two tablespoonfuls of butter, pepper and salt to taste. Boil the milk, add the potato and boil again, stirring frequently that the potato may become thoroughly dissolved, and season just before serving. Serve very hot.

CRISP COOKIES.—One-half pound sugar, one-half pound flour, one-quarter pound of butter, a third of a nutmeg, three eggs. Cream the butter, add the sugar and yolks of the eggs, beat until light; stir in the stiff-beaten whites, the nutmeg and flour; flour the board, roll, cut and bake in a quick oven.

ONION SOUP.—Three pints of milk in which six good-sized onions have been boiled makes a delicious soup, seasoned to taste with butter, salt and pepper, thickened, if desired, with a tablespoonful of cornstarch made smooth in cold milk. Onions are much nicer boiled in milk than in water.

QUEEN FRITTERS.—Take one glass of water and two ounces of butter and put on the stove in a saucepan. When this comes to a boil, add half a pound of flour and stir till stiff. Take off the fire and add six raw eggs separately, beating each one as added till a soft dough results, then fry in lard in pieces the size of a walnut.

APPLE TAPIOCA PUDDING.—Soak a cup of pearl tapioca in a pint of water two hours, stir in three-fourths of a cup of white sugar, add one-half teaspoonful of salt and a cup of thin cream or new milk. Peel, quarter and core eight large apples (Greenings preferred), and put in an earthen pudding-dish, grate a little nutmeg on top, and bake an hour and a quarter in a slow oven. Serve with whipped cream.

CHOCOLATE FILLING FOR CAKE.—Grate such a quantity of chocolate as you may desire (I use about half of a square) into a small tin pan, and set it on the back of the stove to melt. Then beat the whites of one or two eggs with sugar as you do for unboiled frosting, and stir it into the pan with the chocolate. Flavor with vanilla, and spread between the layers and on top of the cake when the cake has cooled.

LEMON SAUCE.—Mix a tablespoonful of cornstarch with three tablespoonfuls of cold water, stir into a teacupful of boiling water, boil till clear and thick; add grated yellow rind and the juice of one lemon, with a cupful of granulated sugar. Simmer two minutes. Beat one egg, add two tablespoonfuls cold water, pour the boiling mixture into this, stirring rapidly, return to fire; remove soon as it begins to simmer.

CREAM CHOCOLATES.—One quart of fine white sugar, half a pint of boiling water, half a pound of Baker's chocolate. Pour the water on the sugar, mix well, and leave it to boil ten minutes without stirring. Place the saucepan in cold water, and stir briskly until it becomes stiff enough to handle. Mold it in little balls and put aside to cool. Break the chocolate in small pieces and put it in a bowl in the top of the boiling tea-kettle. When melted, remove the bowl and drop in the balls one at a time; take them out with a fork and place on buttered paper.

SMALL TEA BISCUIT.—One-quarter of a pound of flour, one-quarter ounce of butter, half-ounce of firm, sweet lard, a little less than a gill of milk, one teaspoonful of baking powder, and one saltspoonful of salt. Mix the baking powder with a portion of the flour and sift it into the rest of the flour through a fine sieve; then rub the butter, lard and salt through the flour until quite fine; pour in the milk, mix lightly, place on the board which has been well floured, and roll it with the rolling-pin without kneading. Cut with a small cutter, prick and bake in a hot oven until brown on top.

WHY DAMP HAY HEATS.—After a series of very careful experiments, Prof. Cohn of Breslau has found that the heating of damp hay to a temperature sufficient to cause spontaneous combustion is due to a fungus.

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Situation Wanted—A. H Bensen, Berkeley.
Music—Haverfield & Girvin, New York.
Butter Paper—A. G. Elliott & Co., Philadelphia, Pa.

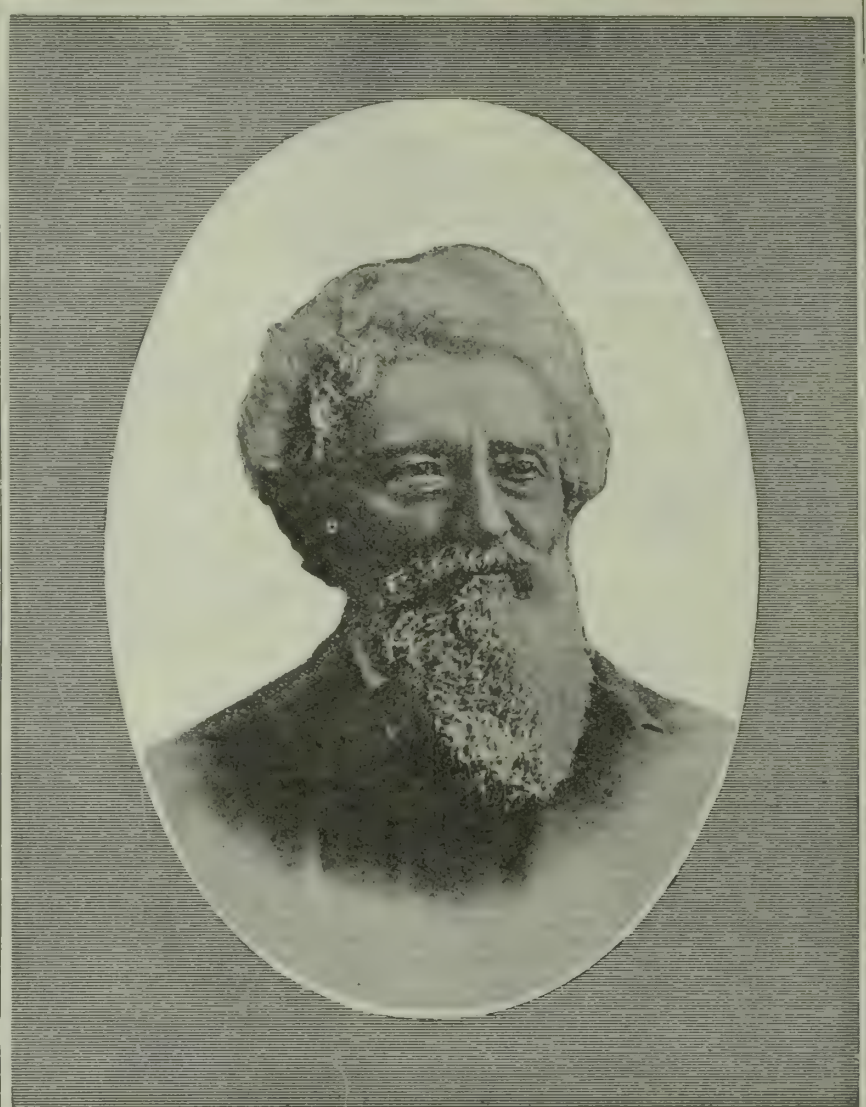
See Advertising Columns.

The Week.

The excitement over election has been followed so quickly by a financial flurry in the great money markets at the East and in London that the earlier irritation of the body politic has almost been forgotten even before a clear understanding of the results was reached. Money is reported in very short supply, although Uncle Sam has set loose about $85,000,000 by buying bonds, and now that there is less than $10,000,000 in the National pocket-book, no more bond-buying can be indulged in. It is hoped that the excitement may stop short of a panic and that matters may resume a steady course.

So far as election goes, the forecast of last week was correct, viz.: California practically all Republican and the rest of the Union all Democratic. The next Congress will be at sword's-points politically with the administration, and there will be some fur flying. But such things have not hurt the United States much in the past and probably will not in the future.

THANKSGIVING.—The President and the Governor have issued the usual proclamations appointing Thursday, November 27th, as the National Thanksgiving. Let all prepare for it.



THE LATE DR. JOHN T. STRENTZEL.

The Late Dr. Strentzel.

Many California fruit growers who will assemble at Santa Cruz next week will mourn the departure of their honored friend and associate, Dr. John T. Strentzel, who died at his home in Alhambra Valley near Martinez, on Friday, Oct. 31st. It was a sad coincidence that his old associates of the State Horticultural Society, in session in this city on that day, selected him as chairman of a committee to extend an invitation to the American Pomological Society to hold their next meeting in this State. Thus almost at the hour of his death his associates were placing upon him honors and responsibilities which during his long, active life he had accepted so quietly and discharged so well. During recent years, bodily infirmities have prevented him from many activities which he formerly pursued, and denied our younger fruit-growers the opportunity for acquaintance with him, but he never lost his interest in horticultural work and progress, and died in the harness full of years and honors.

John Theophile Strentzel was born in Lublin, Poland, November 29, 1813. He entered the University of Warsaw at the time of the revolutionary disturbance, but laid aside his tasks for service in the patriot army, and after the dismemberment of his country, proceeded to Hungary, became a student, and after taking a full course in the University of Pesth, graduated as a physician in 1839. Soon after he emigrated to Texas, where he followed his profession for nine years. On the 31st of December, 1843, he was united in marriage to Miss Louisiana Erwin, a native of Tennessee, who for 47 years has been his devoted wife and life companion. Early in the spring of 1849, having had his attention called to the far-famed El Dorado, Dr. Strentzel and family joined a company, who had organized for the purpose of crossing the then trackless plains in an endeavor to reach California. On the 14th of April, 1850, Dr. Strentzel and family reached the Tuolumne river after an eventful journey of 13 months. They resided first about two miles from La Grange, afterward on Merced river, but in 1853 selected a permanent home in Alhambra valley, adjoining the town of Martinez, where he purchased 500 acres of unimproved land. Here he became a pioneer fruit-grower, purchasing all his stock at great expense, experimenting with over 1000 varieties of fruit, besides many kinds of ornamental and flowering trees, with a view of determining which were best adapted to the climate of California. He was first to announce the success of citrus fruits in suitable locations in Northern California and the first to show a properly cured Muscat raisin at the State Fairs of California.

By persistent industry, he succeeded in amassing a moderate estate, although no distinct love of wealth became a factor in his character. On the contrary, he was ever ready to lend a helping hand to those who needed it. Bland and courteous in manner, considerate and kind in action and sociable in disposition, his circle of friends and his influence in public affairs enlarged with his growing years, and when he rendered the final account of life, at the ripe age of 77, his departure was sorrowfully honored by the community which surrounded his home and his numerous friends at more distant points. He was prominent in all public and humane enterprises, and an active member of many scientific and other associations.

In his family relations, Dr. Strentzel was exceedingly happy. His wife, whom he led to the altar 47 years ago, still lives to honor his name. His daughter Louise, wife of John Muir, the well-known geologist and *litterateur*, has remained in the neighborhood of her father's home and has cheered his declining years.

The portrait which we present herewith, though not as good as we desire, will recall his venerable features to his old friends and suggest to others the lineaments of one whom they should long remember and honor as a potent factor in California's horticultural progress.

The Nuts of the United States.

The Department of Agriculture is in receipt of reports from different parts of every State and Territory concerning the production of wild and cultivated nuts, and will embody the information in a bulletin soon to be issued by the Pomological Division. The extent and possibilities of nut culture are by no means generally understood. In Central California almond orchards of from two thousand to five thousand trees are not unusual, and in the southern portion of the same State the Madeira nut, or English walnut, as it is more commonly called, is cultivated in orchards of from one hundred to fifteen hundred trees. From most of the other States, also, the Madeira is reported to be grown for nut production. On Staten Island the same nut is marketed green for pickling and for catsup. The pecan is grown in orchards and groves in the South central and Southwestern States; while the pinon, or pine nut, though quite unknown to people east of the Mississippi, is marketed in immense quantities in the cities of the Pacific Slope. By selection and culture, nuts are found to improve almost as readily as fruits. Thin shells and increased size are the most common results of improvement. The Pomologist of the Department will be glad to add to the list of persons to receive the bulletin the names of such as furnish concise reports on matters relative to nut culture. Others who are interested may obtain the bulletin when published by applying to the Secretary of Agriculture, Washington, D. C., or to the Pomologist direct.

The Fruit-Growers' Convention.

As previously announced in the RURAL, the Fourteenth State Fruit Growers' Convention, under the auspices of the State Board of Horticulture, will be held in the city of Santa Cruz Nov. 18th to 21st. Everything indicates a meeting of unusual popularity and importance. The Santa Cruz people have promised a warm welcome to the attendants upon the convention, and a few days at the seaside amid a cordial people and with interesting and important meetings to participate in, ought to be very attractive to fruit-growers living in the interior valleys and foothills. There will also be many features of the convention very acceptable to the ladies, so the wives and daughters of fruit growers should accompany them. There will be reduced rates at the hotels and accommodations will be ample. The reduction in railroad fare amounts to one-third of the ordinary rate for the round trip—that is, you pay full fare going to Santa Cruz, either on the broad gauge or narrow-gauge roads, and you return for one-third of the same amount. *A receipt should be taken from the ticket seller at the starting point*, and for this purpose blanks can be had by applying to Secretary B. M. Lelong, 220 Sutter St., S. F.

The following is the official program for the convention as prepared by the secretary:

Opening Day—Tuesday, Nov. 18, 1890.

Morning Session.—Convention will assemble at the Y. M. C. A. hall at 10 o'clock. Order of business and subjects for discussion: Calling to order by the President. Election of two Vice-Presidents. Remarks by the Mayor of Santa Cruz. Address of welcome. Address of President.

Afternoon Session.—Fruit Culture, varieties to plant and new fruits. Essays: W. H Aiken—"Prune Culture," illustrated by specimens. Frank H. Buck—"Peach Culture and Varieties." Robert Hector—"Cherry Culture." Luther Burbank—"New Fruits." Discussion.

Wednesday, Nov. 19

Morning Session.—Insect Pests and Their Extermination, Parasites and Fungoid Diseases. Essays: E. J. Wickson—"The Study of Entomology in the Schools." Frank W. Willis—"Injurious Insects." Alexander Craw—"Insect Friends and Foes." H. K Snow—"Chemical Famigation." Prof. H. W. Harkness—"Fungus Growths Affecting Fruit Trees." Discussion.

Afternoon Session.—Excursions. Reception in the Evening.

Thursday, Nov. 20.

Selecting, Preparing and Marketing Fruits.—L. W. Buck—"Fruit Shipments of 1890." J. L. Mosher—"Fruit Preparation." Discussion.

Afternoon Session.—Orchard Fertilizers and Pruning: Prof. E. W. Hilgard—"The Proper Orchard Fertilizers." A. Scott Chapman—"Effects of Fertilizers." R. C. Kells—"Pruning." Discussion.

Evening Session — Ladies' Night.—Floral Culture, Wild Flowers and Ornamental Plants: Mrs. I. H. Haymond—"Window Gardening." Miss Lillian Howard—"Wild Flowers." Mrs. Elwood Cooper—"Floral Culture." Discussion.

Friday, Nov. 21.

Fig Culture, Table Grapes and Small Fruits. Prof. W. H. Galbraith—"The Grape." Mrs. L. U. McCann—"Small Fruits." Discussion.

Afternoon Session.—Olive Culture and Citrus Fruits: S. S. Boynton—"Citrus Culture." W. A. Hayne—"Olive Culture." Discussion. Unfinished business and arrangement for next convention.

Special.—To be assigned by the president: The advisability of forming a Union with Florida Fruit-Growers. The exhibition of California products at the coming Columbian World's Fair. Essay by John M. Stewart—"Fruit Culture in Santa Cruz County." Essay by F. L. Carke—"Forestry."

The California Fruit Industry.

Preliminary Review of 1890.

A Year of Wonderful Progress in Horticulture.

[Written for the RURAL PRESS by J. R. F.]

The early pioneers can hardly realize the wonderful progress made by California in horticulture. The writer well remembers the time, in the fifties, when two deciduous fruit orchards—they were in Yuba county, near Marysville—were considered remarkably large, the fruits from which commanded such good prices that they enriched the proprietors within a few short years. The trees were carefully pruned and cultivated, which caused them to yield a large crop. As time passed and farming came to the front, other orchards were laid out and planted with the best varieties of fruits. Besides this, many farmers planted a few trees. Without an outlet for the product of the orchard, prices under large crops fell so low that fruit farming barely paid. In consequence a large majority of fruit trees were neglected, and horticulture as an industry sank to a low point. With the advent of railroads, gradually an outlet was secured, first for canned fruits, then dried fruits, and later on green fruits have found each year an increasing demand. Reductions in railroad freight charges and better transportation facilities and improved fruit cars have had much to do with the increasing trade East. The growth of the United States and more or less failures in the fruit crops east of the Rocky mountains have also been great aids in drawing to us fruit orders that would otherwise have been hard to secure. Another consideration is that to the soil and climate of California are due the successful culture of two fruits—the apricot and prune—that largely contributed to securing attention to our deciduous fruits. Besides the above two, the nectarine is forcing itself to the front as a favorite, the successful cultivation of which is peculiar to this State.

The Prune.

It is claimed, and probably correctly so, that the prune is now attracting more attention than any other fruit, with the orange a good second. California prunes at the first were given third consideration at the East. With better care given to cultivating the tree, and a better understanding, thorough practice and also securing better information regarding the picking, curing, packing, etc., in vogue in European prune districts, California prune-growers have established a name which stands unequaled. The fruit is now acknowledged to surpass in every respect the imported article, and at the same time so prolific bearers are the trees that European prunes are relegated to a back seat. Probably there was one thing more than any other which contributed largely to popularizing California prunes at the East. That was the successful move made by buyers in 1888 to lower the price through and by means of widely-published discouraging reports. The forcing down of prices enabled buyers to purchase large quantities at such figures as enabled them to undersell in the East the foreign product. Being much cheaper, they went into more general distribution throughout the Central and Eastern States. Consumers having tasted them, were not slow in acknowledging their superiority, and what in 1888 was considered a misfortune was in reality a blessing in disguise. This was plainly manifested in the large increased demand for the fruit in 1889, and that at such prices as to enable those growers who exercised ordinary care in handling their fruit to net a large profit. This success caused more prune planting in 1889–90, and also better care to be paid to the cultivation of the tree and to the curing and packing of the fruit. Its cultivation has gradually spread to other counties aside from Santa Clara, where it receives the largest attention, for it has been found to be adapted to a wide range of soil and climate, while its remarkable freedom from attacks of insect pests and disease makes it quite a favorite with many horticulturists. The prune is not regarded as an article of luxury, and therefore it enters largely into household consumption. Probably from this cause and also to its superiority to the foreign product, prune-growers do not appear to feel any apprehension regarding the industry being overdone.

The buying or contracting season this year opened unusually early and at a slight advance over the best figures obtainable for the same grades in 1889. So tempting were the bids that buyers secured the product of many orchards. As verified reports came to hand of a probable short prune crop abroad and a short crop of all kinds of fruits in the East, buyers became more anxious, and advanced prices, in some instances, to about 11 cents a pound for the three sizes, yet toward the close of the season prices fell off from 1 to 1½ cents a pound, although now a stronger tone and a slight advance is obtainable.

Apricots.

The cultivation of apricots is steadily enlarging, with attention given to the better varieties, which give good annual crops. The fruit when canned has a reputation second to none, and wherever introduced is held in high esteem. Each year witnesses its more general distribution throughout the Central, Eastern and Southern States, while it is growing in favor abroad. The dried product has also forged ahead, and few dealers can be found but keep it in stock. This year the possibilities of a short peach crop at the East, and a shortage in the apricot crop here, brought buyers into the market quite early, and many orchards were secured at 1¾ cents a pound; but under stronger competitive buying, prices were gradually advanced until as high as 2½ cents a pound was realized by many growers for their entire product. The demand set in very heavily from the East for both canned and dried apricots, and prices advanced, particularly for dried apricots. The product soon passed into speculators' and distributors' hands, so that the year will close with nominally no supplies in first hands. The superior quality of the dried product, derived from experience in curing and catering to the wants of consumers, has made much of the fruit put on the market almost perfect, and, being so, it necessarily commands general attention from consumers. It looks as if the industry cannot be overdone, yet it is not reasonable to look for as remunerative prices in the future as obtained this year, for it may be many years before fruit crops at the East turn out as poorly as they did this season.

Peaches.

Peach growing has made great progress Formerly the best fruit came from lowland orchards, but in late years mountain or foothill orchards are turning out such fine fruit as to challenge the attention of buyers. It is claimed by many that for distant shipping and canning purposes they cannot be excelled in this State. If this be so, it is not at all improbable but the dried product from mountain or foothill orchards will give the best of satisfaction. A very large number of the latter orchards are either owned or controlled by Chinamen, who are proverbial for selling at the best obtainable prices when the product is ready for marketing. It is this that forces prices for both green and dried, at a certain time in the season, to lower prices than should obtain. Contracts with them for future delivery are seldom made, which is perhaps a fruitful source of low prices when the fruit grown by them is ready to be marketed. Americans and Caucasians in general contract largely ahead, and therefore are in better position to maintain values for the remainder.

California peaches come into general competition with Eastern peaches, and for that reason the prices are largely dependent upon crop prospects on the Atlantic seaboard. Last year our crop was large, so was that at the East, and in consequence comparatively low prices prevailed. This year high water killed many trees, which more than offset any increase in the number of trees that came into bearing. The changed character of the winter at the East caused a small crop of peaches. These two causes produced in this State strong buying. The purchases were made by driers, canners and Eastern shippers. The latter were the more anxious, and to meet their wants they unhesitatingly paid an advance over other buyers. Contracts were made early in the buying season at 2 to 2½ cents for the entire product of the orchard. Prices were gradually advanced until fully 3 cents was realized, and some say even more. In this city, for the best canning varieties, as high as 4 to 5 cents a pound were paid, and in some exceptional cases even a slight advance over 5 cents was realized by sellers. Such high prices for the green fruit naturally produced higher prices for the dried product. Prices realized ranged from 50 per cent to, in some instances, over 100 per cent over 1889 prices. The pack of canned was placed some time ago, while that of dried is better cleaned up than for many years.

Apples.

Each year's experience has demonstrated that the valley lands of this State are not adapted to the production of apples of good to choice quality. They generally lack in tartness and other requisites, which causes Eastern and Oregon apples to be the favorites with consumers. The dried product of the fruit is also poor. As a result, the cultivation of apples in the valley lands has been neglected; however, experiments in the foothills and mountain plateaus have demonstrated that superior apples can be cultivated. This naturally has led to new orchards being set out each year in those localities, while the fruits from the more favored orchards command the highest market prices. This is more readily recognized when it is known that valley apples sell at from one-quarter to one-third the prices obtainable for mountain and foothill apples. The crop this year, or at least that sent to this city, was more or less wormy and otherwise defective, and being so were forced on the market at the best obtainable prices. This naturally reacted against good to choice apples, causing them to sell for less money than they otherwise would. With the cleaning-up of the trash the market began to recover, and an advance has been established in the better qualities of fully 50 per cent over prices obtainable a few weeks ago. Dried apples have been fairly inquired after, but there has been an absence of that eagerness which characterized buyers for other fruits. This no doubt was largely due to the crop East being larger than was estimated earlier in the season. This is witnessed in the fact that Eastern apples are beginning to make their appearance in our market.

Plums, Nectarines and Pears.

Plums have not appeared to keep up in the onward march with other fruits, the causes of which are too well known to require giving. Outside of a few special varieties, the prices obtainable some seasons hardly justified marketing them, but this year they fetched better prices. This was due to the high prices obtainable for prunes, apricots and peaches. The green fruit fetched comparatively good prices, as has the dried product. The stock in first hands is said to be tolerably well cleaned up. Prices ruling for dried average a slight advance over that of 1889.

Nectarines are coming to the front, slowly but surely. Wherever tested, either in the green or dried state, they find recognition as a superior fruit. Each year finds them being more inquired for, and admits of future contracts being made. This, as much as anything else, attests its growing popularity. Prices this season ranged for the dried product higher by fully 50 per cent than last year. They averaged within 2 or 3 cents a pound of the same grade of dried peaches.

Pears have gone off quite freely this season and at good prices. Eastern parties were large buyers, which necessitated canners to pay well up so as to secure their requirements. Toward the close of the canning season the range in this city for best varieties was from 3 to 4 cents a pound, and it is said that even a slight advance was paid in some instances. The crop did not appear to be as large as it was in 1889, although the enlarged Eastern shipments made make it more apparent than real.

Cherries and Berries.

The cherry crop went early into consumption. The yield was a full average to the tree, while the quality was generally good. The East took heavier than ever before, which was a large factor in securing good prices to growers. Canners bought more fully than for several years past.

The berry crop was not as large as it was claimed early in the season it would be, and consequently good prices ruled throughout the season. Canners bought quite freely of all kinds, but more particularly of blackberries Purchases made by them of the latter were the largest in the history of the fruit-growing industry of the State. These purchases kept the market well up, prices averaging fully 50 per cent more than they did in 1889. Raspberries held to better prices than they did in 1889, as did strawberries. Huckleberries have met with quick sales. The high prices are against canners taking them.

Peach Pits.

This year a new industry sprang up, viz. saving and selling peach pits. The demand was chiefly from the East, where they were planted so as to secure young peach trees for replanting. The canners found in the trade more profit than burning the pits for fuel. It is said that as high as 3 cents a pound was paid for pits from the better varieties.

Citrus Fruits.

The first large orange orchards, or at least the first of any size the writer saw, were those of Gen. Wilson and Col. Kewen, near Los Angeles. The success met by them encouraged others to go into the business in that county. In a former article the writer stated that gradually the industry spread into San Bernardino and elsewhere, although next to Los Angeles the other county named has always maintained second rank. The orange orchards of Riverside and elsewhere commenced to attract attention by the excellence of their product, and with their attainment of maturity an Eastern market was sought for the constantly increasing crop of golden fruit. At once California oranges were received with favor at the East, and their shipment became a business of large proportions. The desire to share in the large profits that are realized from orange culture has reached other portions of the State as well, and as far north as Butte county extensive orchards have been set out. In the county named there are now three or four thousand acres of young orchard, and in Placer, Yuba, Fresno and elsewhere orange orchards will be planted upon a considerable scale this season. There has never been so general an interest in this pursuit as at the present time, and the demand for trees has been very great. At one time it was found necessary to import them from Florida by the dozen carloads.

Last season's crop went into consumption at good prices, averaging slightly over $1.75 a box. In speaking of the improved method of handling the crop, the Riverside *Phœnix* says: "The demand has been better than it ever was before, and the system of selling on the tract, which is largely coming into vogue, is the most satisfactory one that has been adopted as yet. When we contrast the practice of a few years ago with that of to-day, we can easily see how much improvement has been made. Then every grower, almost, packed his own, hauled it to Colton, and shipped it on his own responsibility in parts of a carload lot to some commission man, who could not in all cases be relied on. Even in the crop year of 1884–85, when four packing-houses took hold and shipped what they packed, and that packed by individual growers on commission, the result was very far from satisfactory, and in some cases growers had to put their hands into their pockets to help make up for losses on sales. That season, however, put an end mainly to the commission system, and from that time on, prices for the growers have been gradually improving, until the past season has been the most satisfactory that we have ever had. It has not all been, however, owing to an increase of prices in the East, but it has also been helped very materially by more improved methods of packing and lessened rates of freight, coupled with a great decrease of time occupied in transit, which has very materially reduced the percentage of loss by rotting or heating on the way. Even the risk and loss incurred by frost have been reduced to a minimum which has all inured to the benefit of the grower. These causes have made the prices of the past season, on the whole, the most satisfactory that we have ever had, even to the packers."

For the 1890–91 crop, buyers have been in the market for some time, paying, it is said, on the orchard an average price of $1 60 a box. Regarding the crop prospects, probably the estimate of the Southern Pacific railroad is the best to accept. The company estimates the number of cars that will be required to carry the orange crop of Southern California, and an interesting array of figures it makes. By counties, it is given as follows:

Los Angeles.	Cars.	
Los Angeles	316	
Downey	109	
Duarte	112	
San Gabriel and Alhambra	500	
Azusa and Glendora	130	
Pomona	148	
Spadra	4	
Pasadena and Lamanda Park	49	
		1368
Orange county.	**Cars.**	
Anaheim	90	
Santa Ana	36	
Tustin	143	
Orange	50	
McPherson	17	
		336
San Diego county		27
Ventura county		30
San Bernardino county.	**Cars.**	
Riverside	1800	
Ontario	34	
Redlands	120	
Highlands	51	
Colton Terrace	14	
		2019
Total carloads		3780

For the other counties, central and northern, no estimate is made public, but it is claimed that the crop will be about 25 per cent larger than it was for the season of 1889–90.

Lemons.

The cultivation of lemons has been successful in all respects. Inexperience brought failure, but with the discovery of the proper means to be adopted in their gathering and curing, money is being made by those giving them attention. This is having a stimulating effect upon the industry, and as a consequence there has been a largely increased acreage planted to that fruit within the past two years. With their proper curing, California lemons are displacing the best imported. It is claimed by the better informed that the markets of this country will be supplied, before the next decade, entirely with the California product. The prices obtained the past year were fair, but not as high as they would have been had the weather not been so cool during the summer months.

Olives.

Olive culture is receiving its full degree of attention. The success met with by those who are devoted to the industry is stimulating others, and as a consequence many orchards are planted. The oil sells at an advance on the imported, and at the higher prices is given preference. There are many households that use it in preference to animal fat in the kitchen. That it is much healthier is an acknowledged fact.

Figs.

California figs are forging ahead. It is only a question of time, probably shorter than generally thought, when the imported will be a stranger to the markets in this country. A few public-spirited horticulturists have given much attention to the successful curing and packing of figs, and are meeting with the success their efforts deserve. California figs on this coast are displacing the foreign, and that, too, at good prices. Considerable have been taken for the Eastern markets. Last year large quantities of figs were peddled in this city by hucksters at very low prices, but this year it was done owing to the fruit being better cured and packed and also an increased distributive demand. In writing on the fig at the close of last year, the following was said, which bears reproducing now: The success attending the cultivation of the choicer varieties now grown and packed here has been such that many have gone into the business upon quite an extensive scale, and many hundred acres of figs have been planted. It has been pretty thoroughly demonstrated that the lower foothills are the best localities for the production of choice figs. The fruit from trees of the same variety grown on the plains and in the foothills is radically different, and the quality of the foothill product is such as to have given rise to the belief among those not fully posted that they were two radically distinct varieties. The fig seems to be especially sensitive to climatic influences, and this fact should be borne in mind by those who think of embarking in the cultivation of this

fruit, which seems destined to become not the least profitable of the many branches of horticulture carried on in this State.

Viticulture.

Shortly after the culmination of the gold-mining excitement, the first systematic planting of vineyards was undertaken in this State, and each year has seen a large addition to the area devoted to grapes. Like all industries, it has met with discouragements, but it is within the bounds of truth to assert that no industry has, in the long run, given more profit for the money invested. Far too many have embarked in viticulture without giving the subject that close business attention it deserves. Many have discovered by bitter experience that the soil, climate and other surroundings should be closely studied to make it a success, and the variety adapted to any particular locality should be given preference in that section over all other varieties. Past experience has brought perfection to the many engaged in the industry upon systematic, scientific business principles. California grapes for table use are given preference at the East and bring higher prices than all others, domestic or imported. The varieties cultivated are too numerous to admit of naming, but it is well known that the most cultivated abroad are successfully grown here, while some new varieties are said to have been successfully propagated. California wines, after many drawbacks, are now acknowledged by connoisseurs to have no superior and few equals. Their superiority is finding recognition at home and is beginning to be recognized abroad, for the exports are gradually enlarging. The demand has increased to such an extent that the supply here has run down quite low, bringing in its wake a considerable advance in prices.

Raisins.

Turning from wine to raisins, one cannot help being favorably impressed with its remarkable growth, a growth won by hard experience founded upon merit. From a few thousand boxes in 1881, the industry has grown to fully 1,500,000 boxes this year. California raisins have forced the imported from the markets of this coast, and are fast taking possession of the Eastern markets to the exclusion of the foreign. California packers have by experience been taught many valuable lessons, lessons that have given them the whip handle in their competition with the product of Spain. While each year witnesses an increased pack over the preceding, still the demand keeps pace, and the close of each season finds our markets depleted of supplies. This year is no exception, for buyers were early in the field contracting for September, October and November deliveries, and it is said that fully three-quarters of the pack were engaged at satisfactory prices. The rains in last month caused considerable uneasiness and set afloat exaggerated reports of damage to the crop. The damaged raisins or grapes were either sold for wine or else cured and sacked for market, but even these were a small percentage of the pack. With several weeks of clear, sunny weather since, the second crop of raisins has been and is being cured and packed in the very best condition. The percentage of high-grade raisins is also quite large.

There has been a serious disadvantage in shipping through the lack of cars, making it hard to meet the Eastern demand before the holidays. The overland shipments for this year are largely in excess of the like time in 1889, and still the cry is for more. It seems impossible to overdo the raisin-grape industry, for it can be only a question of time when California raisins will find a firm growing foothold in foreign countries. This is verified by the largely increased shipments to foreign ports in the Pacific. Where two or three years ago none were shipped, now several thousand boxes are exported. Australasia is the largest single purchaser.

Dried Grapes.

The drying of grapes for market has assumed large proportions, with the demand taking all at good prices. The range of prices this year has been from $65 to $90 a ton, according to locality and variety. The East has taken about all cured and bids fair to take a much larger quantity next year. The drying of grapes is found to be quite remunerative. It lessens the supply of green grapes thrown on the market, which enables growers to get much better average prices for the different kinds.

Grape Syrup.

This year more attention has been given to producing grape syrup. This product is reported to find ready markets at the East at prices ranging from 45 to 60 cents a gallon. It is said that the syrup is taken in preference to other kinds, which, if the case, will cause more attention to be given the industry.

Statistics.

The shipments of fruits, canned and dried, overland by months since January 1, 1890, were as follows:

CANNED.	Cases.
September	271,800
August	230,782
July	69,150
June	24,281
May	40,322
April	15,500
March	41,160
February	27,752
January	15,571
Total since Jan. 1st	736,487
Same time 1889	341,578

DRIED FRUITS.	Pounds.
January	513,080
February	578 500
March	611,020
April	454 580
May	147 930
June	110,250
July	2 869,140
August	5,340 850
September	10,710,360
Total	21,335,710
Same time 1889	18 153,930

RAISINS.	Pounds.
January	367 170
February	404 210
March	371 340
April	256.450
May	85 520
June	32.330
July	
August	
September	3 478,780
Total	4,695 800
Same time 1889	4,118,350

Deciduous Green-Fruit Shipments.

Following is a comparative record by months of the Southern Pacific East-bound shipments of green fruit, all the shipping points of the State being included:

Months.	1889.	1890.	Gain.
May	330,150	526,650	169,500
June	2,532,490	2,798,310	265 820
July	12,518 540	13,095,810	576,970
August	13,162,490	20,720 660	7,618,260
Sept	9,159 900	17,559,840	8,400,940

AGRICULTURAL NOTES.

CALIFORNIA.

Fresno.

FUEL FOR THE DRIER.—Fresno *Republican*, Nov. 7: "As fruit-driers are on the increase, year after year," said Col. Denicke the other day, "the cost of fuel is found to be quite an item. I am satisfied that every considerable vineyard will sooner or later have a drier; that is the inevitable, and we will learn to make just as good raisins by artificial means as we do by sun-drying. Cheap fuel is also within the reach of every vineyardist. The grape prunings can be utilized for the purpose, and a very good fuel they make. These prunings should be gathered in regular layers, by hand, and tied into convenient bundles from three to five feet long by twisting and fastening the ends of the longest vines around the center of each bundle as a sheaf of wheat is gathered and tied. These bundles should be laid between the rows of vines and then gathered up and stored for the following year's use. The doors of the furnaces could easily be made of sufficient size to take in one of these bundles. Better fuel cannot be got, and all it will cost is the trifling expense of gathering and storing it."

SEEDING WHEAT.—Selma *Irrigator*, Nov. 5: Several ranchers west of town are seeding wheat, as dry as it is. They say that in the low grounds there is sufficient moisture to germinate the seed, while in the high grounds there is no moisture at all and the seed is safe.

RAISIN SHIPMENTS.—Fresno *Expositor*, Nov. 5: The number of carloads shipped East from Fresno during the season is 328; and of dried grapes there were shipped 117 carloads. The total shipments from the beginning of the year up to date are but slightly in excess of the totals for the season, being 337 carloads of raisins and 138 carloads of dried grapes.

SORGHUM YIELD.—Selma *Irrigator:* Fantz & Butler finished their sorghum-making last Saturday and found that their 35 acres of cane have yielded 4000 gallons of sorghum, which sells quite rapidly at 75 cents per gallon. This gives a profit of over $85 an acre, which, although not equal to raisins, is not bad itself.

PERSIMMONS.—Selma *Irrigator*, Nov. 7: T. B. Matthews, whose fine fruit ranch adjoins Selma on the east, brought to this office to-day a bunch of Japanese persimmons that excels in beauty anything in the fruit line we have seen lately.

PACKING-HOUSE REQUIRED. — Fresno *Inquirer*, Nov. 7: A. Garsentaub, who has handled considerable fruit in Selma, is talking of building a packing-house in order to handle the fruit and raisins of next season. A large additional acreage will come into bearing then.

Humboldt.

FARM NOTES.—Arcata *Union*, Nov. 8: Potato-digging is over, crops are all harvested, and yet it does not rain. The little shower on Wednesday evening was followed next morning by a heavy frost and a clear, cold day. Rain is badly needed on the stock ranges, and unless it comes soon, and is followed by warm weather, cattle and sheep will go into the winter in a poverty-stricken condition. A heavy, warm rain would be a blessing just now.

Kern.

IRRIGATION BONDS TO BE ISSUED.—Visalia, Nov. 8: The Kern and Tulare irrigation districts, embracing 20,000 acres in the northern part of Kern and the southern part of Tulare county, voted unanimously, Saturday evening, for the issuance of bonds in the amount of $700,000 for the construction of a canal from Kern river and laterals.

Los Angeles.

TO KILL THE LINNETS.—Pomona *Progress*, Nov. 6: We have been told by several fruit-growers that the number of linnets in this vicinity this season is a menace to the fruit crops for next year. The birds multiply very rapidly, and unless some means are taken to destroy them there will be thousands of linnets, where there are now hundreds, to nip and kill the tender fruit buds next April and May. The most effective way to kill the birds is by putting a little strychnine in a quarter or an eighth of an apple and placing the pieces of apple on hundreds of twigs in an orchard, so that the victims can easily eat of the poisoned fruit. Scores of linnet pests can be killed in a day by this method. The great trouble, however, in killing the birds is that there is not a concentrated and general action among the fruit-growers. One orchardist may kill many linnets daily, while the neighbors will do nothing to check the pest.

DROPPED ORANGES.—Pasadena *Star*, Nov. 5: Last summer, during the hot weather, the cry went up that the Navel oranges had all been killed, and that the coming crop would be a total failure. There is no doubt that the crop was injured, but not to the extent that was feared at that time. Many of the trees now show a fair quantity of fruit, and some of them have all they can well carry. The seedlings will have a heavy crop, and in fact the outlook is fairly good for all who have orange trees.

TREE-PLANTING IN POMONA.—Pomona, Nov. 6: A local nurseryman, who has for several weeks made thorough inquiries among the owners of acreage property in this valley, and who has made a little census of his own, tells us that there is no doubt that 3000 acres will be planted to deciduous and citrus fruits in this immediate vicinity next winter and spring. Perhaps the planting may run to 3600 or 3700 acres. It will be about three times what it has ever been before here. The planting of prunes will be very general—perhaps 800 acres—and peach orchards will be set out more than at any time in five years. There will be quite an acreage of the new varieties of olives, figs and apricots. There will be scarcely any pears and nectarines planted. A very large acreage of orange-planting is confidently predicted. It may be 1800 or 2000 acres. The nurseryman says that every one will be astonished at the quantity of trees to be planted here before next May. Hart's Tardiff, the new variety of late oranges, will be unusually popular among the growers. There are calls for it already.

San Bernardino.

FRUIT LAND IN DEMAND.—San Diego *Union*, Nov. 6: A trip through the upper counties has just been concluded by I. M. Merrill of the El Cajon Valley Co., who reports a vast difference in the condition of things since the boom in California fruit lands began. Sales are being made rapidly, and every foot of it is for immediate improvement. He found that at Pomona and Ontario about 3000 acres of unimproved land had been sold during the past three months at from $150 to $300 an acre. A purchaser at North Pomona already had 200 of his 300 acres in oranges. Redlands is selling much at $300 an acre. At Riverside the orange-bearing land is bringing from $500 to $2000 an acre, Mr. Lockwood having just received $60,000 for 30 of his 50 acres of orange grove. The unimproved orange land sells at from $400 to $500 an acre. Ten miles below, at South Riverside, unimproved fruit land is bringing $150 an acre. The Alessandro tract of orange land, lying both in San Diego and San Bernardino counties, is getting more buyers daily. The first 1000 acres brought $50 apiece, the second tract $75 an acre, and the last piece $100, at which it now stands. At Rialto the past three months $100,000 has been taken in for acreage by the Semi-Tropic Co. All these regions are under water, and excepting Riverside, the rates are merely nominal.

LARGEST ORANGE GROVE.—Riverside, Nov. 5: The contract has been let for planting a 700-acre orange grove at Alessandro. This will be the largest orange grove in the world, the largest at present being that of Seth Richards, at Pomona, of 400 acres.

ORANGES RIPENING.—Riverside *Press and Horticulturist*, Nov. 8: The oranges are just beginning to show a slight tinge of color on the side nearest the sun. In a few weeks the "apples of gold" will hang thickly in their yellow beauty amid the glossy green leaves of the trees. Even the Navels, which were supposed to have dropped nearly all their fruit during the hot spell in May, will surprise their owners with the crop they will bear.

SCALE-DESTROYING APPARATUS.—Riverside *Press and Horticulturist*, Nov. 8: The apparatus for destroying scale, ordered by the Board of Trustees for the use of orange-growers, is under way and will soon be finished. There will be two tents—one suspended at each end of a horizontal beam extending from a tall structure on a wagon, so that the wagon can be driven between a row of trees and two of them treated at the same time. The cost of entirely eradicating all scale on a tree will be from 20 cents to $1 each. This gas process is entirely harmless to the foliage and fruit, but is sure death to all insect life.

Santa Cruz.

APPLE SHIPMENTS.—Santa Cruz *Sentinel*, Nov. 8: The apple-packers of the Pajaro valley are about through picking fruit for the season. They are making good shipments to Mexico, New Zealand and other countries.

SUGAR BEETS RUNNING SHORT.—Watsonville *Pajaronian*, Nov. 6: The supply of beets at the factory is running short. There is a large portion of the Moro Cojo ranch crop undelivered, but the daily shipments therefrom are not sufficient to supply the demands of the factory.

San Luis Obispo.

NEW GRAIN SECTION.—Cavisa Plains Cor. San Miguel *Courier:* The first plow was started four years ago next month. The first harvest was a small affair, and it was considered by many an accident that we raised anything at all; but now we claim to have as good a grain country as this State can boast of. Our harvest this year amounted to a little more than 10,000 sacks of as fine grain as was ever grown in this or any other State.

Shasta.

TREE-PLANTING.—Anderson *Enterprise*, Nov. 6: It is the intention of Mrs. Owens, who purchased the Logan Ferry Farm of 1100 acres, to plant 100 acres of fruit trees this season and in due time plant all of the 400 acres of river bottom to orchard.

Solano.

AN INDUSTRY OF THE FUTURE.—Dixon, Nov. 8: The common black walnut tree of which there are so many in Northern Solano promises to become an article of commerce in a few years, when they shall have become fully matured. Most of the trees in this vicinity are quite young and the size of the trunk is not sufficient to make it valuable for lumber. The well-known Solano pioneer, J. R. Wolfskill, planted some walnut trees in the early 'forties, shortly after his arrival in the valley. A couple of years ago, he felled a couple of these trees and shipped the logs to a furniture factory in San Francisco. They were returned to him in the shape of a chamber set, the equal of which in beauty and solidity cannot be found in the State. It will thus be seen that a grove of a few acres of these trees planted on the waste land which cannot be utilized for any other purpose, will in time become a valuable piece of property.

A SQUIRREL EXTERMINATOR.—Dixon *Tribune*, Nov. 8: The following method is suggested as a most successful one for the extermination of gophers and squirrels, the most dangerous rodents with which farmers in this locality are troubled. Take a five-gallon can, cut the top off, put in a little cold water and insert a stick of phosphorus. Then gradually pour in hot (not boiling) water and stir with a stick until the can is full. The water should be just hot enough to melt the phosphorus gradually. As soon as the phosphorus is melted, stir the water briskly, while two pounds of sugar are added. Cornmeal and flour, half and half, is then added, sufficient to make a thick batter. Stirring is continued while wheat is put in until the batter is quite stiff. Fifteen to twenty drops of oil of rhodium is put in at the same time as the wheat. The water will be absorbed by the grain and the mass will become hard. Pieces, the size of a hickory nut, are chipped off as desired and put in the main runs of the gopher. The odor will attract the rodents from a long distance and the least nibble is sure death. One piece is sufficient to destroy an entire family.

Sonoma.

DAIRY INTERESTS.—Santa Rosa *Republican*, Nov. 7: From present indications there will soon be a revival in the dairy interests of the county, especially in the prices of dairy products. The wet, favorable weather of last winter and spring made green feed abundant, and on that account there was an oversupply of all dairy products, causing a decline in prices to almost a ruinous point to those engaged in the business. It is learned from interviews with some of our largest dairymen that feed is now very short and of such a character that but little of the lacteal-giving properties is contained in it. The consequence is that but little milk is afforded for the manufacture of butter and cheese. In fact one dairyman, who has nearly a hundred cows, stated that last week from his dairy he obtained little more milk than would be required for his coffee. The price of all dairy products is sure to advance from this cause, and when the rains come and green feed again starts the dairymen will certainly have the advantage of a better market.

Sutter.

SHEEP IN VINEYARDS.—Yuba City *Farmer*, Nov. 7: W. P. Smith brought his sheep from Yuba county last week and turned them into the vineyard of Joseph Peters below Yuba City, where there is excellent forage for them. After the grapes are taken from the vines or in young vineyards, the sheep at this time of the year crop the leaves and tender shoots, destroying the vine pests to a certain extent and clearing the way for the pruning shears. The sheep do well in the vineyards, which make good pasture when feed is scarce elsewhere.

CROP NOTES.—Yuba City, Nov. 9: Henry Best has recently finished harrowing 300 acres with his traction engine, going over the ground twice, harrowing 120 acres per day. Crops in No. 70 are about all harvested and seeding will soon begin. The land is in an excellent state of cultivation.

Tulare.

IRRIGATION CANAL WORK.—Traver *Advocate*, Nov. 7: The Poso Irrigation District, embracing 39,000 acres in the northern portion of Kern county, started a force of 100 men and 200 head of stock recently on a canal 25 miles long, a large dam and a number of reservoirs. The district includes a very fertile tract of country, which, with the completion of the canal, will become very productive and valuable. The work will be pushed to a speedy completion. Improved machinery has been

provided. Mr. Peacock, superintendent of the 76 Canal for Alta Irrigation District, says that quite a force of men and teams is at work cleaning out and repairing the main canal. The force expects to finish up its work on the main canal by next Monday and then will move down this way and clean out the McClanahan and other branches of the canal. Mr. Peacock says he expects to have the canal ready to receive water in about two weeks.

Yolo.

CATTLE EPIDEMIC. — Woodland *Democrat*, Nov. 8: A remarkable and fatal epidemic among the cattle on Dr. Merritt's ranch is reported. It is said that fat, healthy cattle are stricken with something like itch, and in a short time they bite and tear their legs in a frightful manner. Our informant says that he has not been on the ranch for some days, but up to that time eight or ten had been killed and others were taking the disease. No one seems to know how to diagnose the disease, but call it the "blackleg."

NEVADA.

STRANGE CATTLE DISEASE. — *Lyon County Times:* George Plummer of Mason Valley has a cow that is afflicted with a strange disease. Some weeks ago the animal refused to eat much fodder, and later on her hide began to crack. The hide around the animal's neck and shoulders has now all turned back from the flesh, leaving the flesh exposed and raw. The animal still lives, but other cracks in her hide are appearing. From the cracks the skin rolls back like a piece of burnt leather. It is the most peculiar cattle disease ever known, and no one seems to know what causes it or how to cure it.

GOOD CROPS. — Winnemucca *Silver State*, Nov. 7: The grain and hay crops in Paradise were unusually good this year. The average production of wheat and barley to the acre was about 25 bushels. Probably 20,000 tons of hay were stacked this summer in the valley.

HORTICULTURE.

Small-Fruit Growing in the Fifties.

EDITORS PRESS:—A recent talk with one of our pioneer horticulturists brought out some reminiscences of horticulture that doubtless will be of interest.

In "the early fifties" the demand for small fruits and the seemingly large profits to be made from them, and particularly strawberries, led many to look about for suitable locations for their culture. The sandy loam of Alameda claimed attention and was largely given up to the strawberry—in fact few were cultivated elsewhere in the State at that time.

About 1856 Robert Bryant, associated with a Mr. Jensen of the Santa Clara valley, bought 12 acres in Alameda with the idea of setting out the entire tract in strawberries. This was done in the spring, the plants being obtained of Aug. Haraszthy at Half Moon Bay. Mr. Haraszthy was one of the horticultural enthusiasts of that time and imported the original plants. There were several varieties planted, among others the Black Prince and British Queen, which were favorites at that time. They did well in the sandy soil and yielded abundantly. Pancost was another large grower, having 20 acres or more.

The plan of chest with drawers for marketing the fruit similar to those used at the present day was adopted at that time, but the size of drawer may have been a trifle different from those now used.

The problem of freight and expenses in shipping to the San Francisco market was somewhat different from to-day's quick methods and frequently cut into the profits, although the fruit in good condition brought an average of a dollar and a half a pound and frequently sold for two dollars. WILL C. AIKEN.

St. Helena, Napa Co., Cal.

Horticulture in the Tariff.

Under the McKinley bill a duty of 20 per cent ad valorem is now levied on "plants, trees, shrubs and vines of all kinds known as nursery stock" imported into the United States. They were formerly admitted free. "Orchids, lilies of the valley, azaleas, palms and other plants used for forcing under glass for cut flowers or decorative purposes," are still retained on the free list, and bulbs or bulbous roots, not edible, on which a duty of 20 per cent was levied under the old law, are now placed on the free list. Garden and agricultural seeds, and other seeds not specially provided for, with a few exceptions, still pay 20 per cent ad valorem, although the following are on the free list: Anise, canary, caraway, cardamom, coriander, cotton, cummin, fennel, fenugreek, hemp, hoarhound, mustard, rape, St. John's bread or bean, sugar beet, mangel wurzel, sorghum or sugar cane for seed, and all flower or grass seeds.

These changes are likely to make a very considerable difference in the horticultural business of the country. The admission of bulbs of flowering plants free of duty should largely increase the importation of these plants and stimulate their cultivation in this country. The duty of 20 per cent on so-called nursery stock is likely to have unfortunate results. Some plants, like hardy rhododendrons, hardy azaleas and certain conifers, which require special climatic conditions and much skilled labor to produce to the best advantage, cannot be well grown in this country, and the duty must have the tendency of reducing the number of such plants used here. The retention of the duty on greenhouse plants, which, so far as their production goes, come under the same category as the plants already mentioned, is due to special efforts of the florists of the country. The duty will not affect, probably, the production of forest-tree seedlings in this country, and the only result will be to increase the cost to the planter. American nurserymen have already demonstrated their ability to produce better plants of this class at less cost than they can be imported for from any European country.

The trade in roses will probably be benefited by the duty, as it has been the habit of some Continental growers to glut this market yearly with their surplus and generally badly grown stock, which, under forced auction sales, has demoralized prices and made it difficult to find a market at fair prices for good plants grown in this country or in England.—*Garden and Forest.*

Prune Nomenclature.

EDITORS PRESS:—Mr. Gillet does not seem to appreciate my remarks in RURAL of Sept. 25th. However, as I am sure your readers do not want to read another "tirade" (?) I will content myself by saying: 1st. That as regards nomenclature, Mr. G. agrees with me, as I have for the last six years contended that Robe de Sergent could not be the correct name for the prune generally known as such; and, second, that if Mr. Gillet will compare some of his prunes with mine and any others, and be himself present at the next August meeting of the State Horticultural Society, I am sure he will be welcome and we shall all be mutually benefited. LEONARD COATES.

Napa, Cal.

Fruit Prices.

EDITORS PRESS:—Do you not think there is danger of overproduction in a few years so that the profits will come to a level with that in growing grain? Is there any likelihood of prices for dried fruit keeping at anything near their present condition? E. C. COBURN.

Lake Co., Cal.

[These are questions over which one might argue pro and con almost indefinitely. As our correspondent only asks an opinion, and is at liberty to place his own value upon it, we will say that we are not apprehensive of any such overproduction as he speaks of, of any fruit that can be canned or dried as well as sold fresh. We do not expect that the dried-fruit prices of this year will be maintained, nor is it at all necessary that they should. Growers of fruit can do well enough at much lower figures. EDS. PRESS]

Yellow Jackets and Fruit-Drying.

EDITORS PRESS:—In sun-drying my fruit this season, I have had but one nuisance to combat, and this was a large force of those everlasting gormandizers and double-ended fighting individuals called "yellow jackets." Not alone is the dried fruit devoured by these voracious pests, but nearly the entire crop of grapes destroyed by them.

Knowing that these defiant fruit "jackets" are not peculiar to a single locality, and that some of the many readers of the PRESS may have some efficient method of dealing with them, I thus make inquiry. J. L. LAWSON.

Tres Pinos.

[We would like to have accounts of experience on this subject.—EDS PRESS]

The Citrus Fairs of 1891.

EDITORS PRESS:—The State Board of Agriculture will meet at 3 P. M. on Tuesday, Dec. 2, 1890, for the purpose of selecting locations for the citrus fairs of 1891. All interested are respectfully invited to be present. EDWIN F. SMITH, Sec'y.

Sacramento, Nov. 7th.

Citizens of localities desiring the location of the State Citrus Fairs, one in Northern and the other in Southern California, as provided by law, should heed the above notice and have representatives at the meeting.

How to save money is a problem that interests everybody. One way to do it is to invigorate the system with Ayer's Sarsaparilla. Being a highly concentrated blood medicine, it is the most powerful and economical. It is sold for a dollar a bottle, but worth five.

Complimentary Samples.

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WOMAN'S INTUITION.

Nearly Always Right in Her Judgment in Regard to Common Things.

An old gentleman over seventy, came into the city from his farm, without his overcoat. The day turned chilly and he was obliged to forego his visit to the fair.

To a friend who remonstrated with him for going away from home thus unprepared, he said: "I thought it was going to be warm; my wife told me to take my overcoat, but I wouldn't. Women have more sense than men anyway."

A frank admission.

Women's good sense is said to come from intuition; may it not be that they are more close observers of little things? One thing is certain, they are apt to strike the nail on the head, in all the ordinary problems of life, more frequently than the lords of creation.

"According to Dr. Alice Bennett, who recently read a paper on Bright's disease before the Pennsylvania State Medical Society, persons subject to bilious attacks and sick headaches, who have crawling sensations, like the flowing of water in the head, who are 'tired all the time' and have unexplained attacks of sudden weakness, may well be suspected of dangerous tendencies in the direction of Bright's disease."

The veteran newspaper correspondent, Joe Howard, of the New York *Press*, in noting this statement, suggests: "Possibly Alice is correct in her diagnosis, but why doesn't she give some idea of treatment? I know a man who has been 'tired all the time' for ten years. Night before last he took two doses of calomel and yesterday he wished he hadn't."

A proper answer is found in the following letter of Mrs. Davis, wife of Rev. Wm. J. Davis, of Basil, O., June 21, 1890:

"I do not hesitate to say that I owe my life to Warner's Safe Cure. I had a constant hemorrhage from my kidneys for more than five months. The physicians could do nothing for me. My husband spent hundreds of dollars and I was not relieved. I was under the care of the most eminent medical men in the State. The hemorrhage ceased before I had taken one bottle of the Safe Cure. I can safely and do cheerfully recommend it to all who are sufferers of kidney troubles."

"Battle of Gettysburg."

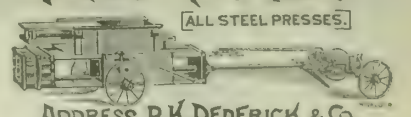
The celebrated Panorama of the Battle of Gettysburg and Museum, corner Market and Tenth Streets, San Francisco, is a wonderful production. It has captured the entire State, doing a great deal of good. There is no better way of passing an hour or so, and in studying American history, than by visiting this Grand War Panorama. If any of our readers have not seen it, it will pay them well to do so.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, *or beyond the time he intends to pay for it*, let him not fail to write us *direct* to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

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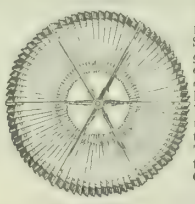
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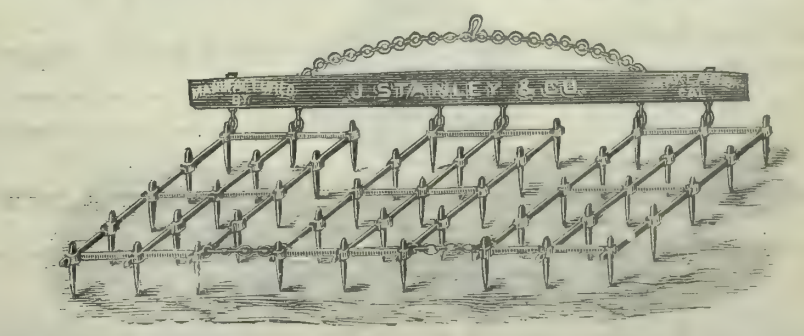


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What is the Use of Spending your Coin for a Wood Harrow when you can get the Champion All Steel Harrow? It lasts a life-time by renewing the Teeth for the Same Price.

THE CHAMPION ALL STEEL HARROW



Owning the Patent for the Pacific Coast States and Territories for this, the Best and Cheapest All Steel or Wrought Iron Harrow made (cheapest because it can be made cheaper than any other all steel or iron Harrow). The following are some of the advantages it has over other harrows:

1. It is all made of steel or wrought iron; all of the bars are straight, and are lighter and stronger than bent bars.
2. The teeth are driven into clips which unite the bars rigidly together; every tooth forms a key or wedge; they can be driven out, sharpened, and put back as easily as in the wood harrow.
3. There are no holes in the bars to weaken them; there is NOT ONE BOLT, NUT, SCREWED CLIP or SET SCREW to get loose and twist off when the teeth want sharpening or lightening.

These harrows are made in sections of 15 and 24 teeth each. Buyers can have any size harrow they want. The 15-tooth sections can be used for vineyard and orchard. We also furnish, when ordered, the Patent Side-hill Attachment to draw bar for side-hill harrowing—which is very important for side-hill work, as a harrow will not cut the same both ways on a side-hill without changing the draft at the turn. With this arrangement it changes and adjusts itself by turning the team.

Price List:

15-Tooth Section, weighs 40 lbs., cuts 3 feet	$ 8.00
24 " " " 70 " " 4 "	11.00
Draw Bars and Connections for 3-15 Tooth Sections	3.00
" " " " " 3-24 Tooth Sections	4.00
For each additional Section more than above described	1.00

Remember these harrows are no experiment. There have been over 25,000 sections sold in the Eastern States and Canada in the last five years, and more of them sold here in the last two years than any iron harrow in the market. Send your orders to

J. STANLEY, Mission San Jose,
Or 957 Broadway, Oakland, Alameda County.

Or, BURGE & DONAHOO, San Francisco Agents, 7 & 9 Main Street, San Francisco.

SAVE WOOD AND AVOID FIRE.

FARNHAM'S

PATENT

Stovepipe Drums.

It is a perfect SPARK ARRESTER as well as a FUEL-SAVER. Not a spark can escape through the pipe when the damper is properly turned, and for this reason alone, should be on every stove.

It is especially adapted to cooking stoves. If the oven is slow to heat, the drum will correct this fault, throwing more heat around the oven It will last from 10 to 15 years. Parties desiring can give it a fair trial on their stoves before purchasing.

This drum is sold at the modest sum of $5 and is warranted to give ENIIRE SATISFACTION. For further particulars apply to

M. P. FARNHAM,

GERMANTOWN, COLUSA COUNTY, CAL.

☞ AGENTS WANTED.

BLISTER FOR HORSES. WHAT TO USE.

For a blister to use on live-stock,

COMBAULT'S

CAUSTIC BALSAM

Has NO EQUAL. Why?

Because it is a perfectly safe remedy for any one to use. After applying as directed it needs no attention, acts quickly and is effective. Removes all bunches or enlargements and guaranteed not to leave scar or blemish. Supersedes all cautery or firing. Every bottle sold is warranted to give satisfaction. Price $1.50 per bottle. Sold by all druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. Address LAWRENCE, WILLIAMS & CO., Cleveland, O.

WANTED. A healthy lady, a worker, over 25, residing in a country town, to operate a branch for a wholesale house Must be able to furnish a satisfactory voucher for goods consigned and moneys handled; also references for character, honesty and business ability. State business experience, if any. Address No. 8, 220 Sansome St, S.F.

F. W. Kreling & Sons

— THE —

LARGEST MANUFACTURERS

— OF —

ARTISTIC, ANTIQUE

— AND —

FINE FURNITURE.

Hardwood Mantels and Interiors

A SPECIALTY.

RICH UPHOLSTERY, DRAPERIES, BEDDING, ETC.

WAREROOMS: 534 & 536 MARKET ST.

FACTORY: 319-329 GUERRERO ST.

SAN FRANCISCO.

JOHN G. ILS & CO.,

— MANUFACTURERS OF —

FRENCH COOKING RANGES

TINWARE,

Kitchen and Bakery Outfits, Grate Bars, Bake Ovens and Furnace Castings.

814 & 816 Kearny St., S. F.

Prop's Jackson Foundry.

ANNIE ROONEY song and music FREE. Sheet music size. Send 2c. stamp for postage. Haverfield & Givin, New York.

The Whole Country Needs Fertilization

ADMONITION TO FARMERS!

GUAYMAS, MEXICO, September 9, 1890.

R. B. CUNNINGHAM, ESQ., Agent Mexican Phosphate and Sulphur Company—DEAR SIR: In answer to your inquiries as to the value of phosphates for worn-out lands, I will state that it is my opinion the lands of the older settled portions of California afford a good field for the use of phosphates These lands have been cropped for years without any restoration of the chemical constituents necessary for an abundant crop. They therefore show plainly that they need assistance artificially to produce crops good in quantity and quality, let the crop be whatever it may.

Take, for instance, San Joaquin and Santa Clara valleys, and what do you see? Many crops that are so imperfect in quantity and quality that the eye at once detects the defect. The only relief that can be resorted to must be infused into the soil to replace the chemical properties that have been extracted by previous crops, and the writer is of the opinion that a liberal supply of phosphates will accomplish this.

The attention of the cultivators of the soil is sharply turned to rotation of crops, hoping thereby to get wealth out of their lands without fertilization. Some have turned their attention to beet cultivation in soil worn out by other crops. Beet or other seeds will not grow successfully unless the soil will nourish them.

This summer I saw several crops of beets on excessively cropped lands, the majority of which showed that there was something wanting to complete the plants to ample size and in quantity that should be expected of sugar beets under favorable circumstances. If a good crop is not obtained, there is deficiency in profit. It costs as much to cultivate soil deficient in chemical properties as it does if ample nutrition was in the soil. Under the former condition a deficient crop is certain, while under the latter condition he may reasonably expect an ample crop with profit.

Fields often are allowed to go to weeds, supposing thereby to enrich the soil. This is an uncertain method and not profitable. Your weeds have grown up and seeded: the dead stems can only add a limited addition to fertilize the soil, while the seeds of the same will cause much expense to exterminate them from the future crops. Besides, while thus only weeds as a crop, no profit was realized, while if a supply of phosphates had been applied to the soil, a profitable crop of beets or corn would be had. Besides, the weeds would have been exterminated during the cultivation of the said crop I am, Sir, your obedient servant,

EDWARD PALMER, M. D.

THE MEXICAN PHOSPHATE AND SULPHUR CO.

Manufacture three grades of this Superior Fertilizer of the following analyses:

GUARANTEED ANALYSIS.	Brand [A] for Sugar Cane, Sugar Beets, Etc.	Brand [B] for Grain, Gardens, Lawns, etc.	Brand [C] for Fruits, Vineyards, Etc.
Phosphoric Acid	10 to 11 per cent.	15 per cent.	12 per cent.
Potash	9 to 10 "	2 "	5 to 6 "
Ammonia	3 to 4 "	2 "	3 to 4 "

And will sell in lots to suit.

PARTICULARS AND CIRCULARS MAY BE HAD OF THE UNDERSIGNED.

H. M. NEWHALL & CO.,

AGENTS.

309 & 311 SANSOME STREET, SAN FRANCISCO, CAL.

THE

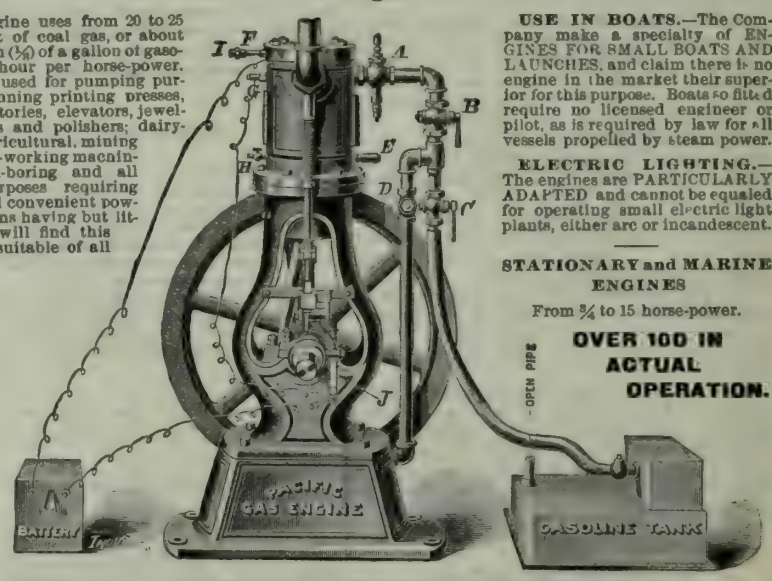
PACIFIC GAS OR GASOLINE ENGINE.

PATENTED JUNE 17, 1890 — NOS. 430,504, 430,505, 430,506.

Also in Great Britain and other foreign countries.

Starts Instantly Without the Necessity of Boiler, Fire or Experienced Engineer.

The engine uses from 20 to 25 cubic feet of coal gas, or about one-eighth (⅛) of a gallon of gasoline per hour per horse-power. It can be used for pumping purposes, running printing presses, small factories, elevators, jewelers' lathes and polishers; dairymen's, agricultural, mining and wood-working machinery; well-boring and all other purposes requiring cheap and convenient power. Persons having but little space will find this the most suitable of all motors.



USE IN BOATS.—The Company make a specialty of ENGINES FOR SMALL BOATS AND LAUNCHES, and claim there is no engine in the market their superior for this purpose. Boats so fitted require no licensed engineer or pilot, as is required by law for all vessels propelled by steam power.

ELECTRIC LIGHTING.—The engines are PARTICULARLY ADAPTED and cannot be equaled for operating small electric light plants, either arc or incandescent.

STATIONARY and MARINE ENGINES

From ¾ to 15 horse-power.

OVER 100 IN ACTUAL OPERATION.

READ THESE TESTIMONIALS.

ALAMEDA, April 8, 1890.

PACIFIC GAS ENGINE CO.—GENTLEMEN: Permit me to add my testimonial to the many you have received indorsing your engine. As you are aware, mine was a Regan engine which gave me considerable trouble. I had to remove the head and raise the tappet valve every time I wanted to start the engine. I sent you the engine; you removed all the Regan appliance except the cylinder and stand. You put in your appliances, head, starting device, inlet valve, and, in fact, changed it to the Pacific Gas Engine, which now works splendidly I have not had to remove the head for any cause since you made the change (over two months). It gives me no trouble: my boy, 14 years old, attends to it.

The change from the Regan to the Pacific is a decided improvement. I can also get a third more power since the change, and I cheerfully recommend your engine as being simple, effective, and cheap. Respectfully yours,

B. S. HILL, S. W. Cor. Encinal Ave. and Morton St.

MAYFIELD, March 26, 1890.

PACIFIC GAS ENGINE CO.—We have given your little 1-H. P. engine a splendid advertisement. A fire broke out at 2:30 o'clock this morning, in a tenement house on my premises. I started the engine, connected the hose, and by its use saved at least $3000 worth of my property. I saved my blacksmith shop lying 12 feet from the burning building, my barn and my dwelling. Three times the fire started in these buildings, and I extinguished it every time. The engine never faltered, and threw water between 50 and 60 feet high. The whole town was astonished, and they acknowledged that I saved at least $20,000 worth of property.

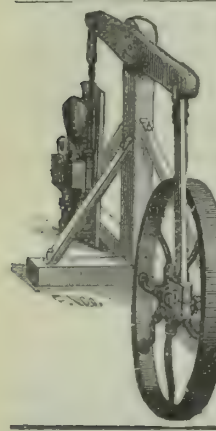
A fire department is being organized here, and I think they will have one of the engines on a truck for fire purposes. *They cannot be beaten.*

Hoping that all of your customers will be as well pleased with the engine as I am, I remain, Yours truly,

JOS. P. PONCE.

PACIFIC GAS ENGINE CO.,

Send for Circular and Price List. 230 FREMONT STREET, SAN FRANCISCO.

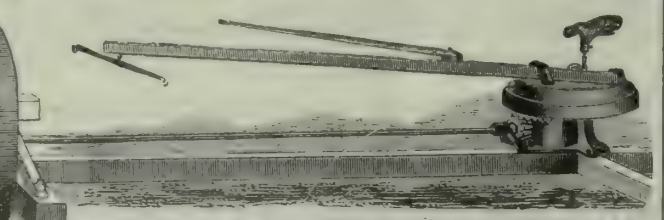


The Economy Horse-power

PUMP

WITH FLY-WHEEL, WALKING BEAM AND PUMP

Is the Best for Pumping Water for Stock, Irrigating and House Use. Send for Catalogue and Price List.



F. W. KROGH & CO.,

51 BEALE STREET, - - - - SAN FRANCISCO.

"P. & B."

Patent Ideal Roofing and Preservative Compound.

Cheapest, Most Durable and Fire-Resisting Roofing in the market.

Preservative Compounds for Wood, Iron or Metal. Acid and Alkali-Proof.

TRADE C B MARK

"P. & B."

Coated Building Papers.

Water-Proof and Odorless.

NO DEARER THAN COMMON SHEATHING.

PARAFFINE PAINT COMPANY,

116 BATTERY STREET, SAN FRANCISCO.

C. D. LADD,

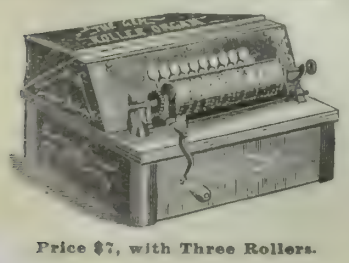
Guns, Fishing Tackle, Ammunition.



SPORTING GOODS OF EVERY DESCRIPTION.

529 & 531 KEARNY STREET,

Send for Catalogue and mention this paper. SAN FRANCISCO.



Price $7, with Three Rollers.

18,000 NOW IN USE ON THE PACIFIC COAST

And Still Booming.

THE ROLLER ORGANS

Have no equal and the price is in reach of all. Saves its cost in one night for dance music. Any one can play them. Plays sacred and popular songs and dance music.

We sell all kinds of musical instruments at bedrock prices. Circular free on application. All goods sent C. O. D., subject to examination before paying.

HAMMOND'S MUSIC STORE,

2257 Mission Street, near Nineteenth, San Francisco, Cal.

H. N. COOK,

— MANUFACTURER OF —

LEATHER BELTING, LACING AND HOSE.

NO. 32½ FREMONT ST. SAN FRANCISCO.

A Specialty of Agricultural Drapers and Carriers.

The Fig.

(*Concluded from page 411*)

success of the fruit crop greatly depends upon the method of pruning.

It has often been claimed that the fig tree never bears when once pruned; this is, to a certain extent, correct, but the real cause is entirely owing to immaturity of the wood, caused by pruning, which fails to produce fruit, or to the fruits being produced and failing to ripen, as shown in Fig. 5. If the fruit-bearing shoots (Fig. 6) are cut back, the first crop of fruit is destroyed.

Fig trees having non-bearing shoots, as shown in Fig. 7, can be pruned without any loss of fruit. If a fig tree is pruned to any extent, there will be a loss of the crop; however, such operations at times must be performed to keep the trees well balanced and within form, although this only affects the crop of one season. After the tree has been properly balanced and shaped, whether high or low, then pruning can be effected the following year with a certainty of a crop the same season; in such case the shoots, as represented in Fig. 6, must not be cut, excepting just a few here and there to keep the tree well balanced.

All such shoots which bear only wood buds, as shown in Fig. 7, should be cut back, and, if necessary, cut out entirely, as they only take away nutritious sap which should flow into the fruit and into the fruit bearing wood. Branches of almost any age or size can be cut off from any part of the tree, and young shoots will be produced quite freely, as shown in Fig. 8, but the cuts or wounds should always be covered with grafting wax or rubber paint, which helps them to heal over, and protects the stock from the action of the atmosphere. If too many shoots are thus produced, they can be reduced when young to the required number.

Formation of the Tree.

The proper formation of the tree next presents itself for consideration, with a view to the simple production of fruit. The formation of the tree with such a view requires the exercise of knowledge and understanding. All fruit trees which naturally assume a bushy form should have their energies confined to a single stem, with the head of the tree of whatever character formed thereon, and they always prove the most fruitful. When a number of shoots are allowed to spring from the root, all striving to outstrip one another, a huge, unshapely bush is the result. Fig trees, as a rule, produce suckers (shoots from the roots) in abundance, which, even if they have a fine, healthy appearance, should not be allowed to remain; they produce no fruit and only crowd up and rob the parent stem. The confining of the plant to a single stem is of the utmost importance for the production of fruit of nearly all fruit trees, and is especially so with the fig.

The trees can be trained either with high or low trunks, after once being formed; pruning then becomes less, requiring only thinning out and occasional shortening of some of the branches. The pruner has, however, great difficulty in contending against the over-luxuriance of growth of trees grown on damp soil. In such cases, it is necessary that the pruner should guard against over-luxuriance, by keeping the shoots on the tree thin and well exposed to the full influence of the direct rays of the sun. The trees should also be prevented from extending beyond bounds, even if heavy cutting has to be resorted to. Where trees grow under such conditions (too luxuriantly) the young, growing shoots should be vigorously pinched back through the summer, in order to check luxuriance and bring the tree into a stubby, fruitful form of growth.

Production of Fruit.

The first crop of the fig is borne on the wood of the previous season's formation, as represented in Fig. 6, the young embryo fruit being shown at *a*. That of the second or succeeding crop is produced in the axils of the leaves on the wood of the current season's formation. Fig. 5 represents the remnant of the last crop of figs of the previous season as they are to be seen frequently on the trees after the fall of the leaves in autumn. They are the late fruit of the past season which failed to arrive at maturity, perhaps through want of heat or the proper conditions required at that time. This fruit is not worth consideration; sometimes a few, under very favorable conditions, remain on the tree and ripen, but this, however, is very seldom. Fig. 7 represents a shoot having no fruit buds upon it, only wood buds.

These three figures represent the different characters of shoots, with the position of the fruits, buds, etc., as they are commonly seen on fig trees in the dormant period during winter-time. When a tree ripens its wood in its best conditions, healthy shoots, as shown in Fig. 6, are found most plentiful; on the contrary, when a fig tree is grown under conditions unfavorable to its culture, such feeble growth or shoots as shown in Fig. 7 will predominate.

AN ALL-STEEL HARROW.—Mr. J. Stanley of Mission San Jose has an attractive advertisement in this issue of the Champion all-steel harrow, with an engraving which shows the trim and simple form of the implement. These harrows have been widely used and approved. They can be seen at 957 Broadway, Oakland, or at the well-known place of Burge & Donahoo, 7 and 9 Main St., as well as at Mr. Stanley's factory at Mission San Jose.

Notes of the Fairs.

Redding—27th District.

The annual fair of the Shasta County Agricultural Association was formally opened at Redding, Tuesday evening, Sept. 23d, with an address by Vice-President Shanahan, a large audience being present.

The *Free Press* of that week says: "The exhibition fully equals any one made in previous years, and is considered by many even better. There is plenty of room in Armory hall, hence a display is made to better advantage than formerly. The varieties of apples and grapes are especially remarkable. The grape display of Louis Schneider and of the Fish Bros. (F. W. Fish & Sons) cannot be excelled anywhere. The former has on exhibition a bunch of grapes weighing 5½ pounds. The display of fancy articles is a fine one, and flowers are abundant and nicely arranged. Geo. Groves has a splendid exhibition of flowering plants from the Del Monte gardens. The showing of canned fruits and fruit in jars is quite extensive.....There is very little live-stock on exhibition. Mrs. George introduced quite a feature with her incubator and brood of small chicks just hatched out."

From among the numerous entries we take as characteristic those of two or three exhibitors who won many of the premiums:

Sol Hufford—Forty-nine varieties apples, 6 of peaches, 6 of pears, 1 plums, 1 quince, 1 figs, 4 of grapes, 1 of ground cherry, 2 of tomatoes, pumpkins, muskmelons, mangel wurtzel beets, red table beets, carrots, cucumbers, cabbage, potatoes, onions, 6 of beans, 3 of string beans, 5 of corn, Egyptian corn, turnips, peppers, onion sets, dried corn, hops, barley, alfalfa, 2 var. broomcorn seed, sunflower, plum pie fruit.

W. H. Myers—Four varieties of wheat, barley, oats, popcorn, 9 of corn, broomcorn seed, 7 of beans, 12 of squash, 2 of watermelons, 8 of sun-dried plums, prunes, apples, peaches, pears, blackberries, string beans, pressed figs. Seeds—onions, turnips, 2 of beets, radishes, 4 of potatoes, cabbage, sweet potatoes, cucumbers, carrots, pressed hops, hops on vine, green peas, beans, 3 of tomatoes, 25 varieties apples, 6 of pears, 6 of peaches, honey in comb, butter in roll, bacon, almonds, 4 var. walnuts, peanuts, 3 of grapes, 22 of canned fruits, 7 of preserves, 4 of jelly, 8 of pickles.

J. N. Logan—Watermelons, muskmelons, carrots, 2 var. onions, cucumbers, 3 var. potatoes, beets, 13 var. apples, 4 of peaches, 1 of prunes, 4 of plums, 3 of grapes, 1 of figs, 1 of blackberry, egg plants, 2 var. green peppers, 1 of sweet corn, 1 of tobacco, 1 of tomatoes, 1 of cabbage, 1 of string beans, 1 of corn, 3 of dry beans, 2 of popcorn, 1 of bamboo, 2 of wheat, 1 each of barley and oats, 1 of walnuts, 3 of almonds, alfalfa, evergreen millet, summer squash, pumpkins, Egyptian corn, turnips, butter, bacon, lard, 8 var. canned fruit, bottle vinegar.

In looking through the list of awards, we notice that the best draft stallion three-year-old was exhibited by John Dexter, and the corresponding mare by M. T. Kite, who also took four prizes for Jersey cattle, three for graded cows, and three for chickens. J & C Diestelhorst had four premium Holsteins; R. M. Bates, Bronze turkeys, and Ben Oliver, China geese and Pekin ducks.

There was no racing this year, but there appears to have been no lack of interest in the occasion.

San Bernardino—28th District.

The second annual fair of the 28th Agricultural District opened at San Bernardino Tuesday, Oct. 21st, with a very good attendance, and had a fairly successful run during the week.

The new pavilion being incomplete, a hall in the Harris block was used for the indoor exhibits, while the stock show and races took place at the new Cole track, about three miles southeast of San Bernardino on the Redlands motor road.

The *Times-Index* says that on Thursday morning there was a goodly gathering at the track to witness the stock parade. "There were a large number of ladies present, and they were as well pleased with the horses, cattle and pigs as were the gentlemen. The display was not large, but there were some very fine specimens of thoroughbred colts, mares and stallions, also some fine cattle and pigs."

The Riverside *Press* pronounced the display of poultry (made in the rear of the hall), which included White Holland turkeys and Light Brahma, Plymouth Rock, White and Brown Leghorn, Buff and Partridge Cochin and Black Minorca fowls, "very fine."

There were also different kinds of agricultural implements to be seen on a vacant lot near the building.

At the baby-show Friday afternoon, there were 110 babies on exhibition, and the opera-house was packed so that standing-room was scarce.

The *Citrograph* remarked: "The exhibit at the hall is a very good one, but not one-fourth as large as it should be. The apple exhibit—especially James Birch's—was exceedingly fine. The dried-fruit show was very good, probably the best ever seen in the county. The honey display was also good. The balance, with painfully few exceptions, was very ordinary....The fact is, fairs in South California in the fall of the year are all wrong. It is not our season. It is too late or it is too early. The 'agricultural hoss-trot' absorbs entirely too much money and attracts a very large following of exceedingly undesirable hangers-on. Our fairs should be held in March or April; then our citrus fruits and our magnificent flowers are both in their prime. Dried fruits can be shown then as well as in the fall. Apples and pears are even better than earlier because fully ripened. Let us have a fair about the 20th of March, divorce the 'agricultural hoss-trot' altogether, put up money premiums sufficiently large to warrant men and women to take some trouble to preserve fruits and flowers, and the thing will be a success."

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING NOV. 4, 1890.

439,992.—TREADLE PUMP — W. H. Anderson, Riverside, Cal.

439,832.—OPERATING KEYS OF GAS CHANDELIERS—R. F. Bridewell, S. F.

440,003.—WRENCH — W. S. Bunch, Marshfield, Ogn.

439,741.—WIRE SUSPENSION BRIDGE — H. C. Carmack, East Portland, Ogn.

439,812.—MINING—J. W. Crites, S. F.

439,933.—DITCHER AND CULTIVATOR — O. T. Davies, Brighton, Cal.

439,744.—DUST PAN ATTACHMENT — Dean & Earle, S. F.

439,815.—BARREL STAND—H. H. Fisk, Florence, Ogn.

439,649.—CIGAR HOLDER—A. Fritschi, Suisun, Cal.

439,940.—OPERATING ELEVATOR GATES — W. H. Golder, Portland, Ogn.

439,941.—STATION INDICATOR —L. Goldstone, S. F.

439,820.—MACHINE FOR MAKING SHELLS—Chas. D. Kennedy, California City, Cal.

439,959.—TELEGRAPH KEY—W. A. J. Kohrn, S. F.

440,047.—HARROW—H. L. Mack, Ellensburg, Wash.

439,966.—YARN-DYEING APPARATUS—W. Maybury, Pasadena, Cal.

439,823.—OPERATING SHUTTERS FOR ELEVATOR SHAFTS—Ranlet & Provost, S. F.

439,687. — WASH-BASIN DISCHARGE — J. W. Reid, S. F.

439,897.—CAR COUPLING—P. W. Ross, Los Angeles, Cal.

439,902.—HOSE COUPLING—F. E. Sharon, S. F.

439,982.—CAR COUPLING—J. L. Stillman, Fresno, Cal.

439,909.—RUBBER SHOE — John Taggart, San Diego, Cal.

439,755.—WINE-SCHOONER—L. Wagner, S. F.

439,989.—CHAIR ATTACHMENT—A. M. Whiteley, Sacramento, Cal.

439,917.—WATER-BACK FOR GAS STOVES—W. H. Wiester, S. F.

The following brief list by telegraph for Nov. 11, will appear more complete on receipt of mail advices:

California—Louis Benussi and K. and C. Dondero, S. F., preservative; William C. Dillingham, Los Angeles, combined job and news galley; William Fay, Oakland, carpet-cleaning machine; William H. Gunsolus, Sutter Creek, water-wheel; Silas Harris, S. F., upsetting machine; Byron Jackson, S. F., centrifugal pump; Willie C. Keithly (assignor of one-half to J. Farnham), S. F., adjustable picture-frame hanger; Ellsworth D. Middlekauff and C. D. Harsin, Stockton, gate; William W. Sherman, S. F., self-closing gas-burner; Henry Thibault, S. F., sickle-grinder.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

The Horse Sale at Souther Farm.

Gilbert Tompkins, the well-known breeder of Souther Farm, announces in our advertising columns his first sale of horses, of which an interesting descriptive article appeared on page 403 of our last issue. The Souther Farm is a fine estate near San Leandro, Alameda county, upon which breeding has proceeded upon enlightened principles for nearly four years, and the farm has become overstocked. On Thursday, Nov. 20th, practically the entire produce of the farm will be sold, the only exceptions among the young stock being two or three fillies reserved for brood mares and all of the foals of 1890, which are too young for present sale. The entire Souther Farm collection of brood mares will be sold, saving and excepting a few that are not in condition to place on the market, besides three or four kept for road use. Among this collection of brood mares are some of the best and most fashionably bred, and there are a great many individuals that produce good colts. The produce of almost every mare offered will be shown in such a manner that purchasers may judge for themselves of the worth of the mares. The purchaser will find a fine lot of young fillies by well-bred and fast stallions to breed up with.

Mr. Tompkins assures us that every animal offered will be sold without reserve, limit or by-bidding, and it will be a long time before those who are looking for brood mares will have a better opportunity of purchasing first-class stock at exactly what they will bring when fairly and squarely offered at public sale.

RABBIT PROOF AND STOCK FENCE CHEAPER and better than ever. See Judson Mfg. Co. advertisement, page 427 Their 2-foot fence is especially cheap and strong. By putting ordinary fencing above, it will turn anything.

ELLIOT'S PARCHMENT PAPER, now so popular among the Eastern dairymen, is offered in our columns on liberal terms to introduce it to our readers. Send for a sample box, which is free, and test it. We want all the best things in dairy use.

So far this year Chicago's real estate sales foot up $275,000,000.

FALL IMPLEMENTS.—Baker & Hamilton of this city and Sacramento have just issued a special catalogue of "Fall Implements," 1890, which relates especially to plows, harrows and seeders, and they have so many styles of these valuable implements that it requires 64 large pages to contain the information about them. The catalogue should hang in every farmer's toolhouse.

The Lady Godiva must have had exceptionally long hair since it completely concealed her lovely person. Since Ayer's Hair Vigor came into use such examples are not so rare as formerly. It not only promotes the growth of the hair, but gives it a rich silken texture.

RANCH MANAGER OR FOREMAN.—Albert H. Benson, Berkeley, Cal., advertises in another column for a position as manager or foreman of a ranch. He is practically acquainted with farming and has had wide experience in responsible positions, as his references show.

CALIFORNIA FRUITS

— AND —

HOW TO GROW THEM.

A MANUAL OF METHODS WHICH HAVE YIELDED GREATEST SUCCESS; WITH LISTS OF VARIETIES BEST ADAPTED TO THE DIFFERENT DISTRICTS OF THE STATE.

A NEW BOOK.

BY EDWARD J. WICKSON, A. M.,

Lecturer on Horticulture, University of California; Horticultural Editor PACIFIC RURAL PRESS, San Francisco; Secretary California State Horticultural Society; President California State Floral Society; President S. F. Microscopical Society.

Contents.

PART I: GENERAL.—The Climate of California and its Local Modifications; Why the California Climate Specially Favors the Growth of Fruits; The Fruit Soils of California; The Wild Fruits of California; California Mission Fruits; Introduction of Improved Fruit Varieties.

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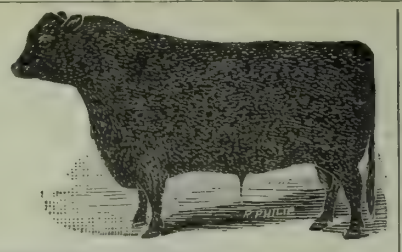
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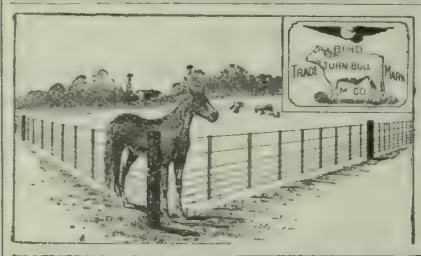
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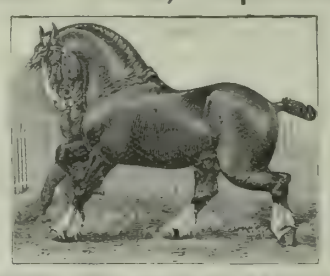
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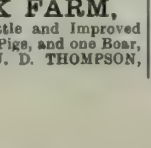
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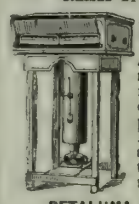
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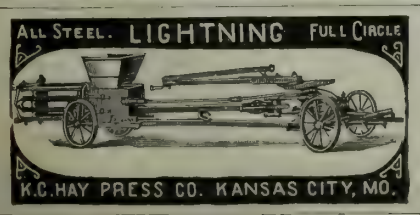
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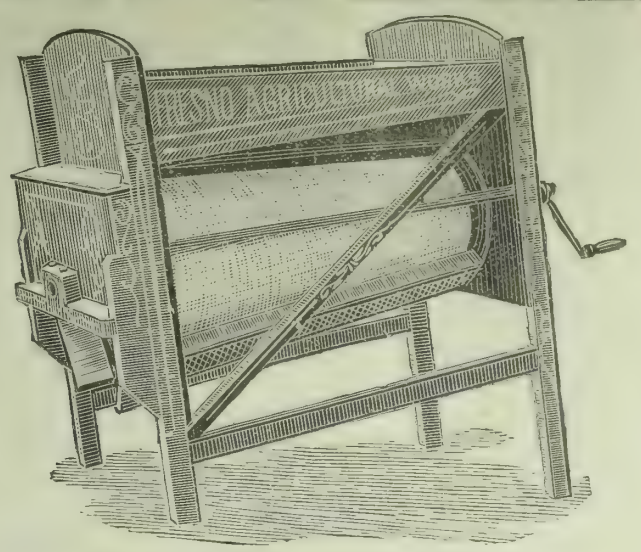


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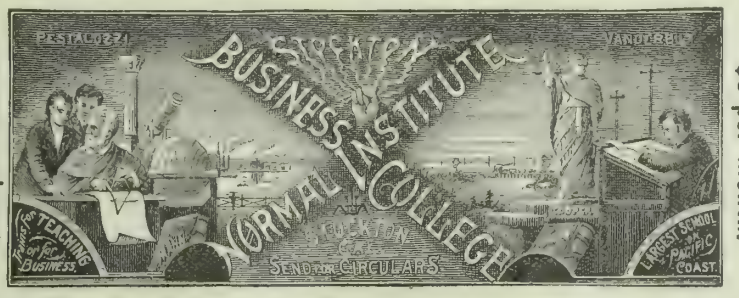
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GRANGERS' BANK

OF CALIFORNIA,

SAN FRANCISCO, CAL.

INCORPORATED APRIL, 1874.



Authorized Capital	**$1,000,000**
Capital paid up and Reserve Fund	**800,000**
Dividends paid to Stockholders	**627,500**

OFFICERS.

A. D. LOGAN.....President
I. C. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on Wheat and country produce a specialty.

July 1, 1889. A. MONTPELLIER, Manager.

Cards FREE

S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Nov. 12, 1890.

General business after election resumed its natural bent, only to be interrupted by close money markets at the East and in England. In New York several failures were reported which unsettled affairs still more. There is not enough money for business requirements, consequently large speculators can pool their interests and bring about any movement desired to add more to their wealth. Free coinage of silver is the only remedy. Wheat at home and abroad stood up remarkably well, considering the close stringent money markets. The following is to-day's cablegram:

LIVERPOOL, Nov. 12.—Wheat—Quiet but steady. California spot lots, 7s 5d to 7s 7½d; cargoes off coast, 38s to 38s 6d; just shipped, 37s 6d; nearly due, 38s; cargoes off coast and on passage, steady; Mark Lane wheat, English, firm and foreign quiet; French country markets, quiet; wheat and flour in Paris, quiet.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Nov.	Dec.	Jan.	Feb.	Mar.	April.
Thursday	7s7½d	7s8d	7s8¼	7s8¼	7s7½d	7s7½d
Friday	7s7¼	7s8¼	7s8½d	7s8¼	7s8d	7s7½d
Saturday	7s7½d	7s7¼	7s7½d	7s7½d	7s8¼	7s7½
Monday	7s7½d	7s7½d	7s7½d	7s7½d	7s7d	7s7d
Tuesday	7s7d	7s7½d	7s7½d	7s7½d	7s6½d	7s6½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	38s0d	37s9d	37s9d	Easier.
Friday	38s3d	37s9d	37s9d	Steady.
Saturday	38s3d	37s9d	37s9d	Quiet.
Monday	38s3d	37s9d	37 9d	Steady.
Tuesday	38s0d	37s6d	38s0d	Quiet.

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per bushel:

Day.	Nov.	Dec.	Jan.	Mar.	May.	July.
Thursday		106¾	107¾	109¾	110⅝	
Friday		105¾	106¾	....	110⅝	103½
Saturday	103½	104⅛	105¾	....	110⅝	....
Monday	103½	104½	105¾	....	108½	....
Tuesday	103⅝	104½	104¾	....	108½	....

The closing prices for wheat have been as follows at Chicago for the past week, per bushel:

Day.	Dec.	May.	June.	July.
Thursday	101¼	107	....	....
Friday	98⅞	105½	....	....
Saturday	98⅝	105	....	....
Monday	97¾	104⅞	....	....
Tuesday	98¼	104⅝	....	....

NEW YORK, Nov. 12.—Wheat—$1.06 for cash, $1.04⅝@1.05 for December, $1.06¼ for January, and $1.08⅞ for May.

CHICAGO, Nov. 12.—Wheat—95⅝c for December and $1.05¼ for May.

California Wines at Auction.

NEW YORK, Nov. 6.—The first auction of California wines and brandies ever held in New York took place at noon to-day at 22 Monroe St. It was a test sale for the purpose of distinguishing between good and poor brands of California wines and to find out what brands New York buyers had the most confidence in. As a first sale it was pronounced a great success. Every dealer and grower in the country was interested and a large attendance of buyers was expected. There were only 50 present, including a few gentlemen from Philadelphia. Martin F. Hatch sold the goods. The red wines brought from 10 cents a gallon for unknown brands to 39 cents for known. White wines ranged from 34 cents to 43 cents a gallon, all known brands, and of the vintage of 1886. Port wines brought 70 cents for the vintage of 1885, and from 46½ to 53 cents for the vintage of 1887. Angelica of 1886 realized 72½ cents, and sherry of 1888 from 47 to 55 cents. Brandies were sold from 65 to 95 cents, vintages of 1887 and 1889.

Hops.

NEW YORK, Nov. 10.—The outward movement in hops this week will be heavy. The situation of the market here is unchanged; there is no new important demand and no pressure to sell. There is a strong indication that growers and dealers have only to be patient to win against the brewers.

Dried Fruits.

NEW YORK, Nov. 10.—California dried fruits continue irregular, with chances of higher prices in most lines of good quality. Some difficulty is expected in securing first-class stock at present prices in the immediate future.

NEW YORK, Nov. 10.—California loose Muscatel raisins have been rather more freely offered in this market the past few days, and prices averaged somewhat lower in a number of instances. Brands that enjoy particular favor appear very little affected, if at all, as the arrivals of that class of fruit are nearly all absorbed through deliveries now making on back orders, but the average quality can undoubtedly be secured at a concession on prices generally asked one week ago. The quantity of fruit offering is not very large, nor are there any indications of a general pressure to sell. London layers of really attractive quality are in moderate supply as yet, and bring relatively better prices than loose Muscatels.

Local Markets.

BARLEY

	Buyer Season. H.	Buyer Season. L.	Seller 1891. H.	Seller 1891. L.	Buyer 1890. H.	Buyer 1890. L.
Thursday	157	156½	....	....	150	150
Friday	158½	155½	....	....	150	149½
Saturday	156	155½	....	....	149½	149½
Monday	156½	155½	....		150	149½
Tuesday	156	155½			149½	149½

WHEAT

	Seller Season.	Buyer 1891.	Buyer 1890.	Buyer Season.	Seller 1890
Thursday	h.	....	136½	144½	....
	l.	....	135½	143¾	....
Friday	h.	....	135½	144	....
	l.	....	135½	143½	....
Saturday	h.	....	....	143¾	....
	l.	....	....	143½	....
Monday	h.	....	135⅝	143¾	....
	l.	....	135¼	143⅛	....
Tuesday	h.	....	135⅛	143½	....
	l.	....	135½	143½	....

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Nov. 11th, were as follows:

Flour, qr. sks	81,949	Middlings, sks	3,853
Wheat, ctls	329,023	Alfalfa, "	....
Barley, "	19,552	Chicory, bbls	100
Rye, "	1,006	Broomcorn, bdls	208
Oats, "	3,268	Hops, bls	18
Corn, "	8,042	Wool, "	887
*Butter, "	279	Hay, tons	1,929
do bxs	146	Straw, "	77
do bbls	....	Wine, gals	238,680
do kegs	15	Brandy, "	15,425
do ½ do	....	Raisins, bxs	17,554
†Cheese, ctls	493	Honey, cs	83
do bxs	54	Walnuts, sks	446
Eggs, doz	17,150	Flaxseed, sks	2,918
do " Eastern	112,500	Mustard, sks	4,933
Beans, ctls	12,495	Almonds, sks	485
Potatoes, sks	24,270	Peanuts, sks	....
Onions, "	1,222	Popcorn, sks	194
Bran, sks	12,002	Beet sugar, bbls	560
Buckwheat, sks	168	do do sks	3,226

*Overland 240 ctls. †Overland 293 ctls.

BAGS—The market is dull for standard-sized at 6¾c May-June delivery.

BARLEY—The sample market has held to strong prices. Receipts have been fair. In futures, trading was light. The following are the reported sales made on to-day's Call:

Morning Session: Buyer 1890—100 tons, $1.49¾; 100, $1.49⅞. Buyer season—200 tons, $1.56¼; 200, $1.55⅝; 500, $1.55¾. Seller 1891—100 tons $1.11 ₩ ctl. Afternoon Session: Buyer 1890—200 tons, $1.50¼. Buyer season—300 tons, $1.56¼ ₩ ctl.

BUTTER—The market scored another advance, closing the week strong. Receipts are light and demand active. The East is beginning to send in some. The demand runs largely on pickled and solid.

CHEESE—The market is strong at higher prices. The demand is free while receipts are light.

EGGS—Eastern eggs continued to come liberally. Choice, fresh-laid Californian are wanted, for which an advance is obtainable.

FLOUR—The market is steady, with only a fair demand ruling.

WHEAT—The sample market has held steady prices. The offerings are moderate. In futures, trading has been light. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—100 tons, $1.35¼; 400, $1.35⅜ ₩ ctl. Afternoon Session: Buyer 1891—100 tons, $1.35½. Buyer season—100 tons, $1.43⅞; 100, $1.44 ₩ ctl.

Cereals.

The local wheat market has held fairly strong throughout the week. Holders are reported as being firm in their views. They part with their holdings only under strong pressure. Continued absence of rains is considered favorable to the holding interest, as is the tonnage situation, although the latter will hardly make itself felt much before well into 1891. A. D. Logan, president of the Grangers' Bank of this city, and largely interested in farming in the northern part of the Sacramento valley, says that the acreage summer-fallowed this year is below an average. He says that the winter and spring months were too wet, and plowing at the usual time was impossible, and when the weather did change the soil dried out too rapidly to admit of much summer-fallowing. Of course his remarks apply to Butte, Colusa, Yuba and neighboring counties. The exports, flour reduced to wheat, so far this season aggregate within about 15,000 tons of the exports made in the like time in 1889. The English markets have been quite firm, as have the Eastern, and this, too, in the face of a very stringent money market abroad and at the East, which brought about a panicky feeling in stocks. So close was money at times that the percentage ran up to over 90 per cent. The condition of the money market emphasizes the necessity for free coinage of silver. The opinion prevails now that this will be secured, for the Congressional elections at the East were grounded on lower tariff and free coinage of silver. When the latter is secured all farm products will be improved in value.

Barley made another slight advance the past week, with a strong tone at the closing. The supply continues light, with a good demand reported. The consumption for feed and malting is reported to be larger than at this time in 1889.

Notwithstanding the receipts of oats have been quite free, the market strengthened slightly, under a good demand and strong holding. Oregon is sending us fair supplies, as is Washington.

Corn has made another advance. Although receipts are free, yet all appears to be taken care of by the firm which is reported to have a corner. The high prices ruling for oats, barley and ground feed are in favor of corn holders.

Rye is steady at current quotations.

Feedstuff.

The demand for ground feed continues active, and with only fair supplies prices have been advanced. Oregon is sending to us bran, shorts and screenings more freely, yet all goes into consumption. The absence of rains and exhausted pasturage are the stimulants to the market. Bran, rolled barley and feedmeal are all higher.

Hay shows continued strength, but with no further advances reported. The receipts are fair, while dealers confine their purchases as much as possible, owing to high prices and the lateness of the season. Clear weather enables more teams to run on railroad construction, levee building and similar outdoor work. Shipments hence, both by rail and sea, are light. Nevada has sent considerable into the State.

Fruits.

Grapes have crowded the market. Cold, frosty nights are said to have precipitated receipts, causing low and unsatisfactory prices. The consumption is slow, although it is stimulated to some extent by low prices. Wine grapes are also slow, with quotations hard to give correctly.

Under freer receipts of apples the market is weaker. Choice red apples fetch $1.50, but they must be good colored and choice in every respect. Bellflowers are in good supply. Oregon and upper California counties are sending in considerable. Pears are slow.

The dried fruit market has ruled dull, although light supplies keep values firm. Peaches are offering quite freely, and to effect quick sales concessions are necessary. Apples are easier. The supply promises to be large. Pitted plums are barely steady. The supply of apricots is about exhausted. Pears are in light stock, but the demand is slow. Grapes continue to meet with a fair demand. Prunes are reported essentially unchanged under limited supplies. To buy in quantity, a slight advance would have to be paid.

Raisins continue to be sent overland quite freely. Reports have been received that some consignments did not turn out well—fermentation having set in. It now looks as if the entire pack will go into consumption before another season sets in. The second crop is being secured in fine condition.

Vegetables.

Frosts the past week nipped green vegetation. Beans, peas, cucumbers, tomatoes, summer squash, etc., are in limited supply and promise to be out of the market soon. Root vegetables are fairly firm, as are cabbages. Cauliflower is scarce.

Onions are slightly easier. Oregon is sending us freer supplies, which naturally tends to weaken the market, particularly so, owing to consignees being forced to sell on the wharf so as to save expenses. The demand is somewhat restricted, due to high prices.

Potatoes have fluctuated, with some kinds slightly lower. The demand has been more urgent in some quarters, but was offset by a falling off in the call from other sections. Taking the market as a whole, it has a strong, healthy tone. The digging in all the counties is about through with. The supply to draw from is not large.

Live-stock.

Bullocks and mutton sheep are in liberal receipt. Calves are scarce and wanted. Hogs are firmer under a good packing demand. Milch cows are more inquired for. The higher price ruling for butter is said to have caused the demand. Horses are unchanged.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4½@4¾c ₩ lb; dressed, 7@8c ₩ lb.; heavy, 4@4¾c ₩ lb.; dressed, 6½@7½c ₩ lb. Stock hogs, 3@3½c ₩ lb.

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¾@5¾c ₩ lb.; second quality 4¾@5c ₩ lb.; third quality, 4c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6½@8½c ₩ lb.; large, 6@7c.

MUTTON—Wethers, 7c ₩ lb.; ewes, 6½c ₩ lb.; lamb, spring, 8@9c.

Dairy Product Receipts 1890.

BUTTER.

Months—	California.	Eastern.	Oregon.
January, lbs	666,300	....	1,700
February	810,600	34,600	....
March	1,475,700	....	500
April	1,426,600	12,700	300
May	1,546,800	115,700	2,300
June	1,183,200	109,700	200
July	952,900	114,100	....
August	1,181,100	104,200	9,900
September	1,024,500	109,300	1,200
October	653,700	36,000	4,500
Totals	10,684,100	696,300	20,600
1889	10,044,200	929,300	34,000

CHEESE.

Months—	California.	Eastern.	Oregon.
January, lbs	293,100	60,300	600
February	314,000	129,400	300
March	458,300	98,800	100
April	624,000	135,700	2,900
May	761,900	44,000	200
June	469,500	98,400	800
July	488,800	103,700	3,700
August	484,600	187,100	4,700
September	388,000	101,000	1,700
October	359,500	156,400	....
Totals	4,642,700	1,117,800	15,000
1889	2,827,600	1,270,100	70,900

EGGS.

Months—	California.	Eastern.	Oregon.
January, doz	104,774	213,720	....
February	317,504	412,050	12,510
March	332,230	88,260	210
April	355,770	320,460	....
May	268,234	414,040	....
June	163,575	335,070	....
July	218,529	310,400	510
August	184,425	202,560	900
September	111,855	345,630	660
October	144,045	351,980	1,800
Totals	2,199,898	2,944,560	16,590
1889	2,363,778	2,552,020	13,350

Miscellaneous.

From the *Commercial News* of Nov. 11th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	274,342	224,896
On the way to neighboring ports	21,207	11,913
In port, disengaged	19,475	25,818
In port, engaged for wheat	57,917	71,600
Totals	392,941	334,227

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Nov. 5, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	3,653,308	4,036,513
Flour, bbls	423,477	402,731
Barley	157,346	714,773

In quoting Call Board sales of grain the term "buyer" means that the buyer can call for the stuff bought at any time before the contract time expires. The term "seller" means that the seller can deliver the stuff at any time before the contract time expires. All deliveries must be made before the contract time expires.

The poultry market is fairly steady for all kinds, except turkeys, which are higher.

Beans continue to fluctuate, being governed by receipts, but the general tone is strong.

Hops are firm at full quotations. Receipts are light.

Wool is moving off more slowly, owing to some holders' advanced views. Eastern advices report a good demand, but at essentially unchanged prices.

Honey is firm at full prices. Free shipments abroad and to the East, together with an absence of rain, are in favor of holders.

Exports by sea the past week aggregate as follows: Wheat ctls, Cork, 121,455; Hull, 77,624; Dunkirk, 68,370. Flour bbls, Punta Arenas, 3295; Honolulu, 3597; Hilo, 375. Beans ctls, Punta Arenas, 100,600; Honolulu, 11,498; Hilo, 3920. Wine gals, Victoria, 1887; New York, 113,893. Wool lbs, West Concord, N. H., 19,757. Mustard seed lbs, New York, 557,968. Barley ctls, Honolulu, 3817; New York, 3134. Rolled barley lbs, Honolulu, 20,648. Bran sks, Honolulu, 2683. Dried fruits lbs, Honolulu, 3405. Raisins boxes, Honolulu, 332. Brandy gals, New York, 8962. Potatoes sks, Honolulu, 642. Onions sks, Honolulu, 162. Canned fruits cases, New York, 1080. Peach pits lbs, New York, 15,161. Hay bales, Honolulu, 631.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Nov. 12, 1890.

BEANS AND PEAS.			
Bayo, ctl	3 75	@	4 00
Butter	2 25	@	2 75
Pea	2 50	@	3 00
Red	2 50	@	2 75
Pink	2 10	@	2 35
Small White	2 50	@	2 70
Lima	3 50	@	3 80
Fld Peas, bkeye	1 50	@	1 70
do green	2 50	@	2 75
do Nlea	1 35	@	1 55
Split	6	@	—
BROOM CORN.			
Choice to Extra	60 00	@	75 00
Fair to Good	45 00	@	55 00
Poor	40 00	@	—
CHICORY.			
California	5½	@	6
German	6	@	6¾
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair, lb	15	@	25
do good to choice	27½	@	32½
do Giltedged	37½	@	40
do pickled	25	@	30
do in kegs	22	@	26
do Creamery in rolls	40	@	42½
Eastern do	—	@	—
do do, in tubs	25	@	30
CHEESE.			
Cal. choice mild	12	@	13
do fair to good	10	@	11½
do gilt edged	13	@	14
Young America	12½	@	14
N. York Cream	13	@	15
Western	10½	@	12
EGGS.			
Cal. ranch, doz	42½	@	45
do do selected	45	@	47½
do. store	35	@	40
Eastn. cld storage		@	—
do fresh	25	@	30
do selected	32½	@	—
FEED			
Bran, ton	20 00	@	22 00
Feedmeal	28 00	@	29 00
Gr'd Barley	31 00	@	32 50
Middlings	25 00	@	28 00
Oil Cake Meal	25 00	@	27 00
Manhattan Food Per 100 lbs	7 50	@	—
HAY.			
Compressed	14 00	@	19 00
Wheat, per ton	12 00	@	17 00
do choice	18 00	@	19 00
Wheat and Oats	12 00	@	16 00
Wild Oats	12 00	@	15 00
Tame do	12 00	@	15 00
Barley	9 00	@	13 00
Barley and Oats	10 00	@	14 00
Alfalfa	12 00	@	13 00
Straw bale	70	@	80
FLOUR.			
Extra, City Mills	4 25	@	4 50
do Co'try Mills	4 25	@	4 50
Superfine	3 25	@	4 00
GRAIN, ETC.			
Barley, feed, ctl	1 45	@	1 50
do Choice	1 52½	@	—
do Brewing	1 62½	@	—
do do Choice	1 65	@	—
do do giltedg'd	1 62½	@	—
Chevalier cnce	1 55	@	1 58½
do com to good	1 40	@	1 50
Buckwheat	2 00	@	2 25
Corn, White	1 32½	@	1 37½
Yellow, large	1 32½	@	1 37½
do, small	1 32½	@	1 37½
Oats, milling	1 77½	@	1 82½
Surprise	1 80	@	1 90
Choice feed, ch'c	1 77½	@	1 80
do good	1 70	@	1 75
do fair	1 60	@	1 67½
do Gray	1 62½	@	1 67½
do Black	1 65	@	1 80
do do for seed	2 00	@	2 05
Rye	1 30	@	—
Wheat, milling. Gilt edged	1 42½	@	—
do Choice	1 40	@	—
do fair to good	1 37½	@	—
Shipping, cho'ce	1 36½	@	—
do good	1 33½	@	—
do fair	1 31½	@	—
Sonora	1 30	@	1 35
HIDES.			
Dry light to h'vy	10	@	11
Salted	5	@	8½
HOPS.			
Oregon, 1890	32½	@	40
Cal 1890 Choice	37½	@	40
do Fair to G'd	32½	@	35
NUTS JOBBING.			
Walnuts, Cal. lb	9	@	10
do Ch'ce	10	@	12
Almonds, hd shl	6	@	7
Softshell	14	@	15
Paper shell	15	@	16½
Brazil, "	19	@	20
Pecans mall	11	@	14
do large	17	@	18
Peanuts	4½	@	5½
Filberts	11	@	13
Hickory	6	@	8
Chestnuts	12	@	15
Pine nuts	7	@	8
ONIONS.			
Silver Skin	3 00	@	3 25
POTATOES.			
Early Rose, sks	55	@	65
Chile	90	@	1 00
Peerless	70	@	90
do Salinas	1 00	@	1 10
River Reds	75	@	90
Humboldt	—	@	—
Burbanks	80	@	1 30
Sweet	1 50	@	—
POULTRY AND GAME.			
Hens, doz	5 00	@	6 50
Roosters, old	5 00	@	6 00
do young	4 50	@	6 50
Broilers, small	2 50	@	3 50
do large	4 00	@	—
Fryers	4 50	@	—
Ducks, tame	4 00	@	5 50
do large	6 00	@	7 00
Geese, pair	1 50	@	2 00
Turkeys, Gobl'r.	19	@	20
Turkeys, Hens	17	@	19
do dressed	19	@	22½
Pigeons	1 75	@	2 50
Rabbits, doz	1 00	@	1 25
Hare	1 25	@	2 00
Venison	—	@	8
Dove	50	@	75
Quail	1 12½	@	1 50
Snipe, English	1 25	@	2 00
do Jack	50	@	75
Du ks, Mallard	4 00	@	5 00
do Sprigs	2 00	@	2 50
do Teal	1 50	@	2 00
do Widgeon	1 25	@	1 50
do Small	1 00	@	1 25
Geese, Gray	3 25	@	3 75
do white	1 00	@	1 50
Brant	1 00	@	1 50
EGG FOOD.			
Manhattan, ₩ lb	12	@	—
PROVISIONS.			
Cal. Bacon. Heavy, lb	10½	@	11
Medium	12	@	—
Light	13	@	13½
Lard	9	@	11
Cal. Sm'k'd Beef	11	@	13
Hams, Cal	13	@	14
do Eastern	14	@	15
SEEDS.			
Alfalfa	8	@	8½
Canary	3½	@	4
Clover, Red	11½	@	11½
White	17½	@	20
Cotton	80	@	—
Flaxseed	2	@	3
Hemp	4	@	5
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German	5	@	6½
do Common	5	@	6
Mustard, yellow	1 90	@	2 25
do Brown	2½	@	—
Rape	1½	@	1½
Ky. Blue Grass	14	@	16
2d quality	13	@	14
Sweet V. Grass	75	@	—
Orchard	12	@	14
Hungarian	7½	@	8
Lawn	27½	@	40
Mesquit	6	@	7
Timothy	6	@	7
TALLOW.			
Crude, lb	3	@	5
Refined	6	@	—
WOOL, ETC. SPRING—1890.			
Humboldt and Mendocino	19	@	24
Sac'to valley	15	@	22
Free Mountain	18	@	24
S Joaquin valley	12½	@	17
do mountain	17	@	22
Cala'v & F'th'll	15	@	24
Oregon Eastern	13	@	22
do valley	20	@	25
So'n Coast, def	10	@	14
So'n Coast, free	12½	@	19
FALL—1890.			
North'n, choice	16	@	18½
do defective	14	@	16
Mountain Free	13	@	15½
San Jo quin defective	9	@	11½
Southern do	9	@	11½

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Nov. 12, 1890.

Bananas, bunch	1 25	@	2 50
Cranberries	9 00	@	12 00
Limes, Mex	4 00	@	5 50
Lemons, Cal., bx	4 00	@	5 00
do Sicily, bx	7 00	@	8 50
do Malaga	7 00	@	8 50
Pineapples, doz	3 00	@	5 00
Strawberries chest	7 00	@	10 00
Pears, bx	75	@	1 50
Apples com box	55	@	60
do good	90	@	1 15
do choice	1 25	@	1 50
Grapes, box	20	@	50
do Muscats	15	@	40
do Rose of Peru	15	@	40
do Tokay	30	@	50
do Blk Hamb'rg	25	@	50
do Isabella	40	@	60
do Malvoise	15	@	40
do Cornichon	40	@	60
do wine Zinfandel	10 00	@	13 00
do other wine black kinds	8 00	@	10 00
Crabapples, box	75	@	1 00
Quinces, box	50	@	75
VEGETABLES.			
Okra, dry, lb	6	@	10
do green bx	1 00	@	1 25
Parsnips, ctl	1 25	@	—
Peppers, dry, lb	12	@	—
do green, bx	40	@	60
Turnips, ctl	75	@	—
Beets, sk	—	@	1 00
Cabbage, 100 lbs	50	@	60
Carrots, sk	30	@	45
Tomatoes, bx	25	@	50
Lima do	3	@	4
Marrowfat, ton	00	@	12 00
Hubbard	5 00	@	20 00
Garlic, lb	8	@	10
Egg Plant, bx	60	@	80
Cauliflower doz	50	@	70

Rope.

Baling, Duplex, lb	11
" Manilla, lb	14
Twine, for hops, balls, tarred, lb, Manilla	15
" " grape vine, balls, lb	15½
" " " coils, lb	15½
" sgring, lb	1
" binder (650 ft. to lb), lb	15

Duplex twine 3c per lb less.

CANADA has decided to reduce postage to two cents.

Dried Fruits, Etc.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices named, unless otherwise specified, are for fruit in sacks. Add for 50-lb. boxes ½c per lb., and for 25-lb boxes ¼c to 1c per lb.

Apples, sun-dried, quarters, common	6½@ —
" " " prime	7 @ —
" " " choice	8 @ —
" " sliced, common	7½@ —
" " " prime	8 @ —
" " " choice	8½@ —
" Evap. bleached, ring 50-lb boxes	10½@ 11½
Apricots, sun-dried, unbleached, common	10½@ —
" " " prime	12½@ —
" " " choice	13½@ —
" " bleached, prime	16 @ —
" " " choice	17 @ —
" " " fancy	18 @ —
" Evap. choice, in boxes	18 @ —
" " fancy, "	19 @ —
Figs, sun-dried, black	2½@ 3½
" " white	— @ —
" " " washed	@
" " " fancy	8 @ 10
" " " pressed	4 @ 6
" " " unpressed	2½@ 3½
" Smyrna boxes	12 @ 14
" do sacks	10 @ 12
Grapes, sun-dried, stemless	3½@ 4½
" " unstemmed	2 @ 3½
Nectarines, Red, sun-dried	10 @ 13
" evaporated, in boxes	13½@ 14½
" white, sun-dried	12 @ 16
" evaporated	17 @ 19
Peaches, sun-dried, unpeeled, common, bleached	9 @ 9½
" " " prime, "	10 @ 11½
" " " choice, "	13 @ 14½
" " " fancy	15 @ —
" evaporated " choice	15 @ 16
" " " fancy	18 @ —
" sun-dried, peeled, prime, bleached	20 @ —
" " " choice	23 @ —
" " " fancy	24 @ —
" evaporated, " in boxes, choice	26 @ —
" " " fancy	27½@ —
Pears, sun-dried, quarters	7 @ 9
" " sliced	9 @ 10
" evaporated, " in boxes	10 @ 11½
" " ring "	12 @ 13
Plums, pitted, sun-dried	9½@ 11
" " evap. in boxes, choice	11 @ 12
" " " fancy	13 @ 14
" unpitted	5 @ 8
Prunes, Cal. French, ungraded sizes	9 @ 9¾
" " " graded " 90 to 100	8½@ —
" " " " " 80 to 90	9 @ —
" " " " " 70 to 80	9½@ —
" " " " " 60 to 70	9½@ —
" " " " " 50 to 60	10½@ —
" " " " " 40 to 50	11½@ —

Fancy sell for more money.

RAISINS.

Halves, quarters and eighths, 25, 50 and 75 cents higher respectively than whole box prices.

London Layers, choice ₰ bx	$1 80 @ 2 10
" fancy, "	2 25 @ 2 50
Layers, ₰ bx	1 50 @ 2 00
Loose Muscatels, common, ₰ bx	1 15 @ 1 35
" choice, "	1 50 @ 1 75
" fancy, "	1 80 @ 1 90
Unstemmed " in sacks, ₰ lb	4 @ 6
Stemmed " " "	4 @ 7
Seedless " " "	6 @ 7
" ₰ 20-lb bx	1 15 @ 1 25
" Sultanas, unbleached, in bxs	1 15 @ 1 25
" " bleached "	1 25 @ 1 30

CALIFORNIA HONEY.

Comb, dark, 2-lb. frames, 60-lb. cases, ₰ lb	4 @ 5
" amber, " " cs. new "	4½@ 5½
" white " " " "	9 @ 12½
Extracted, dark, 5-gal. cans, 2 cans to case, ₰ lb.	4 @ 4½
" amber, " " "	4½@ 5
" white, " " "	5½@ 6
Comb, 2-tins, 2 doz. to case, ₰ doz	— @ —
Extracted, " " "	— @ —
" 4-lb. tins, 1 doz. "	— @ —
Beeswax, per pound	22½@ 25

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PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE: Nov. 5 11.	Olympia. Rain	Temp.	Wind	Weather	Portland. Rain	Temp.	Wind	Weather	Eureka. Rain	Temp.	Wind	Weather	Red Bluff. Rain	Temp.	Wind	Weather	Sacramento. Rain	Temp	Wind	Weather	S.Francisco. Rain	Temp	Wind	Weather	Fresno. Rain	Temp	Wind	Weather	Keeler. Rain	Temp	Wind	Weather	Los Angeles. Rain	Temp	Wind	Weather	San Diego. Rain	Temp	Wind	Weather
W.	....	....	....	....	16	42	S	Ry.	.00	50	N	Fr.	.00	64	S	Cl.	.00	58	S	Fr.	.00	52	SW	Fr	.00	72	W	Cy.	.00	56	S	...	.00	69	S	Cy.	.00	62	E	Cy
T..	.10	48	Cm	Cl.	.02	50	N	Cl.	.08	52	N	Cl.	.00	60	N	Cl.	.00	56	S	Cl.	.00	56	N	Fr.	.06	46	N W	Cy.	.00	50	S	Cy.	.10	52	W	Ry.	.10	58	S W	Ry.
F..	.01	46	S	Cy.	.01	46	E	Cy.	.00	52	N	Cl.	.00	66	N	Cl.	.00	58	S E	Fr.	.00	52	SW	Cl.	.16	52	S E	Cl.	.12	48	N W	Cl.	.02	56	W	Cl.	.18	58	W	Cy.
S..	.04	50	SW	Cy.	.05	52	S	Cy.	.00	50	N W	Cl.	.00	66	N	Fr.	.00	58	Cm	Cl.	.00	54	S W	Cl.	.00	58	W	Cl.	.00	54	N	Cl.	.00	58	W	Cl.	.00	62	W	Cl
S..	.00	50	Cm	Cl.	.04	52	S W	Cl.	.00	46	Cm	Fy.	.00	60	....	....	.00	62	N	Cl.	.00	54	W	Cl.	.00	62	W	Cl	.00	52	S W	Cl	.00	60	W	Cl.	.00	64	N W	Cl.
M..	.T	52	S W	Cy.	.00	54	S	Cy.	.00	50	N	Cl.	.00	64	N	Cl.	.00	62	N W	Cl.	.00	54	W	Cl.	.00	64	W	Cl.	.00	54	S W	Cl.	.00	64	W	Cl	.00	62	N W	Cl.
T..	.08	50	S	Cl.	.00	50	N	Fr.	.00	52	N	Cl.	.00	68	N W	Cl.	.00	66	N	Cl.	.00	60	S W	Cl.	.00	64	W	Cl.	.00	56	N E	Cl.	.00	66	W	Cl.	.00	66	N W	Cl.
	.23				.28				.08				.00				.00				.00				.22				.12				.12				.28			

EXPLANATION. Cl. for clear; Cy, cloudy; Fr., fair; Cm, calm; — indicates too small to measure. Temperature wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

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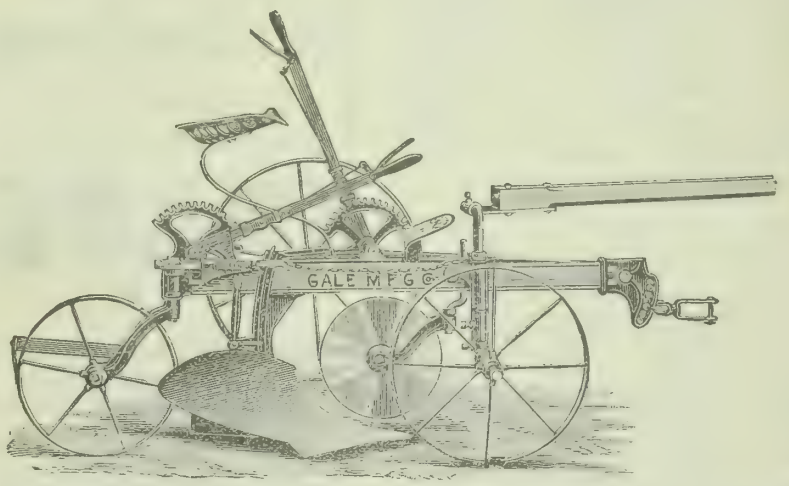
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Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

TIRE-TIGHTENER.—Geo. C. Richards, Sissons, Cal., assignor of one-half to Wm. T. Tuckwell, Sissons, Cal. No. 438,362. Dated Oct. 14, 1890. This invention belongs to that class of adjustable spoke sockets in which the spoke is adjustably connected with the felly, said adjustment being controlled and operated by a nut, the effect of which is to vary the length of the spoke, whereby the tire, the felly, and the spoke are tightened. It consists in a felly having a socket, a spoke having a tenon fitting in the socket, a protecting plate fitting around the spoke-socket and extending up on each side of the felly, a sleeve on the spoke-tenon having a head provided with a concave seat which receives the convex portion at the base of the tenon, a nut upon the threaded portion of the sleeve having a flange on its under surface and a split washer between the nut and the head of the sleeve.

HARNESS.—James R. Phelps, Sacramento, Cal. No. 438,360. Dated Oct. 14, 1890. The purpose of this device is to give a trotting, pacing or running horse a proper gait and cause him to spread the hind feet when traveling so as not to interfere or overreach. It consists of a frame-work supported from the back or hips of the animal, and connections from said frame-work to the hind legs of the horse with such an elastic tension as will cause the animal to travel with the hind feet more widely separated than it would otherwise do.

VEHICLE SEAT.—D. F. Oliver, Oakland, Cal., assignor to Truman, Hooker & Co. of San Francisco. No. 439,325. Dated Oct. 28, 1890. This invention belongs to that class in which the seat is pivoted at one end, and is adapted to be turned in a horizontal plane from a position for use to a position out of the way to enable a person to readily enter the vehicle. The invention consists in a novel, simple and effective construction of the pivot joint of the seat, whereby it is readily operated, is locked in either an open or closed position, and is fully supported during its turning.

CLUTCH PULLEY.—James C. Gibson, S. F. No. 439,140. Dated Oct. 28, 1890. This invention is an improvement in belt pulleys for driving machinery. The pulley consists of a rim without a central hub, means for connecting said rim with the driving shaft or disconnecting it therefrom, so that it will remain stationary, and means for supporting said rim when disconnected from the driving shaft. More particularly speaking, the pulley consists in connection with a rotary shaft having a hub secured to it, radial guides from said hub, arms sliding radially in the guides, levers fulcrumed to the hub, and having one end connected with the sliding arms and the opposite end connected with the clutch sleeve, a means for moving the sleeve longitudinally on the shaft so as to actuate the levers and arms, and clamping segments fixed to the outer ends of the arms, said segments being adapted to clamp an interior flange on the pulley rim so as to unite the rim with the central hub and cause it to be driven thereby.

ADJUSTABLE SEAT-BACK.—Stephen C. Houghton, S. F., assignor of one-half to D. C. Branch of same place. No. 439,403. Dated Oct. 28, 1890. This invention, though applicable to any chair or seat requiring an adjustable back, is particularly designed for use in connection with piano stools. The invention consists essentially of a back connected with the stool by a hinge joint, and a thumbscrew and nut whereby the back may be turned upon its joint to be accurately adjusted to and held securely at any inclination desired. The back can be readily connected with and disconnected from any stool, and its inclination easily and accurately determined and securely maintained.

FRUIT-DIPPING APPARATUS.—David D. Jones, San Jose, Cal., assignor to W. C. Anderson of same place. No. 439,072. Dated Oct. 21, 1890. This apparatus is intended for the dipping of prunes, first into lye water and then into clear water, previous to drying. It consists of two tanks, one for the lye water and the other for the clear water. In each is a swinging dipper having a foraminous bottom, and these dippers operate alternately, the first discharging its contents into the second and the latter discharging the fruit upon a vibrating tray upon which the prunes spread themselves evenly and on which they are carried off to dry, a fresh tray being substituted.

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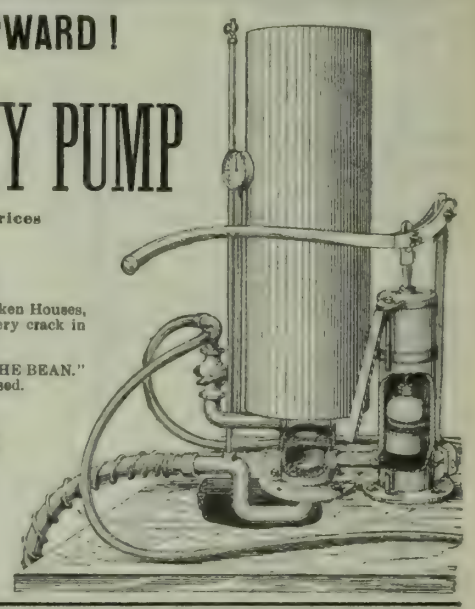
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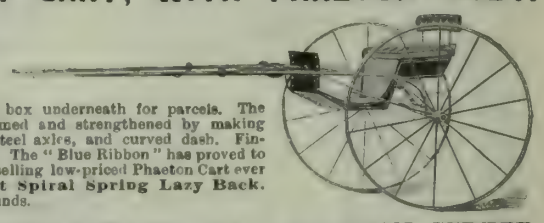
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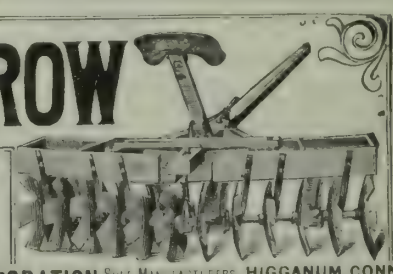
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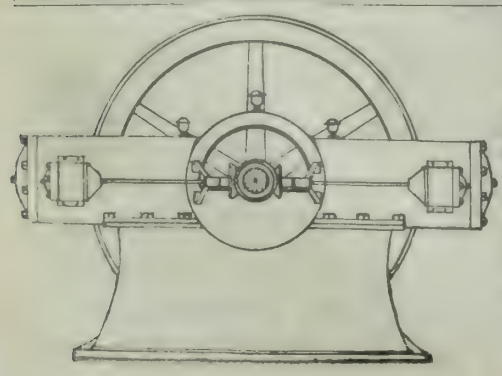
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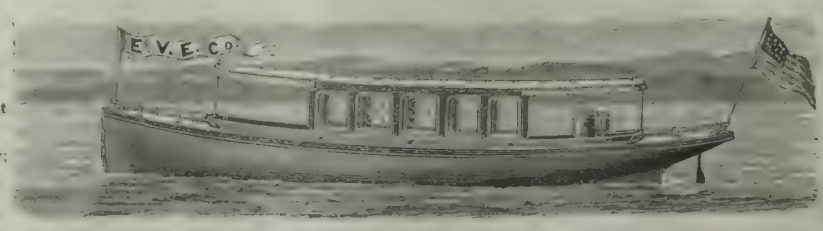
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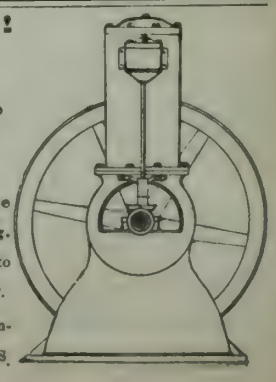
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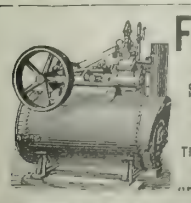
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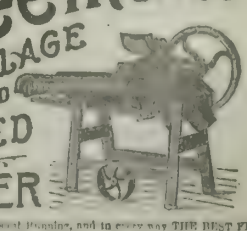
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FIRST SOUTHER FARM SALE

WILL BE HELD ON

THURSDAY, NOVEMBER 20, 1890, AT 12 NOON, SHARP.

This Farm has been breeding and collecting TROTTING STOCK for over three years, and in that time has never offered anything for sale. It is now greatly overstocked; and the very complete barns, boxstalls and shelters are too crowded to allow for the rapid increase in the business of educating and boarding horses, joined to the demands of the space required for wintering TROTTING and RUNNING HORSES. Consequently, all the young stock, excepting the weanlings and three fillies reserved for brood mares (and two or three that are out of order) will be sold at PUBLIC AUCTION on the above date. On the same day will be sold

THE ENTIRE SOUTHER FARM COLLECTION OF BROOD MARES,

Among which will be found many well-bred and worthy individuals. All will be sold without limit, reserve or by-bidding of any sort whatever. This is an unusual opportunity to purchase first-class young stallions and gilt-edged brood mares from producing lines at what they will bring at fair and square auction.

Among the Young Stallions that will be offered are:

GRAN MORO, Blk c, foaled 1888, by LE GRANDE (sire of Grandee (three years) 2:23¼, dam SUNNY SLOPE BELLE (dam of Don Carlos (three years) 2:32), by THE MOOR [sire of dams of Bell Boy (three years) 2:19½, Hinda Rose (three years) 2:19½, etc.; also grandsire of Stamboul, 2:11½]. GRAN MORO is sound and fast, and will earn money for somebody.

JIM LINFOOT, Blk c, foaled 1888, by FIGARO [son of Whipple's Hambletonian and Emblem [sister to Voltaire 2:26½], by Tattler, 2:36]; first dam FANNY LINFOOT by ERWIN DAVIS, sire Ed, 2:26, and Carrie F., 2:27¾, and the dam of Florence B., 2:26½. JIM LINFOOT will make a race horse, and is a very handsome young stallion.

There are a number of others, Two-Year-Olds and Yearlings. They will be shown at the sale.

The following are among the Brood Mares:

VERONICA, B m, foaled 1884, by ALCONA 730 (sire of Flora Belle, 2:25, and grandsire of Silas Skinner, 2:19); first dam, FONTANA (dam of Silas Skinner, 2:19, Flora Belle, 2:25), second dam FANNY WILLIAMS (dam of Bay Chieftain, 2:29½), by ALEXANDER'S ABDALLAH 15. Sister to FLORA BELLE, 2:25.

ROSALINE, B m, by MAJOR MONO. ROSALINE is also a good road mare. Dam of ALPHEUS, 2:27.

EFFIE DEANS, B m, by WHIPPLE'S HAMBLETONIAN (sire of dams of Dawn, 2:18¾, Elector, 2:21½, and seven others with records better than 2:28). Dam of GERSTER (pacing) 2:13.

PUSS, Ch m, by SKENANDOAH 926 (Kentucky Hunter). Dam of HAVERLY (pacing) 2,25, MODJESKA (pacing) 2:32½, BELLE DAVIS (three years) 2:40.

ROSEBUD, Br m, foaled 1884, by GIBRALTAR, 2:22¼ (sire of Homestake, 2:14½); first dam, JOHNSON MARE by A. W. RICHMOND, sire of Arrow (pacer) 2:13½, Richmond Jr., 2 22¾, etc.; second dam by CRICHTON (thoroughbred son of Imp. Glencoe and mare by Wagner) sire of dam of ARROW (pacer) 2:13¼, etc. ROSEBUD showed a mile in her work at Napa in 2:40. She is a fine road mare.

And many others of First-class Breeding and Good Individuality.

THERE WILL ALSO BE SOLD SOME GOOD ROADSTERS AND GENERAL PURPOSE STOCK.

Sale Day Thursday, November 20, 1890, Beginning Positively at Noon.

It is a pleasant drive to the Souther Farm from Oakland, or from San Francisco by the Creek ferry; take county road from Oakland to San Leandro, and turn off at signboard, three-quarters of a mile this side of San Leandro. On the day of the sale an earlier train will run and all will be served with lunch at the Farm.

SPECIAL TRAIN ON DAY OF SALE, leaving foot of Market Street at 9:30 A. M., and First and Broadway, Oakland, at 10 A. M.

To drive to the Farm, take Creek Ferry Boat at about 9 A. M. Lunch will be served to all comers.

GILBERT TOMPKINS, Proprietor, SAN LEANDRO, CALIFORNIA.

Fare for Round Trip on Special Train, 50 Cents. Tickets can be obtained of KILLIP & CO., 22 MONTGOMERY ST., SAN FRANCISCO, who will furnish CATALOGUES and all desired information.

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TWENTY-PAGE EDITION.

Vol. XL.—No. 21. SAN FRANCISCO, SATURDAY, NOVEMBER 22, 1890.

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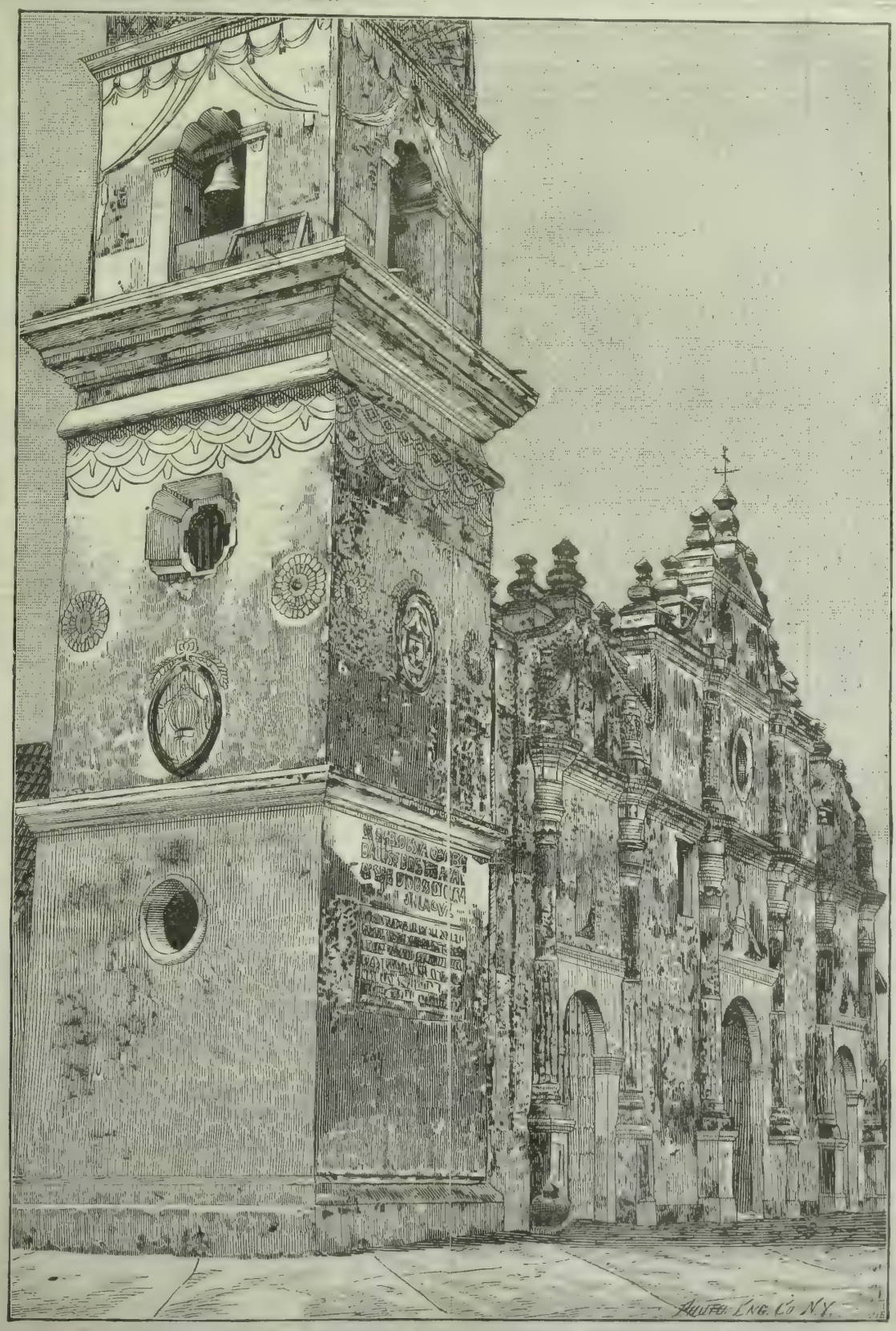
An Old Church at Granada.

At the Thanksgiving season the thought turns naturally to formal worship and to the appurtenances thereof. We introduce, therefore, a very interesting structure of great age, the cathedral at Granada, a city of Nicaragua, a country which will come into growing importance in the world's eye as the Nicaragua inter-oceanic canal progresses nearer to realization.

Granada is a city lying on the western shore of Lake Nicaragua. The towns near the lake, of which Granada and Rivas are the chief, might under happier auspices have become great centers of population; but years of anarchy and internecine strife, together with the jealousy of rival cities—Leon and Managua for example—have produced more of ruin than time itself. Many a follower of Walker could tell stirring tales illustrated by the battered walls, wrecked churches and "places stormed at with shot and shell" in Granada and Rivas. There has always been a certain jealousy between the Nicaraguan cities as to the right to be considered the capital of the State. Even to-day it is not a safe issue for a stranger to raise. In the total population of 400,000 the ancient and aristocratic city of Leon comes first with 30,000 inhabitants. Massaya comes next with 14,000, of whom, however, a large number are Indians. Then there is Granada with 12,000, and Managua, the generally reputed capital, with 10,000. Rivas, the ancient capital, has dwindled down to fifth place with 8000, but as the proposed canal will pass quite close to it, the prospects for its restoration to supremacy are exceedingly good.

Nicaragua is essentially a land of antiquities. The splendid churches and cathedrals built by the Spaniards have architectural charms and ruined glories of their own. The great cathedral of San Pedro of Leon is probably the finest religious edifice south of the City of Mexico. It was finished in 1743, at a cost of $5,000,000, occupying 37 years in construction. It is of cut stone and is one firm mass of masonry, covers an entire square, and its front extends across one side of the Grand Plaza. Like similar buildings whose ruined arches and walls may be seen in Antigua de Guatemala, this church has walls at least 15 feet in thickness, and has the solidity of a rock. Numerous earthquakes have produced no impression, and the storms of a century and a half have in no way injured its fine quality of stone. In numerous disputes between Leon and Granada, the church had often been converted into a fortress, and sustained a few bombardments from besieging forces. Thirty pieces of artillery are said to have been planted on its roof at one time and on its eastern side there are many indentations made by shot. This cathedral was once possessed of great wealth, the chancel was surrounded with a railing of solid silver, while all the altar ornaments were of gold. With the exception of the cup and plate used at mass, the church has no ornaments of precious metals now. Much was shipped to Spain, and what remained did not escape the rapacity of the soldiers, who have many times advanced and retreated through Leon.

The church shown in the engraving on this page is quite different in some respects from that at Leon to which reference has been made. It is the church of La Merced. It is ancient, massive, and in a good state of preservation considering the vicissitudes through which it has passed.



CHURCH OF LA MERCED, GRANADA, NICARAGUA.

American Pork in Europe.

The Secretary of Agriculture is in receipt, through the Department of State, of a copy of a communication from the Hon. Clark E. Carr, United States Minister Resident, Copenhagen, to the Secretary of State, in which Mr. Carr states that a petition was recently presented to the Danish Government by leading importers in Copenhagen, asking for the removal of the restrictions now existing in that country against American pork products. This petition, he says, was taken up by the Chamber of Commerce at Copenhagen, which adopted a resolution asking that American pork be admitted so soon as Germany should make the same concession. Mr. Carr adds that the opinion is generally entertained in Denmark that in the near future American pork will be admitted to all the countries of Europe, but that the Danes hesitate about removing their restrictions until Germany does so, for fear Germany would then exclude Danish pork from the Empire. He states that in spite of all that has been said and written by which unreasonable prejudice has been created against American pork, the Danes do not seem to be influenced by it, and he believes they would be glad to admit American pork for their own home consumption and thus be enabled to sell all of their own product to Germany and other countries.

Mr. Carr states incidentally that Danish pork is preferred in other countries over that raised in the United States because Danish swine are slaughtered earlier than ours, hogs usually being fattened and killed at a year old. In most European countries a hog weighing 200 pounds is preferred to those of greater weight. There is also a general belief that American pork is too fat and that it would be more desirable for table use if it were otherwise.

No Duty on Imported Cattle in Mexico.—A statement having recently appeared to the effect that the Mexican Government had placed an import duty on cattle from the United States, the Secretary of Agriculture immediately called the attention of the Department of State to this matter, with a request that the real facts be ascertained. He is now in receipt of a communication from the Department of State inclosing a telegram from the United States Consul-General at Nuevo Laredo, in reply to one from the State Department instructing him to make inquiries on the subject, in which that official states that no such duty has to his knowledge been imposed by the Mexican Government.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

A Glimpse of Ventura.

EDITORS PRESS:—In taking notes here and there of the useful and desirable which Ventura county contains, it seems fitting to notice first our capital, Ventura by the sea.

Standing on the level elevation at the head of Main street, one looks along its busy thorough fare for perhaps a mile, where may be seen many substantial business blocks of brick that would do credit to any city upon our extensive coast. At the right, parallel to Main, Poli street lies like a cable stretched across the lap of the hills. Along this elevated street are found many of the handsomest residences. Pausing here, one forgets the traffic and the turmoil just below, and the eye wanders to the islands rising abruptly from the sea or follows the sinuous line of sandy beach away to Point Magou, an abrupt headland jutting into the ocean, and which forms one boundary of the famed and fertile Santa Clara valley of the South.

The census gave Ventura about 3000 people, who feel a just pride in her broad, smooth sidewalks of asphaltum or cement; in the new electric light; in her proposed street railway, fine hotels, educational advantages, and her several pretty churches. Among the last mentioned we make special note of the new M. E. Church South, which is a gem in architecture and coloring. Fully furnished, its cost was something over $8000. The liberality of Ventura's citizens has dedicated this temple to God, recently, free from debt.

Not far from the center of the city stands the Episcopalian church, also a recent addition to the town. It is a commodious, symmetrical structure, which pleases well. Its steep, high roof suggests an ancestry from over the sea, and its walls need only to be hidden by cool, green masses of English ivy to make it a complete picture.

The Spanish Mission church, yellow with age, has yet a more modern interior than is usually found in the old Mission churches. It has been repaired with a new ceiling of wood, painted drab, and seated with 24 closed pews; its high, deep windows, which give plenty of light without allowing one to look into the outer world, produce a feeling of seclusion akin to worship.

Speaking of churches, flowers seem the most natural subject to interest next. Who that has ever had the pleasure of visiting Mrs. F. B. Shepherd's lovely garden can find words to do it justice? It is a living, blooming exhibition of what an enthusiastic, energetic woman can accomplish. Five years since, Mrs. S. began with a greenhouse costing $2.50. To-day she has all needed appliances and two acres at the home nursery blooming with choice plants in endless variety and profusion. One mile east of Ventura she has five acres more devoted to raising stock for wholesale marketing, such as callas, cannas and smilax for seed and decorating purposes.

At the home nursery we noticed a night-blooming cereus fully 35 feet in hight which has been called a national curiosity, and begonias ten feet in hight, papyrus, or Egyptian paper grass, cyclamen, bovardias, camellias that bloom from September to May, with hundreds of rare and costly novelties that we have not space to mention.

Along Main street for a distance of 200 feet, Mrs. Shepherd has planted heliotrope. The sidewalk is graded some two or three feet below this blooming bank, making this hedge a border of delight to the passer-by. Visitors constantly express amazement at this pleasing novelty, it being the only one of the kind on this coast. Mrs. Shepherd has been "written up" many times, and, as a result, is flooded with letters of inquiry which it is impossible for her to answer. She is pained many times by the contents of these letters asking for aid and advice which it is not within her power to give.

Ventura has three weeklies and one daily paper. Of these, the *Democrat*, ably edited by Mr. Jno. McGonigle, has a weekly edition of 976 copies. The *Free Press*, firm of Messrs. Leonard & Sykes, is Republican in politics, and has a circulation of 700 copies of the *Weekly Free Press* and 400 copies of the *Daily Free Press*. This is the oldest paper in the county, although its name has been changed several times in the course of its existence. The *Young Republican* has but recently started, and is Republican in politics, as its name implies. We have not learned whether it will be only a campaign sheet or whether it will continue its publication indefinitely, not having succeeded in seeing its publisher.

Six months since, there were a number of vacant houses in Ventura; now those are occupied and several new ones are in process of construction, showing conclusively that people are finding out that this is a good place in which to live.

The new Armory hall and the Masonic Block are indicative of the solid future awaiting the Gem City by the sea.

MRS. M. E. DUDLEY.

THE Woonsocket Rubber Co. has just completed and put into operation the largest rubber shoe factory in the world.

POULTRY YARD.

General Notes on the Poultry Interest.

The following essay was recently read by Mrs. Dr. Warner before the Garden Grove Farmers' Club:

In looking into the poultry question, it may interest us to know something of the earliest date which we have given us of the domestic fowl. When Julius Cæsar invaded Britain he found both the goose and fowl in a state of domestication, and they seem to have been held in some kind of religious reverence, as they were forbidden to be eaten. It is common all over the world, and it is a singular fact that the common fowl, in every way resembling that of our own country, was found domesticated among the South Sea Islanders when first visited by the Europeans. The game cock we seem to owe to the Romans. Several choice breeds were kept by the ancient Greeks, Medes and Persians. Surely we need not search further than 2000 years to show our claim to an interest in fowls, quite as legitimate as an Athenian king, although his interests were for pleasure and ours may be both for pleasure and profit.

One writer declares that the annual production of eggs equals in money value the country's annual total production of iron, and he should have added that this great industry is unprotected, being on the free list. I noticed the fact stated in a reliable poultry journal, not long since, that Canada exports ten millions of dollars' worth of eggs annually into the United States.

The annual value of the poultry and eggs consumed in the United States amounts to the sum of $475,000,000, or more than any other product, except corn, which is only about $5,000,000 more.

I think we might learn much from the prosperity of the French people and of their ability to bear the heaviest burdens without giving way under them. The secret seems to be in the extraordinary thoroughness with which they cultivate their farms, vineyards and orchards and the profits which they obtain from the seemingly insignificant products. We find this exemplified in the figures published, showing the extent and profits of chicken raising. There are in France 40,000,000 hens, valued at $20,000,000. One-fifth are marketed yearly for the table, bringing about $4,000,000. The annual production of chickens is about 80,000,000, worth in the city markets $24,000,000, and $2,000,000 are added for the extra value of capons and fatted hens. The production of eggs is estimated at 40,000,000, making the total value of eggs and chickens $80,000,000—$2.21 to every man, woman and child in France. Now we naturally ask: Why do not more people engage in this enterprise? With many there is an aversion to the carrying forward of any enterprise that needs careful and constant watching, for good care, under all circumstances and at all times, is a prime necessity to success in the poultry business. We are told that "eternal vigilance is the price of liberty," and I think it equally true for success in the poultry business. Any one who expects to succeed must use good common sense, give some heed to the wise counsels of others' experiences, and use good judgment.

It is said that women generally understand the raising of poultry better than most men. One reason is that they attend to the numerous small details which are necessary, while but few men are willing to give the time that is required, and I think quietness and gentleness in handling poultry one of the requisites to success.

One of the greatest mistakes made, by nearly all who keep poultry, is that of feeding grain as an exclusive diet. Now I think the food should be changed often. I feed soft food in the morning. If I have small potatoes I boil them, mash them and mix with wheat bread, the whole moistened with hot water, and I often put in a little salt. I believe any vegetable almost would be good cooked and mixed with bran. Then, too, fowls should have meat quite often, and I prefer it cooked for them. If attention is given to food and pure water for poultry, clean hen-houses, made so by frequent cleaning, and a liberal use of lime, carbolic acid and kerosene, with the proper change of stock, I don't see what is to prevent any one from being tolerably successful in the poultry business. I have said nothing of the numerous breeds of fowls which have their praises sung by breeders of fine poultry, as I hope this part of the subject may be taken up for another evening. My own experience has been with the Brown and White Leghorns, Plymouth Rock and Poland. This breed (the Poland) I like very much, and think I never had so many eggs from the same number of fowls as from them; and it was in Kansas, where the winters were so cold that it was not really as good a test of their superiority as it would be here. I also like the Leghorn fowls. They are so active, and lay a good-sized egg for their size. If chickens sold by the pound in California, they would be too small for profit, but as egg-producers I think they stand in the front ranks.

I saw in the *Rural Californian* a receipt for ridding the hen-roosts and pigeon-lofts of vermin. It was a preparation of sulphur and carbon, known as sulphuret of carbon. In France it has been thoroughly tested, and it is said works like a charm. A bottle containing the solution will last several days, and the cost of it is small. Put two ounces of the sulphuret of carbon in a bottle, open at the mouth, and hang it by a string in the hen-house. At the end of eight days the bottle should be refilled. The remedy is said to be infallible. If as good as claimed to be, it should be known to every farmer's wife and poultry-raiser in the land.

My young chickens I feed cooked food. For the first two or three days I feed light-bread moistened with sweet milk. After that I feed cornbread made up with sour milk, with soda enough to sweeten, and a little salt, and scraps from the table.

[The bisulphide of carbon has been advocated for years in the manner stated, and the recipe was printed in the RURAL PRESS not less than 15 years ago. We would like to know whether any Californian has found it effective used as described.—EDS. PRESS.]

Experience in Orange County.

The Garden Grove Farmers' Club is drawing out exceedingly valuable experience with poultry in its region. Last week we gave an essay read by one member, and herewith we publish an essay written by E. C. Ware and read before the same organization.

The kinds of fowls most raised in this part of the county are the Leghorn and Langshan varieties, both giving good satisfaction, the former being the best to lay when they have plenty of room to forage; but, being of a restless disposition, do not do well when confined in small yards.

The latter breed, I am told by those who have tried them, stand confinement better, are good layers, and for a large fowl are good for the table.

I have kept half and three-fourths bred Leghorns, and will give my experience with these fowls. I have found that 5½ to 6½ fowls will eat one pound of wheat or corn per day, or its equivalent, while producing eggs; that it takes feed equal to sixty pounds of wheat or corn to keep a hen a year.

In 1883 I kept on an average three hundred hens. With these I kept a strict book account. The per cent of hens that laid in each month, and average price received per dozen for eggs each month, were as follows:

January, 31.93 per cent, price of eggs per dozen, 28.6 cents; February, 31.93 per cent eggs 20¼ cents; March, 42 66 per cent eggs, 17.17 cents; April, 38.88 per cent eggs, 22.53 cents; May, 33½ per cent eggs, 26.6 cents; June, 31½ per cent eggs, 23 6 cents; July, 24.13 per cent eggs, 26½ cents; August, 19 71 per cent eggs, 30.35 cents; September, 13.83 per cent eggs, 34.55 cents; October, 14 per cent eggs, 40.30 cents; November, 9 7 per cent eggs; 36 92 cents; December, 12.4 per cent eggs, 30 29 cents—making an average for the year of 26½ eggs per day for each one hundred hens, or eight dozen eggs for each hen for the year, and the average price for the year of 24.8 cents per dozen for eggs. The cost of feed to produce eggs was within a fraction of one cent each.

The cost of feed for 300 hens for the year was $287 67, cost of feed for each fowl, 95 89 cents. There was a loss of fowls that died and were caught by coyotes amounting to $28.50, added to cost of feed makes $316 17. Amount received for eggs during the year, $597.04, leaving a net profit of $280.87, and a profit on each hen of 93 63 cents.

This lot of fowls was a mixed lot of old and young hens, such as farmers usually have on hand, so I conclude it was a fair test of the average stock of hens of the country. By having all young fowls, or by having a few in number, the results would have been better. It is a mistake to suppose you can do as well with a large flock of hens as you can with a dozen or two, at least I never could, and tests made with a few fowls of any breed mislead one as to what can be done with a large number.

I have found by keeping account of hens that died, that I have lost from 10 to 14 per cent per annum of the old stock on hand at the commencement of the year, giving them just ordinary care, about as farmers usually look after poultry.

In buying fowls, do not buy one with a bad breath; it is a sure sign of disease. I never knew a fowl with a sweet breath that was not healthy.

Now as to how these hens were fed: In the morning I gave them soft feed uncooked, and at night fed two days in the week wheat, and five, corn.

The soft feed I mixed up with water. In mixing bran and ground barley, three-fourths bulk bran and one-fourth barley; the same proportions in mixing bran and middlings; bran and cornmeal seven-eighths bulk bran and one-eighth bulk cornmeal.

A quart of the above soft feed a day, and a pint of good wheat or corn to ten fowls, makes very near a pound of feed a day to every six hens.

I also fed about ten pounds of meat twice a week, cut up with an axe. I mixed Cayenne pepper, from time to time, two tablespoons to each 50 fowls. I found it took from seven to eight days for the pepper to take effect and produce an increase of eggs, and that the effect would last about the same length of time after it was discontinued. I found it better to feed it a short time only, now and then, as when fed long at a time it seemed to lose its effect.

In a large flock of fowls there are usually some hens that never lay any eggs, although they go on the nest—probably have been injured—and are often the brightest looking hens.

Mr. Guinn of Westminster says a hen that doesn't lay never gets broody; so in the spring of the year for all hens that want to sit, he takes a pair of shears and cuts off the ends of the tail feathers, and after two or three months, all hens that have not had their tail feathers clipped he sells, and those he has killed and cut open he has always found barren as to eggs. He says he has experimented keeping fowls on cooked vegetables, with a very little grain at night, and is well satisfied with the result, getting more eggs and having less disease among his fowls; he uses a great many squashes and beets and any vegetable, and if a few onions are put in they relish it all the better.

I have kept fowls more or less in small, movable houses, and had at first the difficulty to contend with that too many fowls would crowd in one house, which was overcome by only putting roosts enough in each house to accommodate the number of fowls you wish in it; when the perches are full they are compelled to go to the next house.

I use a swing perch suspended from the roof with wire, about 18 inches from the ground; this keeps the roosts clear of the house, and the vermin cannot leave the perches as readily and spread through the house. I use the flat side of 1x3 inch for roosts, and paint these every little while with crude petroleum, which is the best remedy I have found for hen lice.

In the nest-boxes, in summer, I find unleached ashes, and nothing else, gives satisfaction, as long as they are dry, and keeps down vermin.

In handling fowls in a movable house, if you wish to turn it around, only move it about one-third in one day; if turned completely around in the same day, it confuses the fowls and they don't know how to get in it. If you wish to move the house to another part of the farm, do it by degrees, a length or so a day, and the fowls will follow it up and not notice the change.

You can buy strange fowls, bring them on your place, and if careful for two or three days can get them to roost where you want them; but I have not been successful in making fowls brought up on the place change their roosting-place.

When several hens hatch at the same time, and you wish to give the chickens to only part of the hens, give them chickens of mixed colors, as a hen that has chickens of one color is apt to kill those of a different color that come near her.

A hen that has just hatched out a brood will take chickens a week or two old in addition to her own; but after she has run with them two or three days, if you give them any more, she will usually kill them; at least that has been my experience.

It is well to mark fowls so as to know how old they are. One way is to take a sharp-pointed knife and cut the web between the toes; for instance, cut the outside web of the right foot of this year's chickens, and of the chickens raised next year cut the inside web, and the year after the left foot.

THE APIARY.

Instructive Items in Modern Bee Culture.

EDITORS PRESS:—Now is the time to begin to prepare for next spring. A golden motto for every bee-keeper is to have everything ready early and get all in readiness when it can be done with the least outlay of valuable time.

In all your manipulations with bees, remember you can handle them much easier and control them with more certainty when there is abundance of honey in the flowers.

Always see that your frames are properly spaced before hiving a swarm; they should be 1½ inches from center to center.

Make it a point to always have nice, straight combs. When handling them, shave off any bulged places, or run a sharp knife between the comb and frame and press the comb straight inside the frames, so that you will have an even surface, and you will then meet with no difficulty when changing them from hive to hive.

Large swarms of bees will build combs straight in brood frames with much more certainty than small ones.

When honey is not coming into the hives, bees are generally very cross and smoke must be freely used in handling them. Strangers often express surprise on seeing me take up bees with bare hands. There is nothing particularly brave about this, if the bees are full of honey, or at a time when a heavy flow of honey has made the bees naturally peaceable. Do not be afraid to handle your bees. Buy good frame hives, put the bees into them and become master of them and be determined to keep so.

Save all your bits of comb and render them down in tin pans. Never use an iron vessel for rendering wax; it will surely spoil it by making the wax dark-colored. Beeswax is getting

very scarce and commands a high price on account of so much being used in making comb foundation. Some of the manufacturers have paid as high as 28 cents a pound for beeswax for making into foundation this season. One firm alone manufactured over 30 tons of this article last season. I am often asked if I know of anything to prevent moths from getting into hives. The very best and surest prevention is to keep only Italian or Carniolan bees, and you will never be troubled with this pest.

Remember the old queen always goes with the first swarm. If you have Italianized your black bees, be careful that the first swarm does not get away or your bees will probably be reduced to hybrids or blacks again.

All full cases of sections or unfinished ones should now be taken off your hives and a quilt placed on top of the frames. We use a piece of burlap for this purpose, which answers very well.

A great many remedies for the cure of stings have been given from time to time, such as ammonia, tobacco wet and applied, salt and water, a raw onion cut in half and applied, mud or clay, etc., nearly all of which I have tried at different times; but the best remedy I have ever found is cold water. I had occasion to transfer a number of colonies of hybrids last spring, which proved to be veritable tigers. I found it necessary to have a pail of cold water by me to wash the honey from my hands occasionally. I received at least a dozen stings on my hands during the operation, and I found if I removed the sting immediately and plunged my hand into the cold water that I felt no effect whatever of the sting a few minutes afterward. It is hardly necessary to add that I have used this remedy ever since.

San Mateo WM. STYAN.

Comb Foundation.

EDITORS PRESS:—The invention of comb foundation ranks next to that of the honey-extractor. Not only does it lessen the labor of the bees, but by using it we have straight combs and at the same time have all worker or drone comb just as we like. If bees are put in hives that have nothing but empty frames to commence the construction of combs on, the chances are that some of the combs will be built crosswise and prevent the removal of the frames.

I think I hear some apiarist exclaim: Why don't you use a triangular comb guide and your bees will build straight combs without the use of foundation.

No; bees will not always follow the triangular comb guide. Some colonies will have tolerably straight combs, while others will have their combs joined to two or three frames; therefore, to be on the safe side and to have straight combs at all times, it is best to use foundation.

Be on the lookout at all times when fastening foundation in the frames and sections, and be sure to have it securely fastened in, so that when the bees commence work on it their weight will not break it down.

Where wired frames are used, there is not much danger of the foundation sagging or breaking, therefore if you use large frames and extract your honey, it would pay to wire your frames. In warm weather, when handling large frames filled with honey, there is always great danger of breaking down unless wired. The wire generally used is No. 30 tinned wire. After a frame is securely wired, the foundation is cut so as to nearly fill the frame, and then the wires are imbedded in the foundation by an implement made especially for that purpose and kept for sale by apiarian-supply dealers (Easterday's foundation fastener).

For brood frames, use foundation that will average about five square feet to the pound; it is about the right size to use to obtain the best results. Never use thin or section foundation in brood frames; it sags too much and causes trouble generally.

For section-boxes we need foundation that will average 10 and 11 square feet to the pound.

If too thick a foundation is used in section-boxes, the comb-honey after being finished has a kind of fish-bone in the center, which makes it objectionable to consumers.

The partition of a natural comb is, I believe, 1-180 of an inch in thickness; therefore the thinner foundation is made for surplus honey the better it is.

There are several different styles and makes of foundation, the principal ones being the Van Deusen, Dunham, Given and that manufactured on the Washburn roller-mills.

If you have only a few colonies, you had better buy your foundation instead of buying a mill and manufacturing it yourself; for it will take you quite awhile to learn to make it with any degree of correctness.

Foundation should be made of the purest wax. All impurities of all kinds should be removed from the wax before attempting to manufacture it into foundation. Impurities tend to decrease the tenacity of the wax and cause sagging.

A great many substitutes for beeswax have been tried, such as cerecin, paraffine, etc., but always proved a failure, either by the combs melting down which the bees had constructed on the foundation, or by the bees themselves tearing it down.

By the use of comb foundation we obtain considerable more honey than if we had not.

In order to determine and prove this, make two artificial swarms as nearly equal in size as possible. Give one frames filled with foundation and the other empty frames; and in a week or so make a comparison between them. You will find that the colony with the foundation already has a brood area equal in size to an old colony, sends out a full force of workers to the fields, and has a fourth more honey.

It is astonishing to see how rapidly an average-sized swarm will draw out and fill up the foundation.

By the use of foundation a new swarm will in two weeks stand on the same footing as an old one.

A noted Eastern apiarist has made the statement that bees will accomplish more in two days with foundation than they would in eight days without it; and from what experience I have had I should think they would.

By making a judicious use of comb foundation (worker size) we can do away to a great extent with the multitudes of worthless drones.

Bees will sometimes build drone cells on worker foundation, but not enough to amount to anything unless the queen is a very old one, and then, strange to state, three-fourths of the cells will be drone size. In a case like this, it is best to remove the old queen as soon as possible and insert a young one in her place, and then prune out the drone comb and fill it up with worker-size foundation.

Grizzly Flats. S. L. WATKINS.

HORTICULTURE.

Prune-Growing in San Luis Obispo.

Having chosen prunes and olives as my specialties in fruit culture, the question of a suitable location arose. Naturally a climate as nearly approaching the one where they have been produced in the highest perfection for generations—namely, the south of France—was the one desired. The nearest approach to this, according to the best authorities obtainable, is to be found in the middle coast counties of California, at a distance from the ocean varied considerably by the character of the country, but generally receding from the ocean on the north and approaching more closely toward the south. To this section must California look in the future for the finest prunes, for the reason that the prune demands for its highest perfection a long period of even temperature, and in this region only is it found. Of course the prune can and will be grown in certain localities all over California, but, as in Europe, although grown over a wide range of country, the prune from the south of France far surpasses that of colder Germany or warmer Turkey. So here the prune from the region most nearly approaching the south of France in climate will come nearest to perfection.

To this region, then, should a man turn who desires to make prune culture his business. Having disposed of the question of climate, which, after all, is the main thing, for no man can contend against an unfavorable climate, I come now to the question of location and soil of the orchard. The situation which I selected lies in the same valley as the town of San Luis Obispo, on the westerly slope of the foothills of the Santa Lucia range. I consider it an ideal one for the fruit-grower. Sloping gently to the southwest, it gets the last of the sun's rays, and retains the heat longer at night.

The elevation renders it practically frostless, which, although not a necessity, is, for the prune-grower, nevertheless, a great advantage, as the frostless spring allows the fruit to bloom early and in safety, and consequently mature early, enabling it to be placed on the market among the first, and avoiding all danger in drying from the fall rains. This slope extends for many miles on either side of the town of San Luis Obispo, and the amount of prunes which could be raised there under these most favorable conditions would be enormous.

The kind of soil required can have quite a range, owing to the number of stocks on which the French prune can be grafted. But it is well to remember that the French prune is a good feeder and requires a richer soil than many other fruits. Land that would produce a good crop of wheat or barley should do. I come now to my actual experience in this location. In March, 1887, I planted about 1000 French prune trees, two years from the bud, of the variety known as the Lot d'Ente, the prune d'Agen, etc. Although it was rather late for planting, and not a very favorable spring, being quite dry, the loss was comparatively slight, numbering about 30 trees. The growth during the first year was satisfactory. The first winter after planting (1887-8) I cut back rather sharply, determined to shape them well from the start. Next summer a few trees bore lightly, the growth being good. The following winter (1888-89) I cut back moderately. The next summer again a few trees bore lightly, the growth rapid. In the winter of 1889-90 trimmed very lightly, and lost about 20 trees from the excessively moist winter, which I consider doing very well under the circumstances, as in many portions of the State the loss ranged from ten per cent upward. This spring the trees blossomed heavily, the fruit set well, dropping little or none. I may mention here that prunes were reported as dropping badly in other portions of the State.

The crop, for the age of the trees, was very large, reaching in some cases as much as 50 pounds to the tree, and averaging 20 pounds. According to good authority, ten pounds is considered a good average for trees of their age. The fruit was fine in size, and in flavor equal to the best. I commenced drying in the sun on the 6th of August, and succeeded to my entire satisfaction, producing a dark, rich-flavored prune of good size and easily salable at current rates. The total amount of green fruit collected from 600 trees, which, as I have said, were planted in March, 1887, reached about six tons, from which I obtained 3300 pounds of dried fruit. In spite of the heavy yield, the growth of the trees has been fine. They at present are pronounced by experts unusually large for their age, averaging 12 feet and over in hight, spreading about the same distance, and with a circumference of trunk from 11 to 12 inches.

Before concluding I will say that I have found but one serious enemy to fruit culture here, namely, the squirrel. It is one that has been controlled in other portions of the State, either by concert of action or by county legislation. If this county hopes to reach the prosperity attained by the fruit centers of the State, some action will have to be taken. Fruitmen, isolated here and there, find it impossible to keep down this pest unaided. My own loss from this source, in spite of all my efforts, has been heavy. I owe the destruction of at least 50 trees to this little animal. In miscellaneous fruits and prune trees partially stripped, the amount of damage is hard to estimate. But when from 250 to 300 trees are actually denuded of every prune, as happened with me this year, it is easy to count the loss, the other trees having paid me about 50 cents apiece. In eradicating this squirrel pest in counties where grain-growing and grazing are prominent, some legislative action is necessary because concert of action is difficult to obtain except in already established fruit centers, although the benefit, not only to the orchardist, but to the grain-grower and the grazier, is far in excess of the expense incurred.—*W. B. Prichard in San Luis Obispo Tribune.*

PRUNE ON APRICOT.—F. M. Reed gives the Los Gatos *News* his experience as follows: My experience has been that the French prune does make a good union with the apricot. Three years ago last February Mr. J. G. Withey grafted 100 Moorpark apricot trees for me on my place east of town, putting in French prune scions. The trees were large, vigorous and healthy, from two to three inches in diameter, but never gave me any fruit. About 95 out of the hundred lived and started nicely. People said, they may grow well for a time, but they will not make a good union and they will all blow out with the wind. The result can be seen; they have fine large tops making a splendid growth, forming a perfect union, and not one of them has blown out. This year the grafts bore several pounds of fruit to the tree. No doubt peaches would result equally as well and I think it only need be a matter of choice with the owner as to which variety of fruit they would prefer.

THE FIELD.

Report of the Secretary of Agriculture.

Hon. J. M. Rusk, Secretary of Agriculture, has presented his annual report to the President. He expresses a distinctly hopeful view of agricultural affairs, indicating the obvious benefits to farmers of certain legislation which he specifies. By comparing the prices at Chicago for October 16, 1890, and 1889, he shows a marked increase in the values of agricultural products, and especially the cereals. Secretary Rusk asserts that without ignoring the effects of the natural causes in enhancing the values, it is evident that the economic legislation of the last session of Congress has directly benefited the farmers. The improved status of cereals, he believes, is largely due to silver legislation, which, moreover, has lessened the influence of Russia and India, our wheat competitors in British markets. Our increased export trade in cattle and animal products is another cause of congratulation. He traces this to the energetic and effective measures adopted for the eradication of pleuro-pneumonia and to the growing appreciation at home and abroad of the Department's ability to suppress or effectually control contagious animal diseases.

In line of further precaution the Department is now prepared to carry out the inspection of export cattle before their shipment, provided for by Act of August 30th. Similar energy has been directed to our pork interests, the Department having already undertaken the inspection called for by the same law. The Secretary strongly recommends an inspection law still more comprehensive for all meats slaughtered for interstate and foreign trade. The present immunity of northern cattle from Texas fever he believes to be due to a general compliance with the regulations of the Department issued last spring.

The outlook for the home sugar industry is considered favorable. The Secretary predicts that in the near future half of our sugar will be thus supplied from sugar beets. In the provisions of the Tariff bill Secretary Rusk finds what he remarks as some glaring inconsistencies, in that it gives the entire control of the sugar manufacturing and bounty payments to a subordinate officer of the Treasury Department in spite of the fact that heretofore the Department of Agriculture has been charged with the general supervision of the sugar industry both in its agricultural and manufacturing phases. The production of raw silk as an indigenous industry is referred to in not very encouraging terms, though its importance is emphasized by the reference to the imports of raw silk, which have largely increased during the year and are valued for the year at upward of $24,000,000; but the necessity for favorable legislation, as well as for improvements in machinery, is insisted upon.

Secretary Rusk believes that the recent changes in the tariff on linens will serve to encourage the manufacturers to provide a market for home-grown flax. Reference is made to the forthcoming transfer of the Weather Bureau to the Department of Agriculture with the declaration of the Secretary's desire to widen the present scope of the Bureau, so as to increase its benefits to agriculture. He also insists strongly upon the necessity for more frequent representation of the Department at the meetings of agricultural and kindred societies, not only to give them encouragement and supply information, but for the benefit of the Department workers themselves, who will thus be brought into closer contact with farmers and will become more familiar with their wants and the best means for meeting them.

The possibility of serving the corn-growers throughout the country by extending the market for Indian corn in foreign countries has engaged the Secretary's attention, with the result that he has appointed a special agent abroad, having special qualifications for this duty, to investigate and report upon the possibilities of promoting the consumption of Indian corn in European countries.

The frequent occurrence of important international agricultural gatherings is mentioned, and the fact is pointed out that at these the United States, the greatest agricultural country in the world, is most frequently conspicuous by its absence. The Secretary declares that some means should be provided by which, on occasions of great importance, such as the International Congress at Vienna last year, this country could be officially represented through the Department of Agriculture. Such gatherings, he argues, afford the very best opportunity for a properly qualified person, familiar with the conditions of American agriculture, to observe methods pursued abroad and to estimate their adaptability to our own country.

"By such means alone," he says, "will it be possible for us to hold our own in the intellectual competition which is the basis of all commercial competition."

In concluding his report he says: "I feel amply justified in expressing my general satisfaction by the condition of agricultural matters in our country," adding that, in spite of the effects of the former agricultural depression and of such local depression as must exist more or less at all times in some sections at least of so vast a country as ours, yet a careful review of events of the past year and a general survey of the agricultural field to-day betoken a marked improvement in the condition of our agriculturists and promise well for their future well-being.

He ends by declaring that he looks forward with confidence to the time when, in the high quality of its work, as well as in the magnitude of its enterprise, the agriculture of the United States shall not only lead all other industries in this country, but shall be the leader in this great industry of all other countries.

MR. DENICKE ON CAPRIFICATION.—Mr. Denicke, the well-known fig-grower of Fresno, gives the *Republican* his disbelief in caprification of the fig as follows: "The reason that caprification is desired is, as they explain, in order that the fruit may grow larger, have a better flavor, and because, as they say, the formation of fertile seeds causes the ripe fruit to drop when it is mature, also because of the alleged fact that the formation of fertile seeds assists in curing and prevents acidification while drying. Now I am perfectly well prepared to deny three of these alleged uses of caprification. The process will not give the fig a better flavor, because the ancients dropped the process simply because it gave the fig a worse flavor. The process does not cause the fig to drop when mature, because the fig without caprification will drop when it is ripe. The process will not assist in curing or prevent acidification, because the curing or souring is due entirely to causes outside of the fig itself. As to the claim that a caprified fig will grow larger and better in quality, that is something yet to be proven when the stock of capri figs in the hands of different fig-growers is sufficient to give it a thorough test in the California climate."

AN AUSTRIAN'S VIEW OF AMERICAN EXPERIMENT STATIONS.—Prof. Wilckens of Vienna visited this country last year to study American agriculture. He made his report recently to the Austrian Government, and according to the Experiment Station Record for November, seems to have found much to commend. He especially commends the generosity with which experiment station publications are distributed, and claims to be able by this means "to be far better informed concerning investigations and experiments of the American stations than concerning those of Europe."

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

Work for All.

We consider the proposed Reform Ballot law, the passage of which will be contested in the coming Legislature, as by far the most important measure to come before that body. Every good citizen is interested in its passage. Every one who abhors "bossism," hireling votes and pernicious politicians should work with might and main in favor of the Australian Ballot System until it becomes the law of California.

The present is the all-important time for work in its favor. Let every farmer and voter confer with each member of the Legislature elected with whom they are acquainted and use their strongest influence to see that said members vote on the right side of this question; that they take an interest and use their best powers to avoid any intrigue to prevent the passage of the bill, by allowing the introduction of bad bills or bad amendments to good bills.

Let every good citizen stand as a sentinel on the lookout for evil and injudicious actions calculated to hazard the passage of a real desirable ballot law. Do not forget to talk at once with your local members of the Legislature and let them know that you feel an interest in this matter and are in earnest in demanding the passage of this bill.

Past Master Hale at Merced.

From Sister Nettie Brouse, Sec'y, we learn that Merced Grange will meet Saturday, Nov. 22d, at 10 A. M., and confer the third and fourth degrees on a class of six in the forenoon and hold an open meeting in the afternoon to which all farmers, their families and friends are invited.

This will be a fine opportunity for the farmers of Merced county to listen to the eloquent Past Master of Connecticut State Grange and confer with him on subjects relating to horticulture (semi-tropical and tropical), the census, matter of Farmers' Institutes, Grange views, etc. There should be a large turnout, and we believe none present will be disappointed. This probably will be the last public address given by Bro. Hale before returning East. He is a good writer as well as speaker, and will, no doubt, pleasantly tell us some of our faults while he advertises abroad many of the good features of California.

Resolutions of Respect.

The special committee to whom was referred the drafting of resolutions indicative of the sentiments of Temescal Grange, P. of H., Oakland, Cal., concerning the death of Dr. John T. Strentzel of Martinez, Oct. 31, 1890, beg leave to submit the following:

WHEREAS, The demise of Dr. Strentzel removes from the ranks of horticulturists not only one of the pioneers and most distinguished fruit culturists on this coast, but also one of the most industrious, steadfast and successful members of our beloved Order; therefore,

Resolved, That the example of a gentleman born in a foreign land and thoroughly educated in a foreign tongue, who deliberately chose armed opposition and subsequent expatriation rather than submission to tyranny, coming to America and to California in an early day and at once setting himself the task of learning our language and studying our resources, resulting in the acquirement of a superior knowledge of our horticultural needs and possibilities, and of a wonderful facility in expressing himself with voice and pen thereon, is worthy of high commendation and lasting remembrance by the membership of the Order which he so greatly honored.

Resolved, That the example of Bro. Strentzel in thoroughly experimenting with many kinds of fruit and ornamental trees, and his habit of promptly reporting the results in various journals and magazines, has contributed untold benefits upon a large community, and is worthy of considerate emulation.

Resolved, That the courtly manner and self-respecting dignity of our deceased brother, causing him to impress all his associates with the high purposes of his aims, coupled with the marked kindness of his heart and helpfulness of his hands, combine to form a rich legacy of eminent characteristics recognized by his neighbors no less than by the hundreds of more distant friends attracted and benefited by the voluminous writings of good Dr. Strentzel.

Resolved, That the profound sympathy of the members of Temescal Grange is hereby extended to the members of Alhambra Grange, Martinez, of which Dr. Strentzel was the first and the continuously elected Master, and to the bereaved wife, daughter, son-in-law and granddaughters, now left to mourn the loss of the loving and beloved head of the family.

Resolved, That copies of these resolutions be transmitted by the Secretary to Mrs. Dr. Strentzel and to the Secretary of Alhambra Grange; also to the PACIFIC RURAL PRESS for publication.—J. G. LEMMON, A. T. DEWEY, NELLIE R. JONES, Committee.

Adopted Nov. 15, 1890.

ALHAMBRA GRANGE will meet at 10 o'clock A. M., on Thursday, Dec. 4th, in Grangers' hall, Martinez, for election of officers for the year 1891. There will be the usual Harvest Feast, to which all Patrons are invited.—MRS. M. B. LANDER, Sec'y.

National Grange Annual Session.

NO. I.

From H. E. Hayes, W. M. Oregon State Grange.

ATLANTA, GA., Nov. 13, 1890.

Dear Brother: The National Grange convened yesterday, and at this our 24th annual session, we have already 32 States reported. At 11 o'clock November 12th, the Master called to order and appointed Committee on Credentials, etc. At 2:30, we convened at the capital attired in our regalia. The legislative hall was crowded to overflowing, and the exercises opened with the song, "My Country," followed by an address of welcome from Mayor Glenn, who extended to the members of our Order not only the hospitality of this lovely city, but assured us that we were welcome to their hearthstones and hearts. He was responded to by Col. Page of Missouri, who added honors to our Order by his able remarks.

Bro. Kimbrough was then called, and the noble Southern generosity filled his soul and mouth with welcome.

Bro. Thompson, Master of Illinois State Grange, was called, and in an able manner assured our Southern brethren that the representatives of all these States appreciated the kind feelings extended to us not only by Georgia but all of our Southern brethren. Then the Mayor, acting Chairman, introduced the Governor. Mr. Northen welcomed us to Georgia, not only as the National Grange, but as farmers and the representatives of the greatest interest in our American Government. Gov. Northen touched upon our recent unpleasantness, and assured us that the South now saw its error, and he was happy to welcome us as brethren of a common country and a common cause.

Bro. Rhone responded in an able and instructive manner, showing that the farmers are beginning to learn the art of taking care of themselves.

Col. Hawkins, W. O., was then introduced and assured the N. G. that Alabama joined Georgia in their hearty welcome, and that more than all other influences, the Grange had done more to beat the swords into plowshares. Bro. Messer of Vermont responded, assuring our Southern brethren that they could come to New England and be welcomed and received with open arms as American citizens and lovers of our grand old Republic. National Master Brigham, who is always as broad in his views as he is in stature, closed the exercises in his usual grand and noble style, cementing with hand and heart the interests of our people North, South, East and West.

In the evening the Grange held a session and received reports of officers, which show marked advancement in our Order, not only in educating our farmers, but in practical work.

This forenoon, Nov. 13th, completed reports of State Masters. The committees were appointed, but as I have not the list, cannot give them. Sunday the Grange holds memorial exercises on the death of Bro. Armstrong of New York. It is time for me to go, as it is now 1:30 P. M. H. E. H.

Pescadero Grange.

EDITORS PRESS:—On Saturday, Nov. 15th, Pescadero Grange conferred the first and second degrees on a class of three ladies, and received two applications for membership, one from a gentleman and the other from a lady.

A special meeting was ordered for Saturday, November 29th, to confer the first and second degrees. The third and fourth degrees are to be conferred on the five members at the regular meeting to be held on the first Saturday in December. At this meeting a Harvest Feast and a good social time is anticipated, to which a cordial invitation is extended to all Patrons in good standing.

Pescadero Grange is growing slowly but surely. What we lack in numbers we try to make up in good feeling. We gather inspiration from the music of the "Grand old Pacific" and anticipate sublime results.

Pescadero, Nov. 17, 1890. I. C. STEELE.

Tulare Meeting.

Bro. J. M. Moore and some other members of Tulare Grange will be absent at the time of Past Master Hale's visit, Friday, Nov. 21st, yet we trust there will be a large attendance to hear our Connecticut brother and advance the organizing movement for a Farmers' Institute. The Alliance joins in this meeting with the Grange. All farmers and their families should turn out. The organization of a Farmers' Institute is important to the city and county, and should be encouraged. Bro. Mackie and other able speakers will no doubt support Bro. Hale. Let it be a free-and-easy conference meeting for all interested.

San Jose Grange.

San Jose Grange, No. 10, initiated six members in the third and fourth degrees at its meeting yesterday, and then celebrated the event with a Harvest Feast, at which several addresses were made. The membership of the Grange now numbers 100. The organization extended fraternal greetings to the County Alliance, which was in session during the day in Rutherford hall.—*San Jose Times, Nov. 16th.*

Condensed Statement Relative to the Farmers' Alliance.

We find the following statement more nearly correct than most others published relating to the Farmers' Alliance, and give it in our columns for the benefit of all who wish to be informed on the advancing Order, which is not so new as many have supposed:

The sudden growth into political importance of the Farmers' Alliance, which in Kansas overturned both old parties and in other States performed feats almost as prodigious, has stimulated general curiosity to know what the Alliance is and what its objects are. This article, consisting mainly of material extracted from a page article published in the New York *Sun* last July, is intended to supply that information.

Many Farmers' Organizations.

But first it will be well to take a general survey of all the more important organizations of agriculturists in the country. The list is as follows:

The National Farmers' Alliance and Industrial Union, formed at St. Louis last year by the union of the National Farmers' and Co-operative Union of America and the National Agricultural Wheel. Other farmers' organizations have also been absorbed by the Alliance, and its growth within a year has been marvelous. Its officers at Washington say it has a membership of more than 2,000,000.

The National Grange of the Patrons of Husbandry, the oldest and best-organized of farmers' associations, has more than 26,000 subordinate organizations distributed through all the States and Territories.

The National Farmers' League, a new and rapidly growing organization, entirely political in its objects. It proposes to act in harmony with the Alliance and the Grange and to enter actively into every department of politics. Its membership in New York State is 40,000, and all have joined within six months.

The National Colored Farmers' Alliance and Co-operative Union is a Southern organization, with headquarters at Houston, Texas, and a membership, its officers say, of fully a million.

The Farmers' Mutual Benefit Association has about 50,000 members, with Mt. Vernon, Ill., as headquarters.

The Northwestern Alliance, with headquarters at South Dakota, is strong in Kansas and neighboring States, and is a similar organization to the National Farmers' Alliance first mentioned, with which it may consolidate.

The Patrons of Industry, with headquarters at Huron, Mich., has 90,000 members in that State and as many more in Illinois, Wisconsin, Indiana, Ohio and New York.

Origin of the Alliance.

The Farmers' Alliance is really a combination of older organizations. A Farmers' Alliance was started in Texas in 1873, and also in New York about the same year. The Alliance started in New York spread westward as a non-secret organization and became a strong organization north of the Ohio river and west of Pennsylvania. The Alliance started in Texas was chartered as a benevolent association by the State in 1880, and as a secret organization it took on its period of rapid growth and development about the year 1883. In 1887 it had a membership in that State numbering over 100,000, and united with the Farmers' Union, at that time organized in Louisiana 10,000 strong. These two organizations associated themselves together under the general laws of Congress regulating the incorporation of national trade unions, and secured an article of incorporation in the District of Columbia as a national trade union under the name of "The National Farmers' Alliance and Co-operative Union," and this Order completed its consolidation with the National Agricultural Wheel on the first day of October, 1889.

How It Works.

The Alliance is a secret organization, having its secret work in the manner of other semi-social Orders. Its membership is not strictly confined to farmers, but it takes in the rural population. Both sexes are admitted to membership, with 16 as the minimum age. Only white persons are admitted in most States, and colored delegates are barred from the National Council. The rules permit the admission of country doctors, preachers, mechanics and school-teachers. Persons engaged in the following occupations are excluded: Merchants, bankers, brokers, commission merchants, cotton, grain or produce buyers; lawyers, city doctors, preachers and school-teachers; land agents, book agents, peddlers, canvassers, livery-stable keepers and sawmill men; all dealers, speculators and gamblers, and any others whose greatest interests do not harmonize with farming. When a person is engaged in farming, and in addition thereto follows one of the occupations that are not admitted, the rule is that he cannot be admitted; but the association is allowed to make some exceptions, under conditions prescribed in the laws of the Order.

How It Was Governed.

The governing body of the Farmers' Alliance is the Supreme Council, which is composed of delegates from the State organizations. The executive officers are a president, vice-president, secretary and treasurer. The subordinate Alliances seek to provide the members with such social, educational and commercial advantages as can be gained by co-operation. They endeavor to secure the highest price for the produce raised for sale and the lowest price on the commodities that must be purchased. Of the political methods of the Alliance, one of its official declarations is:

"Our political methods are strictly non-partisan and must ever remain so, because every candidate before taking the pledge is assured that it will in no way conflict with his political or religious views. All political parties are represented in our ranks and all are expected to work in their respective parties to secure a just recognition of the rights of the farmer. All questions in political economy will be thoroughly discussed, and when the Order can agree on a reform as necessary they will demand it of the Government and of every political party, and if the demand goes unheeded they will devise ways to enforce it. The most essential reforms must come from legislation, but that does not necessarily compel the responsibility of choosing candidates and filling the offices. Such a course may become necessary, but will not be resorted to under any other circumstances."

Platform of the Alliance.

The Alliance has promulgated this platform:

We demand the abolition of national banks and the substitution of legal tender Treasury notes in lieu of national-bank notes, issued in sufficient volume to do the business of the country on a cash system; regulating the amount needed on a per capita basis as the business interests of the country expand; and that all money issued by the Government shall be legal tender in payment of all debts, both public and private.

We demand that Congress shall pass such laws as shall effectually prevent the dealing in futures of all agricultural and mechanical productions; preserving a stringent system of procedure in trials as shall procure the prompt conviction and imposing such penalties as shall secure most perfect compliance with the law.

We demand the free and unlimited coinage of silver.

We demand the passage of laws prohibiting the alien ownership of land, and that Congress take early steps to devise some plan to obtain all lands now owned by aliens and foreign syndicates; and that all lands now held by railroad and other corporations in excess of such as is actually used and needed by them, be reclaimed by the Government and held for actual settlers.

Believing in the doctrine of "equal rights to all and special privileges to none," we demand that taxation, National or State, shall not be used to build up one interest or class at the expense of another. We believe that the money of the country should be kept as much as possible in the hands of the people, and hence we demand that all revenues, National, State or county, shall be limited to the necessary expenses of the Government economically and honestly administered.

We demand that Congress issue a sufficient amount of fractional American currency to facilitate exchange through the medium of the United States mail.

We demand that the means of communication and transportation shall be owned by and operated in the interest of the people, and we favor the United States postal system.

Sub-Treasury Bill.

Throughout the South the measure which the Alliance is most interested in is the so-called "Sub-treasury bill," which was introduced by Senator Vance by request and which he does not indorse. This bill proposes to establish in every county of the United States a branch of the treasury department, to be known as the sub-treasury, *provided* 100 citizens demand it and are able to show that $500,000 worth of cotton, wheat, oats, corn and tobacco is produced in such county. A site for the sub-treasury must be donated, and the people must vote on its exact location and the selection of a manager. The grower of any of the crops mentioned may deposit the same in the nearest sub-treasury, and the Government shall loan him in treasury notes 80 per cent of the value of the crops at the market price, the said price to be determined by the Secretary of the Treasury. Special Treasury notes are to be prepared ranging in denomination from $4 to $1000. These Treasury notes are to be full legal tender. The debt is to bear interest at one per cent a year, and when any crops have been on deposit more than a year, they may be sold at auction. The managers of the sub-treasuries are to hold office two years.

Opposition to the Measure.

This radical measure has the support of the Alliance and also of the Colored Alliance of the South. It is, in fact, the pet project of the Southern farmers, and they mean to force it upon the Democracy as a party measure, or to smash things in the effort to do so. How well they are succeeding, recent reports from South Carolina and one or two other States give some indication. But in the North and Northwest the scheme is by no means so popular among the farmers at large. Opposition to it caused the Farmers' and Laborers' Union of Missouri, with its membership of 175,000, to stay out of the Alliance last winter. The Northwestern Alliance is divided on the subject and the Grange does not support it.

Officers of the Alliance.

The headquarters of the Alliance are on Ninth street, Washington, where are the offices of the President, Secretary and Executive Committee. The officers are: L. L. Polk of North Carolina, President; B. H. Clover of Kansas, Vice-President; J. H. Turner of Georgia, Secretary; H. W. Hickman of Missouri, Treasurer; Ben Terrell of Texas, Lecturer; C. W. Macune of Texas, Chairman of Executive Committee.

FARMERS' INSTITUTES.

Capt. McGlincy's Advice.

R P. McGlincy of Campbell, Santa Clara county, writes to the Tulare *Register* as follows:

I attended and took part in these institutes for several years, discussing dairy topics, and I saw the interest manifested by the farmers; and later, saw the benefits arising from such meetings, and am satisfied that there was not a single county in the State that was not benefited, until to-day, millions of dollars have been added to the wealth of the farmers. So popular have these institutes become that no candidate for the Legislature hostile to them could be elected. The meetings are attended by an average of 500 farmers, and these spread the news to their less favored neighbors, which includes some who sneer at "professional farmers," as they term those who prepare papers and take part in the meetings. Merchants and professional men are interested in the work, as all can see that the agricultural interests of the State are being greatly improved by these schools.

Recently Mr. Morrison sent me a copy of the proceedings of the record of the Wisconsin institutes held last winter, and it is an excellent volume containing some 233 pages of meaty matter for farmers. These books are handsomely printed and bound by the State, and I believe are furnished to the farmers free; outside of the State the books are sold, but I do not know the price.

If I were called upon to hold an institute in Tulare county, say, I would select the point in the county that would be most central or convenient for the farmers, or as the county is larger than those of Wisconsin I would hold two institutes. After selecting the place of meeting, I would invite the co-operation of the people of the place; have music, address of welcome, then follow with paper on grape culture, general fruit culture, preparing fruit for market, in fact devote as much time to fruit in all its details as might be necessary. Then have papers on dairying in all its branches; hog-raising; horse, cattle and sheep-breeding; wheat, barley and hay farming; in a word give each branch of agriculture an inning, and make each session so interesting that all would call for more. The household, the flower and the kitchen garden should not be neglected. In each county of this State here are specialties, and provision should be made to present them so that those who are engaged in them or who think of engaging in them would be benefited by the discussions.

These institutes are practically like teachers' institutes, and teachers who desire to succeed in their calling rarely miss an opportunity to attend these meetings, and I am fully convinced that if the farmers could once attend such a meeting they would be in favor of having them in each and every county, and eventually the law-makers would see the benefits and a State appropriation could be secured, and the institutes would become a fixed fact.

Let the *Register* agitate this question; the Grange and the Alliance, too, could help in the matter, and if Tulare county should be the first county to organize an institute, it would add to its renown, cause increased interest in its welfare, and in time add to its financial standing. Will the farmers move in the matter?

Notes in Antelope Valley.

EDITORS PRESS:—I have just returned from a flying trip to the Antelope valley, east side from Lancaster, a station on the S. P. R. R. Through the kindness and hospitality of Dr. Barber and family, I had a chance to look over the county several miles east and northeast of Lancaster.

The soil appears to be rich and very easy to cultivate, and on a good grade to irrigate. From what I saw of the vegetation, etc., I conclude the average rainfall not sufficient for general farming, but with irrigation the soil is very productive. Water can be had by artesian or surface wells in abundance. For miles, good water is plenty within 30 feet of the surface down to 8 and 10 feet. There are good flowing wells at Lancaster from 300 to 400 feet. Six miles east, Dr. Barber has a fine artesian well 500 feet. He told me, I think, that he found a good flow at something less than 400 feet. He has plenty of surface water at 20 feet and less.

The land has in many places a heavy growth of sagebrush, with here and there groves of the yuccas, called by some the "tree cactus." The land is easily cleared and leveled for irrigation. Most of the even-numbered sections are claimed under homestead, pre-emption and tree-culture Acts. Very few improvements of any kind have been made on any of the claims. All are waiting for "something to turn up," or the claimants have no means or disposition to do anything more than put up a little cabin, dig a well and scratch a few furrows in the soil. Looking at such improvements (?) does not give one a favorable impression of the country and its prospects.

The altitude is some 2000 or more feet, and there is a healthy climate; so it will be a pleasant place in which to live when rightly improved and cultivated.

Dr. Barber will gladly show any one what he has done in the short time of about two years on a few acres. What can be done on 5 or 10 acres may be done on hundreds or thousands in that vicinity. He has planted many varieties of deciduous fruit trees, which have grown well and appear healthy, and has as nice alfalfa as we ever saw and many kinds of vegetables which have done well.

Cash, with well-directed muscle, will make something better of the Antelope valley than a desert, which by some it has been so long called. O N. CADWELL

Carpinteria, Cal.

Dr. and Mrs. Strentzel on the Plains.

EDITORS PRESS:—In the RURAL PRESS of the 8th inst. I saw with sorrow the announcement of the death of Dr. John Strentzel of Martinez. Although I never had the pleasure of meeting him in California, I knew him in Lamar county, Texas, before he came to this State, and as a member of the Clarksville train in charge of Captain Griffin and Mr. Shackleford, an old Western Texan, as pilot in 1849.

Dr. Strentzel in Lamar county practiced his profession very successfully, and the poorest man there called upon him with as much assurance as the man with his thousands would. He knew the doctor never hesitated to go, money or no money. He used all his patients alike—rich and poor, the white and the black; he was always ready to do his best for suffering humanity wherever he found it.

When he joined our train at Bonham he had a wife and one girl baby—a pretty child. His wife I shall refer to again before I get through. Our train was composed of 104 men and 7 women. The doctor received the appointment as doctor of the train. We supposed that should we need his services we would have to pay for them and made no other calculations. But whenever he was called on he rendered his services cheerfully, did all he could, but would not receive one cent, not even for the medicine.

My messmate, Mr. R. Simms, was in poor health before he started, and the doctor treated him all the time until he died on the headwaters of the Colorado of Texas; and if my friend had been a brother of the doctor, he could not have been more kind and attentive to him. He was a great favorite with all the members of the train. I wanted to pay him for his services, but he would not take one cent.

Few that are acquainted with Mrs. Strentzel now could realize what she went through in her girlhood days. She was born in a "blockhouse." A blockhouse was made of logs notched close together to keep out bullets and arrows. The second story projected over the walls of the first one some eight or ten feet all round and was floored with logs, with portholes cut through at convenient distances, so they could shoot down at the enemy when they approached the lower walls. These houses were built principally for the safety of the women and children, and to fly to when overpowered by numbers of Indians. Often in her girlhood days Mrs. Strentzel had to fly to this refuge to save herself from the Indians.

On the headwaters of the Brazos river, our train was surprised by the Indians, and the report was that they were 500 in number. I passed by her wagon in the midst of the excitement. There she stood on the wagon-tongue, with her baby under her left arm and a United States dragoon pistol in her right hand, cool and collected. Never in all my life have I seen fight more plainly delineated on any countenance. In passing I made some remark to her. She said, "This is not the first time I have been in danger." While my messmate was sick, any and everything that she could do for him she did. Dr. and Mrs. Strentzel were a noble couple.

Of the 104 men and seven women that composed the Clarksville train, Mrs. Strentzel and her daughter are the only ones that I know to be living. Should there be any others left, I should be pleased and gratified to hear from them. J. L. P. SMITH.

Adelaide, San Luis Obispo County.

The African Explorers Ventilate Their Exploits.

There seems now a danger that in the Kilkenny cat fight being waged between Henry M. Stanley and his lieutenants both parties will come out badly damaged, as each appears able to tell some very hurtful stories of the other. So long as left to toot his own horn, it was an easy matter for Stanley to make himself out a hero, but with these counter-blasts these heroic proportions threaten to shrink into the dimensions of a pigmy.

Just now Henry M. is entertaining the New Yorkers with an account of his exploits, which they appear to enjoy with a hearty relish, as why should they not? A people who are ready to accept the caricatures of Harte and Clemens as veritable facts ought to be able to swallow the Munchausenisms of Stanley without undue strain of the gullet.

We venture the assertion that there can be found a thousand prospectors on this coast who, in the prosecution of their calling, have undergone more hardships and braved more dangers than ever did this much-vaunted African explorer. And yet these men would blush were they made the recipients of the fulsome praise with which this pet of the drawing-room has been beslobbered, both in this country and England.

THE VINEYARD.

A Press for Grape Juice.

EDITORS PRESS:—In your last paper I notice that "An Old Ruralist" of Santa Cruz asks for an easy, inexpensive press or squeezer for expressing the juice of grapes for immediate drinking. Well, I had no idea there lived a person in the same county with myself who would have to ask for information on so simple a matter. I say so simple a matter, for there are so many ways to do it that it would seem as though any one might hit upon some one of them. Now a woman would very soon start the juice running by breaking or mashing the grapes in a dish and pouring the crushed mass into a coarse linen sack and wringing it as she would a dishcloth. This is simple enough and not expensive by any means. But perhaps "Ruralist" would want to express several gallons at one time. If so, then I would advise him to take a good strong box, bore holes all around the sides with a three-eighth bit to let the juice out; then get a wide board, say four inches larger each way than the box; cut a groove in it about two inches from the edge to lead the juice around to the front into a tub or bucket; place the board upon a solid foundation high enough to admit of a tub or bucket being put underneath the edge. Set the box on top and all is ready for the grapes. These should be mashed so that every one is broken before putting them into the box. This may be done by putting them into a tub or a bucket, and with a stick of wood mash the whole until all the grapes are broken, then empty into the box and proceed to mash another bucketful until the box is full, or until enough are crushed to make what juice is required (it takes about 14 pounds of grapes to make one gallon of juice). Now cut some good thick boards to fit inside the box for a follower, and all is ready for the pressing. To do this in the absence of a jack-screw, place the box, etc., near the root of a good-sized tree; get a long, stout pole, pass it over the box and fasten the end to the base of the tree, so that it will be somewhat lower than the top of the box; then place a block upon the top of the follower in box, and hang all the old iron kettles, etc., which may be handy upon the other end of pole, and you have a constant pressure. This is also simple and inexpensive. I myself used this kind of a press for making the first wine made in this neighborhood 24 years ago.

I would also give Ruralist a hint with regard to keeping the grape juice from fermenting for a few days. The grapes should be gathered early in the morning and crushed and pressed when cold; then set the juice away in a cool place for awhile and it will settle quite clear; then draw it off carefully and keep in a cool place. In this way fermentation may be delayed for several days, while if the grapes are picked in the heat of the day and pressed, fermentation will begin within 24 hours.

I think that Ruralist can make an inexpensive press by following the above directions. If you see fit, you can print the same or a part of what I have written. Hoping that it may prove a benefit to him and to others, I subscribe myself RURAL.

Santa Cruz.

[This arrangement is cheap and no doubt serviceable. Perhaps, however, some would prefer a handier arrangement which can be used in the house and always be ready for expressing even small quantities of juice.—EDS. PRESS.]

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING NOV. 11, 1890.

440,257.—PRESERVATIVE—Benussi & Dondero, S. F.

440,348.—PRINTER'S GALLEY—W. C. Dillingham, Los Angeles, Cal.

448,223.—CARPET-CLEANING MACHINE—Wm. Fay, Oakland, Cal.

440,353.—WATER-WHEEL—W. H. Gunsolus, Sutter Creek, Cal.

440,565.—UPSETTING MACHINE—Silas Harris, S. F.

440,252.—PUMP—B. Jackson, S. F.

440,599.—PICTURE-FRAME HANGER—W. C. Keithly, S. F.

440,177.—GATE—Middlekauff & Harsin, Stockton, Cal.

440,443.—SELF-CLOSING GAS-BURNER—W. W. Sherman, S. F.

440,283.—SLIDING GATE—G. F. Sherwood, Salem, Or.

440,337.—SICKLE GRINDER—H. Thibault, S. F.

440,212.—GLOBE AND LAMP SHADE—O. F. Wegener, Seattle, Wash.

The following brief list by telegraph, for Nov. 18, will appear more complete on receipt of mail advices:

California.—Eugene S. Bonnelli, San Francisco, exercising device for musicians; Albert E. Braker, Ventura, drop regulating attachment for seed-planters; Rockwell S. Chaplan, San Francisco, hose reel; Arthur W. Coffin, San Francisco, ticket-puncher; Albert A. Dickie, Suisun, nut lock; Thomas E. Evans, San Francisco, machine for cleaning and polishing knives; George W. Haines, Stockton, traveling thrasher and cleaner; Henry O. Harper, San Francisco, lock; Henry Knight, South Riverside, universal steam joint; Joseph Korbel, San Francisco, guard for gang-edgers; John T. McLean, Santa Cruz, device for securing extra leaves in books; Demirij Mendeleff, San Francisco, explosive; Anson L. Munson, Oakland, treating coal tar; George Rischmuller, San Francisco, safeguard for cable and horse-cars; James Rowe, San Francisco, composition for protecting piles; Philip Somerville, San Francisco, railway cable crossing; Charles W. Thompson, Tomales, automatic wagon gate; Sydney B. White, Los Angeles, stamp-canceling and dating machine; James F. Wickham, San Francisco, stencil-cutter.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

The Beet-Sugar Industry.

SIXTH PAPER.

Co operative Factories.

EDITORS PRESS:—In your last issue we followed the process of sugar manufacture to a point where we have what is termed "raw" or unrefined sugar.

The work of refining belongs to another branch of the business, yet a large quantity of "raw" sugar is consumed just as it reaches the home market, as it comes from the factory; still other sugar is produced by these same factories that is almost, if not quite, as pure and white as the granulated sugar produced by the refinery. This is accomplished by the improved methods and machines in use in the factories of the present day. It is true that to produce pure white sugar in the factory will cause a small loss of saccharine matter, but the increased price makes up that loss several times over.

Having given a brief and rather condensed description of the process of the beet-sugar industry, the question naturally arises, how will the farmer reap the benefit of this industry? It certainly cannot be expected that a community is to derive any special benefit if any of the wealthy refineries own and control these factories, as they will, to get their beets as cheap as possible.

The next plan that presents itself is co-operation. This plan alone will benefit a community in which a factory is located. In this plan the business men of any town can co-operate with the farmers and establish a factory in which the farmer and merchant can be alike interested. It is essential that enough farmers join in such an enterprise to insure a good supply of beets. The following remarks (taken from Lock, Wegner and Harland's book of sugar-growing) should apply here as well as elsewhere:

As an investment, *usines* (factories), both in Guadalupe and Martinique, are in high favor. Capital is freely subscribed to establish new factories upon a large and extensive scale. This is evidence that they return a very large profit.

Upon a crop of 300 tons, it is estimated that the *usine* (factory) would clear 200 francs ($38.60) per ton after paying the planter 6 per cent. Bearing this in mind, the planters have themselves to blame if they allow the capital of such concerns to be mostly subscribed by outsiders instead of investing their own capital in them.

The above cannot be taken as being the condition at the present time, as the estimated profits in a ton of beet roots will not exceed $6; yet the increased capacity of the modern mill will in a large measure make up this difference. In the same book we find:

The first report of the Maine Beet Sugar Co., at Portland, addressed to 1700 farmers, says that the average crop from 100 acres was 9½ tons; in some cases the return was not enough to pay cost of seed and fertilizers; the other extreme was 30 tons per acre. For 9000 tons delivered at the factory, $56,000 was paid; for storing and pitting, $6000; fuel, $10,000; labor and other expenses, $37,000; total, $107,000. The product of 900 tons (10 per cent) of sugar and molasses brought $110,000, leaving $3000 toward machinery and fixtures that cost $60,000; to this $3000 must be added the State bounty.

In the above report we find that beets cost $6.25, whereas they can be raised in this State for $4.50 per ton, which would make a difference in favor of the factory of $15,750. We also save the cost of pitting, $6000. Profit as reported, $3000. In addition to the above amounts, we can add the Government bounty of 2 cents per pound on 900 tons, or 1,800,000 pounds, of sugar, making a total of $42,750 net profit which the Maine Beet Sugar Co. could have made under the conditions offered by California at the present time.

The actual working expenses of a factory, including cost of beets, should not exceed 3¼ cents per pound of sugar produced, and in time that amount will be reduced to 3 cents. As 5 to 6 cents can be obtained, we have a profit of 2 to 3 cents per pound and 2 cents bounty, making a total of 4 to 5 cents profit. In estimating the cost of factories, we must bear in mind that the Government duty on beet-sugar machinery has been removed, making a difference of 45 per cent on the machinery, or 23 per cent of the total cost of the plant.

Previous to the passage of the tariff bill, the estimated cost of factories was $1000 per ton of beets daily capacity; that is, a factory that could consume 150 tons of beets each 24 hours would cost $150,000; at the present rate, it should cost $34,500 less, or $115,500.

The returns from 150 tons of beets should be not less than 14 per cent—21 tons of sugar—at a net profit of $630 and a bounty of $840, making a total of $1470, and a run of 100 days would raise it to a total of $147,000 in one season's run. Certainly no better paying enterprise could be expected. Let each beet-grower own one share of stock for every acre of beets that he would contract to raise, and in a short time that community would feel the effects of having prosperous farmers for neighbors.

Alameda, Cal. B. B. CHANDLER, M. E.



Thanksgivin' Pumpkin Pies.

So you bid me to Thanksgivin'! Thank you, neighbor, it is kind
To keep a plain old body like myself so much in mind,
Here I've been sittin' all alone, and a mist before my eyes,
A thinkin' like a simpleton, of mother's pumpkin pies.

Yes, I've just come home from Sarah's—come home I'm glad to say—
And here, God helping me, I mean in future time to stay—
Oh! Sarah's folks are very fine, but I felt all at sea,
And though the rooms were 'mazin' big, they seemed too small for me.

The house is like a palace, and mine's a tiny nest,
But, neighbor, I'm contented here, I like this place the best;
Just as Sarah's creams and salads, I don't know how to prize;
Her French cook costs a fortune, but—I favor home-make pies,

Like mother's; flaky, rich and brown, and toothsome with the spice;
I grew to loathe her dinners, cut in half with lemon ice;
Give me good food, biled greens and pork; and turkey now and then;
I tell you on our mountain fare we've raised a race of men.

Not spindlin' like them city folks, in dress-suits if you please,
An' mincin' in their low-cut shoes, an' bowin' to their knees—
I hate such silly airs; I like to hear a hearty word;
No! I'm not deaf, but when one speaks, why, speak so's to be heard.

In Sarah's house, 'twas "aunty this," and "aunty that," until
I saw I made a discord, let me to do my best, 'an still
I'm sure the child loves aunty, but neighbor, she and I
Are far apart and nohow could our ways again draw nigh.

She wears her black silk every day, a trailin' on the ground,
Leastwise, a trailin' on the floor; 'tis called I b'lieve, tea gowned,
An' frills an' lace, an' hot-house flowers, such waste, it worried me,
Rememberin' Jotham Peckham's kin, as poor as poor could be.

Rememberin' Jotham Peckham, I was vexed to see his child
A throwin' money here and there; it made me fairly wild;
Her house, it's just like Barnum's, with jimcracks everywhere,
When pa and me the children took to see the wonders there.

How I run on! Well, thank you, neighbor; I see you want to go;
I'm comin' to Thanksgivin'; your good old ways I know;
An' my mouth waters, dear old friend; there's tears in these dim eyes,
For I shall taste the flavor of mother's pumpkin pies.

And though I'm 'most three score and ten, an' cranky, I'm afraid,
Once more I'll feel myself a child, my mother's little maid;
And I'll be very pleased to help, in any way I can—
Good-by, dear, and my love to Ruth, a kiss to Mary Ann.

—*Margaret E. Sangster in Ladies' Home Journal.*

A Thanksgiving Party.

It was a neat, comfortable kitchen, though wholly lacking in ornament. The floor was as white as soap and sand and willing hands could make it, and was well matched by the angular wooden chairs, which had become almost ghastly from repeated scrubbings.

The brass knobs on the dresser, and even the pendulum of the loud-ticking old clock, shone like burnished gold, reflecting the beams of firelight which brightened the dusky room.

The tea-kettle sang merrily, and Aunt Esther passed to and fro, preparing the evening meal and watching for the return of her husband from the woodlot.

A little girl stood by the western window, trying to read by the fast-fading light. Her delicate face, long, shining curls, and dainty apparel formed a bright contrast to the plain room.

"What are you looking for in the almanac, my child? You'll injure your eyes."

"I'm trying to find when Thanksgiving is, but I can't see any longer."

"You'll be more apt to find it in the last paper, Lucy; but I can tell you; it is a week from next Thursday."

"Oh goody! so soon? We'll have one of those big turkeys, and a jolly time, won't we?"

"I'm afraid not, dear; what put that into your little head?"

"Why, auntie, you told me when I first came that those turkeys were for Thanksgiving. I've thought of it ever since."

"Oh, yes, I did tell you so, Lucy, but I meant that we raise them to sell for Thanksgiving. We haven't kept the day since we were first married; your uncle doesn't care for such things. I missed it sadly at first, for we always kept the holidays when I was a girl at home, but I've got used to it now, after all these years."

"I don't think I could," ventured the child, looking solemnly through the twilight at the turkeys, comfortably settled for the night on the bare limbs of the old apple tree.

"Well, don't shed any tears, yet, Lucy; if you can get Uncle Jerry to consent I'll do my part. Better not speak of it till after supper," she added in a whisper as she heard her husband's footsteps at the door.

So with what patience she could command, Lucy waited till the supper was cleared away and they were gathered around the crackling wood-fire, Aunt Esther with her knitting and Uncle Jerry with his paper.

Lucy was his only sister's child. She was spending several months with him, while her parents traveled in the South, hoping to benefit her mother's health. Two brothers and one sister were at college, and were to spend their Christmas holidays at the farmhouse. This was the first time Lucy had been so long from home, and occasionally she suffered from homesickness; and now, with the fear that the loved holiday was to be slighted, an attack of that dread malady was certainly imminent. She felt her courage ebbing away, and hopelessly she sat very still looking straight into the fire, till all the curling, writhing flames melted into one broad sheet of bright mistiness, and then—there were two big tears on her rosy cheeks.

Uncle Jerry, who, underneath his hard exterior, had a really kind heart, was watching her over his paper, and saw the tears, the sly, quick brush of two little white hands, and a brave effort to keep back a sob which was struggling to escape. "Homesick," he thought; "and no wonder, with two dull old folks like us." And for a moment he wanted to take her in his arms and soothe her as her own father would; but he had so long repressed all tender wave that he could not manifest his sympathy. But something must be done. Rising abruptly, he took a pan from the dresser and started for the cellar, saying: "Esther, hold the light for me. I want some o' them fall apples; they won't keep long."

By the time a share of the fruit had disappeared, Lucy had regained her good spirits, and, with new courage, exclaimed: "Uncle Jerry, can't we have Thanksgiving this year? I'd like to."

"Nonsense, child; what would it amount to?"

"Why, we'd have a jolly time. We always did at home."

"Yes, a big dinner one day and the doctor the next."

"It never made me sick, never in the world."

"But what's the good, anyhow?"

"Mamma thinks it's good, and she's always right. Just last year papa thought we'd better not have a dinner, for mamma wasn't strong, and we were so disappointed—I was, anyway—and mamma put her arm around me and said: 'We'll all help and do the best we can, for we mustn't miss keeping a holiday. When my boys and girls have left home and gone out into the world, I want them to have the remembrance of a happy childhood and a pleasant home to help them over the hard places they will find. It will make them better men and women, I'm sure; so order the turkey, papa.' I remember it all, Uncle Jerry, 'cause I thought mamma was going to cry, her voice trembled so, and I believe I should have cried myself if she hadn't said 'turkey.'"

"She never had many good times to remember," said Uncle Jerry, thinking of their hard orphaned life.

"Perhaps that is why she wanted her children to be always happy," suggested Aunt Esther.

"Yes, she said so once," continued Lucy, picking apple-seeds out of a core; "and I think, Uncle Jerry, if you had some little boys and girls, you'd feel different about it. But I'm your little girl this year; won't you do it for me?" She was almost frightened as she looked up and met his stern, white face.

"It is your bedtime now, Lucy," interrupted her aunt. "We'll think it over till morning." And Lucy was glad to retire to the adjoining room, wondering what she could have said to make Uncle Jerry look so—so dreadful!

An hour later Jerry Winters broke the silence, which was becoming oppressive:

"I suppose we must do something, or the child will be homesick."

"Yes," assented his wife.

"Don't see how I can stop choppin' a day, with that contract on my hands, and Jake and Steve have both begged off for Thanksgiving. I wish there were no such days. I suppose nothing less than a turkey will satisfy that child?"

"No; but we can well afford it. Who is going to have our money after we are gone? We may as well make the child happy, and have a good time once in our lives."

"She might be happy, anyhow. It seems waste to me, I must confess."

"Well, Jerry, we never wasted very much that way; and it strikes me that if we had more holidays, and had made the old farmhouse more congenial to a young, lively spirit, we would have had our son with us in our old age."

"Esther!"

"I know we haven't mentioned him for years, Jeremiah; but for all that, neither of us has lived a day without thinking of him."

"Well, I did my duty by him, if ever a father did by his child."

"We did what we thought was for his bets good; but I fear we made some mistakes."

"He was wild as a young colt; nothing could tame him!" The father spoke impatiently and scowled hard, lest his face might show the love and longing in his heart.

"He was full of life, and fiery, too; and instead of guiding him gently in traces which could not gall, we bound him, as it were, so tightly that he broke the fetters and disappeared. We wanted him to be old and steady, and his young spirit could not be subdued. I see it all now. There were no companions for him, no 'jolly times,' as Lucy says, and nothing about the old farm worth staying for."

No answer, but a smothered groan.

"There, Jerry, I ain't blaming you more than I do myself. We were wrong, and the boy was wrong, too. If we only knew where to find him, we might make it all right before we die. I'll warrant he has longed to return, but pride and fear have kept him back. He can't know how we long for him, for he never knew how much we loved him!"

"O Esther!"

"Well, father, I won't say any more. All these thoughts have been crowded down in my heart so long that I had to speak, and I think it'll do us good, after all."

She drew nearer and laid her head on his shoulder, while tears rolled down her wrinkled cheeks, and thus they sat far into the night.

The next day, among the families of the neighboring farmhouses, there was but one topic of conversation—the invitation to spending Thanksgiving with Jeremiah Winters.

The eventful day came at last. Lucy, with a dozen girls and boys, made the rafters ring with their glad shouts. Down-stairs, the best room was filled with the hum of elderly voices recounting "old times," while in the sitting-room the young people were eating apples and counting the seeds, with much zest and laughter, sly glances and blushes.

In the kitchen a long table was loaded with good things, while Aunt Esther, with plenty of help, was completing the preparations for dinner.

Uncle Jerry excitedly went from room to room, trying to appear as if this sort of thing was of common occurrence in his house. For the first time in her life, his wife had asserted her right to entertain her friends, and now he felt glad that she had persevered. He was surprised to find what pleasant neighbors he had.

It was night, and the merry-making was at its hight. The walls echoed laughter and song, and from every window lights gleamed far out into the darkness.

From the village depot, five miles away, a traveler was walking over the lonely road as if eager to join the joyous party; but when at length he came in sight of the many lights, he stopped in amazement. Nearer and nearer he came, till through the unshaded windows he saw the friendly scene within. With a glad smile on his face he turned away, and standing in the deep shadow of a pine, he watched long and patiently.

At last, after a host of thanks and pleasant "farewells," all was still, and only three sat in the deserted rooms.

A hush fell over them, and they looked thoughtfully into the flickering fire. Lucy, climbing on her uncle's knee, thanked him so prettily for the day's pleasure that he bent and kissed her. Then, holding out his hand to his wife, he said: "This little lady has thanked me, but we both ought to thank you. It has been a pleasant day to me."

This was a great deal for this man to say; and they were silent again, but each one happy through making others glad.

Then the door opened, and a stranger entered. He was tall and heavily bearded; but a mother's eyes will know her own, and with a cry which expressed the yearning of years, "My boy!" she was folded in his strong embrace, while about them both were clasped the father's trembling arms. No one knew how long they sat together—the long separated family once more united. Lucy, with wide-open eyes, enjoyed to the utmost this crowning excitement, much pleased with the tall cousin whom she had never seen.

"O John, why did you stay away so long?" ventured the mother.

"I came back once, five years ago, and saw you and father through the window. But, knowing I deserved no welcome, I feared to enter. To-night I should have entered at all events; but when I saw you with your friends about you, and, later, sitting here with clasped hands, I felt sure of a welcome—sure that you had forgiven the past and felt only pity for your wayward son. Now I mean to cancel the suffering of the past by making the future happy."

"Now, Uncle Jerry, I told you so! Thanksgiving can amount to a great deal sometimes!" and the merry laugh which followed was not less hearty because it broke through tears of joy.

HOUSEKEEPERS are aware that boiling water will remove most fruit stains, but should your little daughter stain her best white dress with peaches, rub out in clear, cold water before sending to the laundry.

Thanksgiving Day.

No other day means quite as much to dwellers in New England as Thanksgiving Day, which is now distant but a short time and for which invitations are already sent, and preparations for departure and for reception are being busily made.

Yet while to all it is a day set apart, to each it has a special meaning. In the struggling time with the early settlers, when the few last kernels of corn intrusted to the ground with prayers and fasting had yielded a goodly harvest, the little band of faithful men and women chose the day for glad, heartfelt rejoicing. It was to none of them a mere form, a simple custom to be observed. It was a genuine time of thanks to the "Giver of every good and perfect gift," but with the changing years it has come to be a day observed from custom and as such has a different meaning to each.

To those who still honor the memory of the fathers it means a holy, quiet day, a day to be spent in devotion and glad sacred reunion. To the busy toiler it means a day's holiday, a time for a little unusual fun, a little extra sight-seeing or travel. To the absent it means home, and to the child it means a large piece of turkey or something nice to eat, and so on indefinitely as far as age and circumstances present varying conditions.

Alas! to some it means a day of sacred memories, when childish laughter ringing recalls the merry voice that brightened all a year ago, and "sings among the angels now"—memories of years when the home-coming meant welcome from dear old lips, sealed today in unbroken silence; and when across the ample board one now looks in vain to catch the glad greeting from the sympathetic, loving face, never failing in response through all the years, and finds the eyes tear-filled, as the veil falls between and shuts out that face from mortal view, then the memories crowd most thickly. To these whose home circle has been invaded, the present occasion is a sad one, and turning from it memory becomes a sweet companion as back through the years they walk together, and remembering many a glad and happy festival in those other times, the thankfulness fills the heart that so much happiness was given so that there now remains so much to remember.

Dear old day! Whatever may be the cause for personal sorrow, it must be put aside for the day so that the shadow may not rest on the otherwise merry circle. The day should be made glad for the sake of those who always rejoiced so truly in its merriment. We should count them in with the reunited that gather around the family table and add to the share that is ours, the responsibility of making the occasion as merry as the ones missed would have done if present in person. Let there be no vacant chairs. Seek out some one so far removed by distance and circumstances that he cannot join in his family party. It may be hard to welcome a seeming intruder upon a genuine home day, but once done, the happiness resulting will be ample return.

Those who are still given the old homestead to go back to and whose circle of loved ones is larger and not less than a year ago, have cause for rejoicing. These should allow nothing to hinder the home-coming, and rejoice with fullest thankfulness that health and friends are theirs, letting their measure of blessing overflow so that those less prosperous may share their bounty.

But broader than the home thanksgiving is that of our great and glorious country, and in this all may join. All may rejoice that peace is still our guest, and for so long a time she has blessed our country. Rejoice that the crops of America have been so bountiful as to feed not ourselves alone but the hungry of other nations. Rejoice that industry has favored the many with her blessings and that this year is nearer than all that have gone to the grand Thanksgiving Day when universal kinship shall be acknowledged, and the great brotherhood of man shall unite in thanksgiving for prosperity which no longer causeth one to be poor while it maketh another rich, or one weak while another is strengthened, but which stands for universal peace and plenty, and hence gives it real cause for universal thanksgiving.—*Mass. Ploughman.*

Chaff.

DON'T argue with a fool, or the listeners will say there is a pair of you.

A CROSS old bachelor of our acquaintance defines marriage as the medicine which restores sight to lovers' eyes.

CASTLES in the air do not bring in any rent.

THE great art of keeping friends is to keep them in expectancy.

VARIETY is the spice of life, but steady plodding is its beef and bread.

WHY SHE WEPT.—Friend: You have only been married a week and here I find you in tears. Young Wife: Yes, but my husband has been running for office and I have been reading in the papers what an unmitigated scoundrel he is.

PHILOSOPHER—What induces the men to marry? Cynic—The girls do.

ELECTION is like a Christmas stocking. You never know what's in it, and it's full of surprises.

YOUNG FOLKS' COLUMN.

The Thanksgiving Turkey.

One of the parish sent one morn—
A farmer kind and able—
A nice fat turkey, raised on corn,
To grace the pastor's table.

The farmer's lad went with the fowl,
And thus addressed the pastor:
"Dear me, if I ain't tired! Here is
A gobbler from my master."

The pastor said: "Thou shouldst not thus
Present the fowl to me;
Come take my chair and for me act,
And I will act for thee."

The preacher's chair received the boy,
The fowl the pastor took—
Went out with it and then came in
With pleasant smile and look,

And to his young pro tem. he said:
"Dear sir, my honored master
Presents this turkey and his best
Respects to you, his pastor."

"Good!" said the boy; "your master is
A gentleman and scholar!
My thanks to him, and for yourself
Here is a half a dollar!"

The pastor felt around his mouth
A most peculiar twitching;
And to the gobbler holding fast,
He "bolted" for the kitchen.

He gave the turkey to the cook,
And came back in a minute,
Then took the youngster's hand and left
A half a dollar in it.

Thanksgiving in the Canyon.

[Written for the RURAL PRESS by ADAH FAIRBANKS BATELLE.]

"How much farther, Edward?"

"I've no idea, but we have not gone far."

"It's such a dreadful road, Edward, that I am afraid."

"I was wild to start from Mesmer's with rain in prospect. How it beats!"

The woman shivered under her heavy wraps.

"Are you cold?" asked her husband as he rearranged the robes.

"No. I was pitying you and myself."

"Anybody who is out in the rain deserves pity."

"I had forgotten the rain; it is nothing to our rain of ill fortune."

"It never rains, but it pours; so what can you expect?" asked her husband.

"It has poured for two years," she answered bitterly. "First that bank stock goes down to next to nothing, then Tom brings home his college debts. Even Sister Kate, who might marry Howard Worth and have a beautiful home of her own, must go off to the backwoods to teach school."

"Don't catalogue your troubles—it only makes them worse," he interposed; yet evidently he was ready to heap up a mountain of miseries, for after a few minutes he spoke:

"And last and worst of all, these mines are to shut up after we have put thousands of dollars worth of machinery into them. Didn't things look forsaken around the old diggings? Well, the atmosphere is azure."

Mrs. Reddick took on an injured air.

"I can't bear to hear you joke about such misfortunes. Why don't you say you feel blue?"

"Blue is azure, isn't it?"

"You have reason to, I am sure," went on Mrs. Reddick, appearing not to notice the meek question. "We are not the groaning kind, but we are perfectly excusable for not talking about the bright side and pretending to be happy when we are not. I have no patience with hypocrisy. If I am perfectly miserable, I shall say so."

"Are not you glad that there is no moralizing friend here to remind you how much worse off some people are?" asked Mr. Reddick good-humoredly.

"Indeed I am; that is the *lamest* saying. How much does it help my trouble to know that somebody else has worse? Of course some have worse trouble, but maybe they are not so sensitive as I am."

Wrapped in her sensitive nature, Mrs. Reddick shut out all pity for the rest of humanity.

Mr. Reddick shook the rain from his beard as he remarked:

"I don't object to the bright-side argument so long as I am not exhorted to be thankful for the things that I don't want."

"And for the things you can't get rid of," suggested his wife.

"Yes, it's all right for the money-kings to keep Thanksgiving Day, and poor folks are welcome to, if they want to be thankful for one square meal in the year. It's we middle-rich folks that don't need to be so thankful as to spend a whole day talking about it. You women have more time than you know what to do with, but *we* are too busy."

"It's a lack not of time but of inclination with us," remarked his wife, languidly. "Oh, it is a very pretty Puritan custom," she went on; "quite pastoral, the idea of gathering in one's harvest and returning thanks to God for the yield, but we have outgrown it."

She shivered as she spoke.

"Jessica, you are cold. How slow this horse goes!"

"Can't we stop somewhere?"

"I would not refuse if there was a place to stop."

"Is not there even a cabin on the road?"

"There was none when I came this way last June."

They rode on in silence. The rain beat the red dirt from the hillside down across the sidling road. On the bank above, trees and bushes were bending in the storm, and below them foamed a yellow stream where had been none the day before.

Suddenly Mr. Reddick half turned in the buggy to look at something just passed. With the movement of the lines the horse stopped and seemed loath to go on.

"Some prospectors have been at work here," he exclaimed. "Perhaps there is a shanty near, where we can find shelter."

He drove on slowly for a short distance; then they spied a small cabin in a canyon back from the road. The prospect of a shelter raised Mr. Reddick's spirits.

"It's a rough Thanksgiving Day," he said; "but we have something to be thankful for."

"Perhaps not, for it may be a stage robber's den," suggested Mrs. Reddick, dubiously.

"Uncle Sam's agents don't build houses by the roadside," laughed her husband. "I don't care much who it is, so we can get out of the rain."

The cabin was small and was built partly of old and partly of new boards. It stood alone, protected by the side of the canyon and by a live-oak tree.

When, in response to a knock, the door was opened, the occupants of the buggy saw a welcome sight. It was not the faces of two wide-eyed children, nor the glow of heat from the rusty stove, so much as a long table covered with a white cloth and set with covered dishes and steaming plates of food.

"Have you a place where I can put this horse, my boy?" asked Mr. Reddick after lifting his wife to the doorstep.

"Would he like a barn? We hain't got it; but you kin put him in the woodshed if he ain't 'fraid of k'yote skins."

When the horse, too wet and cold to be frightened at the coyote skins, was housed in the "lean-to" with the wood, Mr. Reddick entered the cabin to find the little girl placing a last dish on the table. Mrs. Reddick, with her wet wraps removed, was quite herself again, and was talking to the two children.

Like wild animals that have never seen man, the boy and girl showed no signs of awe. They accepted these unexpected visitors as if they had been invited guests.

"Ah, you are keeping Thanksgiving Day. That's pleasant," said Mr. Reddick, glancing at the table.

"We'll be glad to have you uns eat Thanksgiving with us," said the young host ceremoniously and with something like cordiality in his tone.

"This is a long table for two of you," said Mr. Reddick as they sat down to the table. "Are you expecting the rest of the family home to dinner?"

"There ain't no rest, except paw," replied the boy gravely as he passed a well-filled plate to Mrs. Reddick. The plate contained a piece of bacon, not fried but roasted in slices, mashed potato and saleratus biscuit.

"You are a good cook," said Mrs. Reddick, critically nibbling a bit of bacon. She did not know just what to say to these children—they seemed so dignified, so self-possessed.

There was a long pause. The little boy—he was evidently less than twelve years old—leaned over to toss a biscuit to a dog.

"Paw took most of the dogs with him," said he.

Two—a sleek spaniel and a long, lank, fierce-looking yellow dog—lay on the floor. They occupied so much space that Mr. Reddick wondered where "the most" of the dogs staid when at home.

"When will your father come back?"

"To-morrow."

The answer was given so shortly that Mr. Reddick began to wonder if the father's name could be an unpleasant theme, when the little girl lifted her large black eyes with a confiding expression. "Let's tell about it, Ab," she said, and Ab explained:

"We are havin' a Thanksgiving dinner because paw can't get home."

Mr. Reddick thought it must be that he misunderstood the boy, and said: "It's too bad that your pa can't get home. Where——"

"No, 'tain't too bad," interrupted Ab. "He went down to Pocher's yes'day, and if he come back to-day he'd be drunk. This rain's a keepin' him. He'll come to-morrow mornin', prob'ly all sobered off."

Through Mrs. Reddick's mind flashed the question: Could their children ever, under any circumstances, feel toward a parent as these children felt?

Mr. Reddick dared not look at his wife. He bit his biscuit and tried not to look amused. He was less amused than shocked, for this idea of Thanksgiving was a painful contrast to his boyhood remembrance of the day. The service in the village meeting-house, the happy faces round the dinner-table, and the twilight talk with father and mother after the guests had gone, all came back to him; and these children—what were they thankful for? Thankful that their father could not get home!

Mr. Reddick was not accustomed to giving moral instruction, but he began:

"Don't you know what Thanksgiving means?"

"Oh yes," said the little girl. "Miss Dovey told us how about them people that was so awful glad when they come to that cold country on the rock, and how they—or else the Lord, I forget which—said everybody must thank God for——"

"'T'wan't the Lord, it was the people themselves," interrupted the boy; and he went on as if his turn in a recitation had come. "They said people must thank God for giving them homes an' food an' such things, and Miss Dovey said we could give thanks for whatever we was gladdest for, and we was gladdest for paw's not bein' here, 'oos we couldn't have any Thanksgiving dinner if he was."

"Don't you love your father?"

Mrs. Reddick smiled at Mr. Reddick's severe tone.

"Yes, we do, and we would like to have him here if he'd be good like the fathers Miss Dovey used to read us about."

"Did not Miss Dovey tell you to love your father?"

"Oh yes, and then she used to kind of make you feel like a lovin' everybody."

"When paw felt good onct," explained the little girl, "he told me about a Thanksgiving that he ate, and they was lots of big covered dishes full of good grub; so we have the covered dishes and play they are full."

This explained why the tureens had not been uncovered during the meal.

"This here dish"—and she touched the largest—"is broke; but it don't show less'n you look inside. Now let's have dessert," said the host impressively, and the girl passed a dish of apples cut in slices and sprinkled with ground cloves.

When the dinner had been warmly praised by the wayfarers, and all had left the table, Mrs. Reddick turned to Ab and asked, "Who *is* Miss Dovey?"

"Why, she was our teacher last year, and we went to her school. My! didn't we have good times! She was so good and teached us so much, and she loved us and got us not to say bad words, and to be good to everybody."

Great tears were rolling down the little girl's face, and Ab stopped to say, soothingly, "You needn't feel bad 'cause we can't go to her school now."

The child's frame quivered with sobs.

"It—it ain't because she's gone; it's be—because if we'd been thinking of Miss Dovey we would of known better than to be thanksgiving—ing about paw; an' he is all the paw I have got, and I do love him. Oh, I want Miss Dovey!"

Every woman, whether or not she likes children, has a certain instinct of motherliness; and with one glance at the pathetic little face, Mrs. Reddick caught up the little girl and held her close, then petted her till the tears were dried.

Sitting on the lap of her new friend, the little girl talked freely of her teacher, while Ab closed her praises with the declaration, "Nobody could not be bad that knowed Miss Dovey."

It was plain that the year in school had been the brightest spot in their bare, somber little lives.

"Where did you go to Miss Dovey's school?" asked Mr. Reddick, and Ab replied:

"It was down to Bentley's Mills, where paw worked last year, 'fore we come here."

"I've got her picture," said the little girl, going to a small box. She took from it a photograph.

As she passed, to hand it to Mrs. Reddick, Mr. Reddick exclaimed, "Kate Duval!"

On the reverse of the card was written: "To my little friends, with love. Kate Duval."

"Well, Kate is a missionary," said Mr. Reddick.

His wife wiped her eyes. "Dear Kate," she said softly, then she glanced up. "Shall I tell them?"

He nodded, and Mrs. Reddick told them first that she knew their "Miss Dovey" and loved her, too; that "Miss Dovey" visited them often—"because she is my sister," she ended simply.

Ab's big eyes were grave with wonder. "Sis," he said, "this is Thanksgiving enough for one year, isn't it?"

His sister smiled. "Tell her—tell Miss Dovey," she said, "that we love her and always will, and we will do like she told us."

"I wish I had a present to send her," said Ab. "Do you 'spose she would like a k'yote skin?"

Mr. Reddick smiled. He could not help it.

"May I write Miss Dovey a letter?" asked the little maid, slipping off Mrs. Reddick's lap. "She used to have us copy one out'en the reader. It said, 'Dear mother, I love you—Frank;' but I could say it different if I had a pencil."

Mr. Reddick produced a pencil, and the child went to work.

Just then Ab came in, bringing not a "k'yote" skin, but three soft bits of fur of a beautiful silver-gray color.

"How lovely; what is it?" asked Mrs. Reddick.

"Moleskins," replied her husband and Ab with one voice.

"Will you give 'em to her? Tell her I didn't let 'em suffer when I caught 'em. She didn't like us to hurt things."

A gleam, not of sunshine, but of light through the gray dullness, shone in at the small window. If it had been a sunbeam, it had lost its brightness in its long journey through the gloomy atmosphere.

"We can go, Jessica, at any time," said Mr. Reddick. "If we start now, we can reach a stopping-place before dark."

So, with the moleskins and the letter of seven words wrapped carefully together, Mr. and Mrs. Reddick prepared to go.

Mrs. Reddick seemed to have lost a certain stiffness from her manner that rainy day, just in the way that some goods lose their starchiness and show the fineness of the fabric all the better for the loss. The children hung about her with an affectionate freedom as if she were their own Miss Dovey. Perhaps she tried to be all she could to them, thinking of their lonely lives and of the loving care lavished on her own children, Miss Duval's nieces and nephew.

Mr. Reddick bade good-by with warm thanks. If he gave them special cause to remember him, he is not the one to tell of that.

"Edward, we have kept Thanksgiving Day," remarked Mrs. Reddick when they were well on their road.

"With small credit to ourselves," replied her husband unsympathetically.

"Let us give those children something to be thankful for," she pursued.

"When you yourself have no reason to be thankful?" quizzically.

"Be quiet; I have. I am thankful we found them."

"And that they had dinner ready?"

"No, but that you are not like their father, even if you won't agree with me."

"I do agree with you. Send the little fellows anything you please, and I will pay the bills."

"And be thankful to do it?"

"Yes, since it is the order of the day."

"And Edward, let us keep a real Thanksgiving Day next year."

"And be a thanksgiving family forever after."

"Be a *giving* family henceforth, giving thanks to God and giving help to people who need it."

Sutter City, Cal.

DOMESTIC ECONOMY.

For Keeping and Carrying Food Hot.

To keep and carry food hot, some newly invented tanks are in use in Boston, where a cooked-food supply company does a thriving business. The tank is made with two jackets, the inner one of glass and the outer one of tinned iron, the space between them being filled with a non-conducting substance chemically prepared. This retains the heat so perfectly that the outside of the vessel loaded with coffee at 212° feels cold to the hand. So perfect is the insulation of the tanks said to be that the only heat which escapes at all gets out around the stopper at the top, where it is not possible to have an inclosed space separating the liquid from the outer atmosphere. If it were not for the slight radiation at the stopper the liquid might be kept hot for a year. Such tanks, loaded in Boston with coffee at boiling point, are said to have actually reached Omaha, 1500 miles distant, with their contents too hot for comfortable drinking. After all, these insulated coffee-pots do but represent the application of a device familiar centuries ago to the fishermen of South Normandy and the Brittany Coast. It has been for an indefinite period the custom there for those toilers of the sea to start out with their nets in the afternoon, carrying with them a warm meal for the day following. The pot containing the stew or heated delicacy is wrapped in a mattress stuffed with feathers, or inclosed in a box with feather-lined cushions, and after 15 hours the dinner is spread as hot as if it had just come off the fire, not more than three or four degrees being lost, at all events. This same idea was carried out by a man who made a little feather-stuffed box and put his newly boiled shaving water into it just before he went to bed every night. In the morning, when he got up early, and shaving water would not have been easy to get off-hand, he opened the box and took out the water, still scalding hot.—*Washington Star.*

GRAHAM BREAD.—Three-fourths pint of milk, lard of the size of an egg, an even teaspoonful of salt, one-third cup of yeast, one-half cup sugar (or part molasses). Stir in enough graham flour so that it will not run or be watery after standing. Put in a well-greased tin, let it rise even with the top, and bake in a slow oven 1½ or 2 hours.

HOME CAKE.—To 1½ cups sugar, one-half cup butter and one-half cup sweet milk, add two heaping spoons baking powder, or one even spoon soda to two of cream tartar. Use three eggs, beating yelks and whites separately, and 2½ cups of flour. Grate yellow rind of lemon and use juice also. Fruit may be added if wished.

SHINGLES.—One-half cup butter, 1½ cups sugar, one-half teaspoon soda in one-half cup hot water. Use flour enough to make them very stiff, and roll them on sheet tins. If preferred, use two-thirds graham flour and cut for cookies.

GINGER CAKES.—One cup butter, two cups molasses, a tablespoon of ginger, a handful of flour. Heat one cup of sweet milk in which is two teaspoonfuls of soda. Pour on. Stir well, add flour, and cut.

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SAN FRANCISCO:

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Nursery Stock—John S. Calkins, Armona.
Business College—J. A. Chestnutwood, Santa Cruz.
Seeds—E. J. Bowen.
Olive Trees—Geo. H. Kunz, Sacramento.
Trees—A. F. Carter, University P. O.
Poultry—E. F. Musson, San Leandro.
Olive Trees—Mrs. C. W. Crane, Oakland.
Wire and Picket Fence—Judson Manufacturing Co.
Stump Puller—Geo. Harvey.
Hereford Cattle—C. L. Taylor.
Real Estate—W. L. Gleason & Co.
Real Estate—William Cross & Co.
Seeds—Trumbull, Strean & Allen Seed Co., Kansas City, Mo.

See Advertising Columns.

The Week.

It is the week before Thanksgiving, and we trust in all the RURAL households preparations are progressing for enjoyment of the happy occasion. It is true, perhaps, that the disposition to give thanks will be hightened if the thirsty earth gets a good draught of refreshing water before the pleasant last Thursday of November arrives, but there is no reason to let forebodings and misgivings prevent the enjoyment of Thanksgiving. It has been a year of general prosperity and progress in California. In some respects we have prospered as none could dare to hope, and experience agrees that a rainy season beginning rather late and favoring continuous growth thereafter is better than early rains with a long interval between them and the regular winter wetting.

We urge, then, all RURAL readers to give thanks. Probably no one can fail to find some occasion for the uprising of the thankful spirit. If any think he cannot, let him read the Thanksgiving story in our Young Folks' Column this week. It preaches a Thanksgiving sermon as touching as it is truthful and inspiring. The oldest child among us can profit by its lessons.

Does It Pay in the End?

It has ever been a question with casuists whether or not wealth wrongly acquired is worth what it costs. Some people think it is. Very many in fact hold that opinion, and acting accordingly, hurry off and without much regard to the means employed, "make haste to be rich." And yet there lives not a sentient being but recognizes in his inner consciousness that this doctrine is dangerously and atrociously wrong.

We took occasion not long since to comment in a mild way on some of the methods made use of by the non-producing guilds to rake in the little money dabs of the laboring classes. Alluding to that modest effort, an interior journal observes that, while these methods are objectionable in a moral point of view, they are after all simply business, not running counter to the usages that largely obtain in most commercial and trade circles. Perhaps so. Certain it is, they do not much run counter to the usages that obtain with the bunco steerer and the burglar, which crafts regard also their vocations as simple business.

It is not a hopeful sign when the public conscience can tolerate or the public journalist write with complacence about things like these. Excuse them as we may, we have an idea that the man who makes his money through recourse to these sharp and cruel practices is weaving into the web of his existence colors that will not "run;" they will prove fast enough—so fast that they cannot be washed out with any detergent soap. It may even be doubted if blood would wholly erase them. We hold that it is a perilous thing to do a wrong that cannot be repaired. This, if any, must be the unpardonable sin. And how shall the man who robs indiscriminately, who reaches out and gathers in the pittance of the poor, ever be able to make restitution, however much he may desire to do so? This can never be done. The wretch may endow colleges and churches, set aside millions for the payment of post-mortem prayers and masses; yet what can these avail, the victims of his inhumanity remaining impoverished and ruined? He may reach out and seek to rescue them, but he will find when it is too late that they have drifted away beyond his reach, and unless there shall be found in the resources of Divine wisdom some way in which these men can, in the hereafter, be enabled to make amends for the wrongs they have done, the hard old doctrine of eternal damnation will be likely to prove true enough.

The daily press having recently informed the public that a couple of convicts had made their escape from San Quentin, goes on to say there are now two violators of the law at large. It would be pleasant to believe there are only two!

Let it not be said we are sermonizing overmuch. We are simply dealing with well-known facts—performing a duty which we cannot consistently ignore.

The Wheat Situation.

The wheat market has kept pace with the decline in the price of silver until the market is lower than at any time this season. Outside of the lower prices for silver and its unfavorable influence on wheat, there is no good cause for the depression. The statistical position of the cereal the world over is favorable to holders, for there is a shortage in the supply. Outside of this, there is every encouragement in California for expecting better prices. The visible supply or stock in the State is less than at this time in 1889, while the summer-fallowed land is claimed by well-informed persons to be less than for years. The long-continued rains last winter prevented plowing, and when the rains finally stopped the land in the summer-fallow sections dried so quickly that very little could be plowed, and since then we have not had enough moisture to admit of plowing. Experienced farmers are outspoken in their belief that, even under favorable circumstances, it will be impossible to prepare and seed much more land than the usual spring acreage. Besides the above, a very large acreage has been diverted from wheat to fruit, and it is not at all likely that enough new land will be added to offset this diversion. With a smaller stock and a lessened acreage in this State, the situation ought to be in favor of the wheat interest.

The Money Panic and Its Lesson.

The past week the money centers of the world have been rocked in the throes of a stock panic that has not had a parallel for nearly two decades. The panic has been sweeping in its effect, affecting to a greater or less extent every industry. It carried in its wake the fortunes of many thousand persons, besides tottering to their very verge many moneyed institutions whose previous financial standing was firmly set in the confidence of all classes. One of these, Baring Bros. of London, England, after weathering the blast of many financial storms, was made the past week to bend in submission to the irrevocable, and had not assistance been rendered by leading banks in Europe, their failure would have followed. Such a calamity would have drawn many more into the abyss. As an example of the effect of the panic, it is authoritatively stated that the shrinkage in the value of securities held by Baring Bros. within a few short hours was over $50,000,000.

Conservative and well-informed readers of the signs of the times have looked with discredit upon the situation abroad, and held to the opinion that it could only be a question of time when a reversal had to set in which would financially swamp all who had not prepared for the worst. Speculation, particularly in England, has been rampant. Any scheme placed before the public with glittering generalities was easily floated. Trusts, syndicates, and all conceivable schemes were hatched by designing persons, and made attractive by pointing to fictitious profits. Speculation was not confined alone to private enterprises, for several countries, seeing a rare opportunity to float bonds and other securities, placed large quantities at such attractive prices that they were readily absorbed. It was the carrying of these securities that caught the old conservative house of Baring Bros.

While the many lost fortunes are to be deeply deplored, yet they leave a lesson that is easily mastered, viz.: There is not enough metallic currency in the civilized countries to safely conduct the large and constantly growing international commerce of the world. Of course the above assertion refers to mono-metallic currency. There can be no longer the question of a doubt but the stand taken by farmers, as expressed individually and through their organization, in favor of bimetallism, is thoroughly correct. The scarcity of money, based on a gold standard, has proven a magnet to draw high rates of interest to the moneyed few, besides allowing large unscrupulous speculators to successfully run corners and deals to the detriment of legitimate business and financial loss of the many engaged in farming or other industries.

It is to be hoped that at the next session of Congress the lesson of the times will be heeded and the free coinage of silver become a law. This country is rich enough in all the elements that go to constitute a leading nation to take the lead in favor of bimetallism and let other countries follow, which they will do, convinced by our prosperity that it is to their best interest.

HEAVY SHIPMENTS OF FRUIT.—There is nothing more convincing than figures, and therefore last month's shipment of California fruit by overland railroad should be convincing evidence of this industry growing in public favor. There were shipped 4986 tons of raisins, 6296 tons of dried fruit, 8983 tons of canned fruit and 5800 tons of deciduous fruit. The total shipments aggregate 21,079 tons for the month of November, requiring 2107 cars to take the fruit to its destination. Besides the above, there were shipped 3793 tons of wine, requiring 379 cars to move it. Notwithstanding the above heavy shipments, the cry comes from the East for more fruit. Already contracts for the incoming orange crop are said to be made, and at good prices. This is being done in the face of well-informed parties claiming that this year's orange crop will be the largest in California's history.

YOLO COUNTY COTTON.—The past week we had the pleasure of a call from Mrs. W. B. Reed of Winters, Yolo county, who kindly brought a sample of cotton grown by her husband from seeds furnished by this paper. The seed was planted late, owing to the difficulty of preparing the land after such an unusually wet winter. For late-planted and grown without irrigation, the cotton looks exceedingly well, and goes far to prove that under favorable circumstances, cotton-growing in the vicinity of Winters can be made a success.

An Installment of Our Debt to Australia.

We are glad to see by the last issue of *Insect Life*, the Government publication on entomology, that California has paid the first installment of her debt to Australia for the contribution of the *Vedalia*, the ladybird which has routed the cottony cushion scale in California. Prof. C. V. Riley, U. S. Entomologist, writes the following interesting note:

Some time since we instructed our California agent, Mr. Koebele, to collect and forward a number of living specimens of a common *Raphidia* which he had found to destroy the larva and pupa of the codlin moth in California, to Mr. Wight in New Zealand, as a partial return for Mr. Wight's kindness to Mr. Koebele when he was in New Zealand in the spring of 1889 collecting the insect enemies of the fluted scale. Recent letters from Mr. Wight and an article in the June number of the *New Zealand Farmer* inform us that the shipment arrived in fairly good condition, although it was opened for examination and held for ten days at the custom-house. Twenty-one specimens were sent, each one in a small box with moss, and the whole inclosed in a strong wooden box. Mr. Wight found pupæ in 16 of the boxes and a larva in one, while three were empty, probably owing to the custom-house examination. The single larva was hungry and very attenuated and it at once attacked and devoured a codlin-moth larva twice its own size. It was so stretched out and distended that at first, not discovering the absence of the codlin-moth larva, Mr. Wight thought it was entering the pupa state; but it presently resumed its usual appearance and finished several more larvæ.

We shall look forward to the result of this importation with great interest. The genus Raphidia is represented in this country only upon the Pacific Coast, and it is not at all likely that it will flourish East. We shall attempt, however, the introduction of this ravenous creature into some of our Eastern apple orchards.

Irrigation with Small Furrows.

[Written for the RURAL PRESS by A. K. J.]

I write for the benefit of new-comers—for those who are growing orchards and nurseries on sloping and uneven ground. Many suppose they have accomplished the desired end if they irrigate often enough with a copious flood of water. It is not frequency or volume of stream that does the work always. Many kinds of soil require time to get the water down deep about the roots. If the water does not go down it promotes the growth of a mass of surface roots to the detriment of the growth of the deeper roots upon which the tree should mainly depend. A tree with such a surface growth of roots will always require frequent watering, is always liable to be blown over, and will be short-lived, and in most varieties will be a shy and uncertain bearer.

In many soils it is best not to let the water come up to the tree, but to hold it off to such distance as can be stirred by the cultivator. If the soil is not stirred the ground hardens about the tree and retards its growth. A system of collar roots is apt to result, which is an injury.

The best method on sloping land is to plow your furrows with the slope of your land, if it is not too steep—about 15 to 20 inches from the tree on each side; when your trees grow larger, make two furrows each side. If the lateral action of the water is imperfect or very slow, cut little trenches with your shovel above and below the tree to let the water in.

I am writing for those soils where the water penetrates slowly and with difficulty. Divide your water into such sized streams as will require all day to run 40 rods. Take little bunches of grass or weeds, if not in seed, or eucalyptus or hedge trimmings, or anything that will partially obstruct the water, lay them in the entrance of your furrows, and with a little care you can manage 30 to 50 streams so that they will all get across within a few minutes of each other. The success of irrigation in such soils depends on getting the water deep down about the roots. This method is much better both as to labor and success than making pits about the trees.

San Fernando, Cal.

CHICAGO has packed 2,500,000 hogs since March 1. Kansas City is second in the United States with half that figure.

FLORIST AND GARDENER.

A California Rhododendron.

The beautiful flowering shrub called the *Rhododendron Occidentale* covers the hillsides of the Sierras at from 3000 to 6000 feet altitude with its masses of beautiful, showy, fragrant flowers during a large part of the months of June and July. Its leaves are deciduous. It attains a hight of a dozen feet. In its magnificent display of flowers it surpasses the finest oleanders in beauty and profusion. The artist in the accompanying cut has shown perfectly the form of flowers and leaves. The flowers are from two to three inches in diameter and are borne in masses of hundreds that completely cover the bushes for weeks during the time of flowering. The bush is of easy cultivation and deserves a place in every home that makes any pretension to floral ornamentation. Like the oleander, it is poisonous if eaten by children or animals. But no bad effects ever result from handling it or using the flowers for bouquets.

The common name "laurel" is given both to this and its near relative, the evergreen *Rhododendron Californicum*, which is also well worthy of cultivation. In my visit to Yosemite last summer, I met many collectors of flowers, those who made it a business to collect and press flowers for sale to tourists. Much to my regret I found them selling this rhododendron under the incorrect name "azalea." The line of demarkation between the species rhododendron and azalea is well defined. Such as wish to investigate this matter will find this flower correctly classed and described on page 458, Vol. 1, Geological Survey of California.

California has the grandest flora in the world, and Fresno county, extending as it does from the frigid high Sierras to the marshes of Fish slough nearly down to sea level, with a flora peculiar to each intervening locality, has a more diversified flora than any other part of California. Why cannot our public-school children make a Fresno county collection of flowers and plants for the World's Fair? Let each teacher press and preserve the finest specimens gathered. Give common and botanic name of each flower, and also give name of pupil and school presenting it. Let our Board of Education offer a prize to the district furnishing the best collection. Let every child in the county understand that he can thus contribute something distinctive, valuable and beautiful to the World's Fair, and that every child contributing will receive due credit, and after the fair present the collection to some high-grade educational institution of our country. Should this suggestion meet with favor, I will give directions through the columns of the *Republican* how to press and preserve the flowers collected; and I will also aid all teachers to give the correct botanic name to such flowers as they are unable to name.

I consider it a shame that the beautiful, rich, varied, distinctive and unique flora of our State was ignored in the preparation of our State series of school readers. Our native flowers should have been illustrated in our readers and should have formed the basis of a number of descriptive articles that would gladly have been contributed by competent scientists of our State. This would have popularized and given direction to the study of our native plants, and helped to give them recognition for their beauty, economic or medicinal uses.—*W. A. Sanders in Fresno Republican.*

[Prof. Sanders' suggestion for the schools of his county is of course applicable to the schools of all counties and should be carefully considered.—EDS. PRESS.]

Southern California Floral Society Exhibition.

[Written for the RURAL PRESS by CLARA S. BROWN.]

It is only three months since the Southern California Floral Society was organized by a few energetic people who realized the possibilities of flower culture in the climate of this section, and aimed to inculcate in the public mind a love of the beautiful in vegetation.

The idea was well received both by professional and amateur florists, and every encouragement was given the society. It now has over 150 members, and invites all earnest flower-growers in the six southern counties to co-operate with it, not wishing the association to be a purely local one. Meetings are held bi-monthly in the Chamber of Commerce rooms at Los Angeles, when essays are read and discussions held that cannot fail to be of value to the florist.



RHODODENDRON OCCIDENTALE.

The first annual exhibition of the society is now taking place at Hazard's pavilion, and is a wonderfully creditable display. Nothing has been received from Orange, San Diego, San Bernardino, Ventura or Santa Barbara counties (it takes time to create a general interest in new movements); yet the exhibit is one of the finest in the floral line that has ever been made in Los Angeles. mounting to over $1100 in cash. If the attendance continues good, the society will be able to pay them from the net proceeds. The fair was opened on Tuesday evening, the 11th inst., by Mayor Hazard, who introduced Col. G. Wiley Wells as the orator of the evening. Arend's orchestra renders a program of popular music each night.

One of the largest exhibitors is C. H. Hovey of the Raymond Nurseries, Pasadena. He wins the first premium for decorative plants, the second for general collection of chrysanthemums, the first for ferns, the third for cut chrysanthemums and first for carnations. His collection of ferns is very large and beautiful, and the admiring visitors are sorry not to find any labels. A fine Rex begonia won first prize.

The Park Nursery Co. of Pasadena, Byron O. Clark manager, has probably the largest single exhibit of all and takes first premium for collection of chrysanthemums, second for palms, first for conifers, first for specimen palm tree (*Cycas revoluta*), best 25 varieties Japanese chrysanthemums, best 15 ditto of 1890, best white incurved chrysanthemums (Molly Baron), best old gold and red ditto (Mrs. C. H. Wheeler), and best light pink (Lilian B. Bird), which was also pronounced the best chrysanthemum of any variety. A beautiful specimen ranging from apricot-yellow to white in color, with compact petals like the dahlia, was brought from England, where it won the first prize last year; its name is Mrs. S. Coleman. Mr. Clark's collection of conifers embraces Italian and Golden Monterey cypress (a new seedling), Araucaria excelsa, A. Braziliensis, A Bidwelli, A. Cunninghami, Arboritae compacta, Douglas spruce, Pinus Lambertiana (sugar pine), P. ponderosa, P. pima, Irish and Japan juniper, Cedar dodara, Thuyœpois dolabrath varigata, Retinospa phemosa, Casaurina erecta, Cryptomeria Japonica, etc. The camphor tree, rubber tree, strawberry guava and others made up a mass of foliage which filled one side of the stage. I had read of the Japanese dwarfing of trees, but never saw an illustration of it until I beheld it in Mr. Clark's exhibit. He has an evergreen tree—Retinospora—*twenty years old* which is only seven inches high. It is a sturdy little thing, perfect in shape, with a spread at top of ten inches.

J. C. Harvey, treasurer of the Floral Society, although an amateur has the finest collection of exotic plants in the building. There is Areca lutescans from the East Indies, Adiantum trapeziforme, A. cuneatum from Brazil, A. L. grandi (hybrid fern), A. amabile from Mexico, Stalobium cicutarium from the West Indies, Nephrolepis davalliodes from Java, Hypolepis repens from Mexico, Microlepia hirta cristata from Polynesia, Asplenium viviparum from Mauritius. Seven varieties of delicate stove plants, a broad leaved plant generously mottled with white called Alocasia machroriza variega from Ceylon, another mottled ornamental plant called Ficus parcelli from Polynesia and other curious specimens form a beautiful bed that is constantly surrounded by students of floriculture. He has a magnificent orchid in bloom, the Cattleya labiata, from South America. It is an exquisite lilac, the size and much the shape of an iris, with a center formed like the pitcher plant, richly shaded with royal purple, maroon and yellow. It is conceded that Mr. Harvey has the rarest ferns, but there are not enough of them to admit him to competition for the premiums, so he receives only "special mention." His New Zealand tree fern (Dicksonia antartica) is thought to be the largest of that variety in the country. He was awarded the second premium for specimen palm.

The Germain Fruit Co. of Los Angeles, seed and nursery department, has a mass of shrubbery, ornamental plants, etc., at the left of the stage and a number of beds in which statuary is placed, besides a room filled with baskets, implements, pampas plumes, dried flowers, etc., making a very large exhibit. The group of palms is adorned with the blue ribbon, the conifers carried off the second premium, and a beautiful bed of ferns is marked "third premium." The company has a large collection of Australian trees. I am not able to give an extended report of this exhibit or of some others, because the only labels were small wooden ones stuck in the pots, most of which were out of reach or not easily discernible, and I found none in charge to question. It adds greatly to the interest of such displays when everything is correctly and clearly named.

E. D. Sturtevant, formerly a well-known Eastern florist, now living at Edgemont, in the Cahuenga foothills, has on exhibition a tank of his celebrated water lilies, which received "special mention." A cream-colored beauty is Nymphœa dentata, a deep purple one is N. Zanzibarensis, an exquisite rose-colored variety, very large, is N. Devoniensis, N. Marliacea chromatella is yellow, N. Zanzibarensis azuera is blue. Mr. Sturtevant wins first premium for lawn vase filled with ornamental plants. He has Ceroxylon niveum, Livistona rotundiflora, Strelitzia augusta, Cycas Neo Caledonia, Ceroxylon andicola (wax palm), Gleichenia flabellata (a lovely fern) and other choice plants.

Ravenswood nurseries, Highland Park, C. G. Packard, proprietor, take the third premium for decorative plants. Among them were Ficus macrophylla (rubber tree) Phœnix canariensis, magnolia grandiflora, Dracaena terminalis, Araucaria excelsa, banana tree and a large number of begonias. There are also chrysanthemums, carnations and roses.

The Central Park Floral Co. of Los Angeles entered a large exhibit in all the classes and show very artistic work in bouquets, baskets, designs, etc. These florists take second premium for decorative plants, second for ferns, third for light pink, also for old gold and red chrysanthemums, first for white ditto, second for cut fall flowers, first for cut roses, second for seedling carnations, second for cut chrysanthemums, and several first premiums for designs.

J. H. Tomlinson, the courteous manager of the fair and a gardener by profession, has a miniature landscape garden adorned with the



Baer, Photo.

VIEW OF PRESCOTT, ARIZONA.—See next page.

blue ribbon. The beds, made of flowers of all hues, are separated by what looks like pure white snow, and surrounded by lawns in which are corner beds of larger flowers. He calls the design "the lovers' knot."

Mrs. O. W. Childs, Los Angeles, exhibits choice chrysanthemums, winning several premiums. Mrs. J. E Clippinger receives special mention for 45 varieties of cactus.

Th. Roussinet, Oriental nursery, Los Angeles, makes a good display of chrysanthemums, for which he obtains third premium. W. Barclay of Compton is awarded first prize for cut fall flowers, having many varieties.

Redondo Beach is as usual to the fore with an elaborate arrangement of flowers and ferns, covering a table 20 feet long. The first premium for cut chrysanthemums goes to the enterprising company that owns the hotel, wharf, and other Redondo property; also first premium for seedling carnations

Peter Henderson & Co., New York, exhibit the new pink "Ostrich Plume" chrysanthemum, Louis Boehmer.

A. Kravhvk, Los Angeles, has third premium for cut fall flowers.

The State Board of Forestry, represented by Wm. S. Lyon, Forester, makes a very interesting exhibit of shade and ornamental trees, embracing over 30 varieties of eucalyptus, acacias, pines, etc. Among the eucalypti are E. marginata, E. diversicolor (giant gum), E. calophylla and E. occidentalus, from Southwest Australia; E. siderophloia, D. punctata, E eugenoides, E. resinifera. E. melliodora, E. paniculata, E. pilularis, E. leucoxylon, from New South Wales, Queensland and Victoria; E. amygdalina (broad-leaved), E Stuartiana and E. viminalis, from Southeast Australia; E. gunne and E. obliqua, from Tasmania and Victoria; E. piperita from Gippsland. There are Sterculia diversifolia and Pittosporum undulatum (mock orange) from New South Wales and Queensland; Cupressus Guadalupensus (blue cypress) from Guadalupe Island; Taxodium distichum (bald cypress) from Eastern U. S.; Pinus pinaster (cluster pine) from Southern Europe; acacias from Australia, South Africa, Victoria (the true black wattle—A. decurrens), and other foreign trees in this instructive collection.

James W. Jefferis has a table covered with cut roses, also a lot of French cannas and chrysanthemums trained on trellises.

Designs in cut flowers are numerous and very artistic, a special invitation having been issued for them. The first day the flowers were arranged for social purposes, such as dinners, balls, presents, etc. Next came wedding designs; the third day, those suitable for church, hall, stage and parlor decoration, followed by the last sad tribute we pay our friends—funeral designs. An arm-chair 150 years old is upholstered with magenta and palest pink chrysanthemums and stands on a carpet of the same blossoms. The Central Park Floral Co. takes first premium for a large picture exquisitely wrought. The raised frame is of yellow chrysanthemums, the background of white ones, and on this rests a vase filled with delicate ferns and blossoms. A great American eagle of white chrysanthemums soars aloft with a child in its talons. Lovely center-pieces for the dining table, harps and hearts, a cornucopia, immense butterfly, bow and arrow, etc., attract much attention in this department. Of baskets, bouquets, etc., there are no end, and altogether the display of flowers is very large for this season of the year.

The florists are wondering how ladies can procure of them the varieties of chrysanthemums that they fancied in the fair held two weeks ago, when only the Japanese names were used then, and the florists use the American labels. They think the change will create great confusion.

The officers of the Floral Society are: Eli Snyder, president; C E. Brydges, vice-president; H. W. Kruckeberg, secretary; John Franklyn, recording secretary; J. C. Harvey, treasurer. Executive Committee—J. H. Denham, J. G. Marlev and J H. Tomlinson.

Los Angeles, Nov. 14th.

Cosmos.

[Written for the RURAL PRESS by L. GREENLEE.]

The Cosmos flower, so fashionable in Washington City this autumn, has an interesting history which is thus told by Mr. Small, a florist of that city:

"It is indigenous to Mexico, where it grows wild in fields, as the daisy does in this climate. About four years ago, a German florist in Hoboken, N. J., propagated some of the plants from imported seeds and introduced the flowers in New York. Then the plant appeared in the Soldiers' Home gardens at Hampton, near Fortress Monroe, where it was found that it would bloom as late as January or February, on account of the milder climate. A gentleman near Alexandria, Va., then secured a quantity of the seed and commenced to grow the plant for the market, meeting with such success that he has now several acres covered with Cosmos blooms and ships an immense quantity to New York daily. It cannot be grown with great success as an outdoor plant farther north than this city."

This is the first year that the Cosmos has become common, but just now great branches of it adorn the windows of every floral establishment, and can be bought cheaply at markets or of boys in the streets. The flower makes a beautiful indoor decoration, and if placed in water when freshly cut will remain perfect for a week or more.

In shape it is much like a single dahlia, only not usually so large nor nearly so coarse looking. In color the flowers run through many shades from crimson to pure white. White ones are much the handsomer, reminding one of golden hearted white narcissi or ox-eyed daisies. The plant is of strong growth, having a tuberous root like the four o'clock or dahlia, and elegant plumy foliage something like cypress-vine or asparagus. Mr. Small is mistaken about its not succeeding farther north than Washington City, for plant notes from several Northern States speak of it as the chrysanthemum's rival, still bravely defying the first autumn frosts after other plants are withered and dead. Planted in pots and brought inside to flower, like our tender chrysanthemums, they are grand; still, in the Southern States, the warmer climate undoubtedly enables it to bloom longer and finer than north of Washington.

When grown from seed they should be started in the garden in March or April and protected by a mulch of leaves. Push their growth by frequent watering and stimulants until August, when if you have not pinched them back they will be tall, spindling plants four or five feet high; but frequent pinching spreads them into handsome, compact plants, that from August till November will be covered with hundreds of blooms, many of them three inches across.

Prescott, Arizona.

On the preceding page we give an illustration of Prescott, the leading town in Northwestern Arizona, and county seat of Yavapai county, the largest political division of that Territory. Prescott was formerly the capital of Arizona, since removed to Phœnix, Maricopa county. Though deprived of this advantage, Prescott remains the most populous town in the Territory and a place of much business importance, being the center of an extensive mining and agricultural region. There is also located here the military post known as the Whipple Barracks, the garrison at which serves to enhance the business and enliven the town.

Prescott enjoys the further advantage of being the southern terminus of the Prescott & Arizona R. R., a line connecting with the Atlantic & Pacific road, which it joins 74 miles to the north. As will be seen by the cut, the town is regularly laid out, the streets being straight and crossing each other at right angles. There are a number of handsome buildings in the place, some of which are not without architectural pretensions. The courthouse with its tall tower, seen near the center of the picture, is a fine edifice, having been built at a cost of $75,000. Prescott is increasing rapidly in both business and population, its future prospects being equal if not superior to those of any other town in Arizona.

THE SMALLEST FLOWERING PLANT.—The smallest flowering plant is *Wolffia microscopica*, a native of India. It belongs to the duckweed family. It is almost microscopic in size, destitute of proper stem, leaves and roots, but having these organs merged in one, forming a frond. There is a prolongation of the lower surface, the purpose of which seems to be to enable the plant to float upright in the water. The fronds multiply by sending out other fronds from a slit or concavity, and with such rapidity does this take place that a few days often suffice to produce from a few individuals enough similar ones to cover many square rods of pond surface with the minute green granules. Small as these plants are, they bear flowers. Two are produced on a plant, each of them very simple, one of a single stamen and the other of a single pistil, both of which burst through the upper surface of the frond.

A Humane Wire Fence.

The illustration presented on this page will give RURAL PRESS readers some idea of the usefulness of the Spaulding Humane Wire Fence, manufactured by Bird, Turnbull & Co., Chicago, Ill. The fence is built especially to resist horses and cattle, without laceration, and from testimonials it does its work most effectually. It is composed of eight No. 12½ galvanized steel wires woven into four cables of two wires each, and interwoven every five feet is a corrugated iron stay or guard, and held in place by the cables, thereby holding the cables firmly in place, preventing them being spread apart and letting stock through The stays or guards are corrugated and 1¾ inches in width, making the fence as visible as a board fence, which is a *very essential point.*

The wires or cables are held firmly together so that any great strain is resisted by the whole fence. The spans thus securely bound will stand a pressure of 8000 pounds.

The fence is visible, as the guards are 1¾ inches wide and are placed every five feet; and, being visible, stock will avoid it, and if driven into it by accident or otherwise, it cannot mutilate or injure them any more than a board fence. The horse and cattle fence is placed 20 inches from the ground, thereby preventing horses from striking their feet over the lower wire, and making a fence 4 feet 4 inches in hight. It will turn horses and cattle better than any barbed wire fence of double the number of wires, for the reason that the cables are held firmly in place every five feet, thus preventing stock from getting through between the wires.

Being composed entirely of steel, and either galvanized or well painted, it is practicably indestructible; it cannot be burned or broken by any fair usage. Being put up in rolls of about 20 rods each, it can be unrolled and stretched out at a single pull. A hundred rods can be taken down, rolled up and moved in a few hours. It is light, only weighing about five pounds to the rod. The manufacturers say:

Taking into account the number of posts required, it is the cheapest wire fence in the market, besides being light and free from wind obstruction. We advise putting the wooden posts not less than 50 feet apart, thereby giving the fence an elasticity that prevents accident to both fence and stock—a feature of much value, and one that a rigid fence cannot have.

We also manufacture a seven-wire fence, the five lower wires being five inches apart and the two upper wires ten and a half inches and of the same hight as the four-wire fence, being 52 inches. For sheep fencing, railroad fencing, and in fact for all purposes where a fence is required, this fence cannot be excelled.

From the strong points presented in favor of this fence, it is surely worthy of a trial. Write to the manufacturers for any further information.

A FEW EVENINGS ago we received a copy of the PACIFIC RURAL PRESS, published by Dewey & Co. The PRESS is one of the best agricultural and horticultural journals in the State, and is particularly adapted to the wants of the fruit-grower and stock-raiser.—*Palermo Progress.*



AN ILLINOIS FARM SCENE—A HUMANE WIRE FENCE.

THE VETERINARIAN.

A Popular Work on Animal Diseases.

The Department of Agriculture has now in press a bulletin prepared under the direction of Dr. Salmon, Chief of the Bureau of Animal Industry, on "Diseases of the Horse." It is stated in the letter of transmittal that "the need of a work on the diseases of the horse which could be distributed to farmers as a safe and scientific guide in the treatment of this species of our domestic animals, either when affected with slight disorders or serious illness, has long been felt. This obvious want has led to the preparation of the present volume, which is designed as the first of a series to cover the diseases of all varieties of farm animals."

The authors of the various articles were duly advised of the popular character it was designed to impart to the work, and an effort was accordingly made by them to present the matter treated of in as simple language as possible. Dr. Chas. B. Michener contributes three articles on Methods of Administering Medicines, Diseases of the Digestive Organs, and Wounds and their Treatment. Dr. James Law writes on Diseases of the Urinary Organs, Diseases of the Generative Organs, Diseases of the Eye, and Diseases of the Skin. Dr. W. H. Harbaugh contributes an article on Diseases of the Respiratory Organs, and Dr. M. R. Trumbower writes on Diseases of the Nervous System and Diseases of the Heart and Blood Vessels. Lameness is treated of by Prof. A. Liautard. The other articles are Diseases of the Fetlock, Ankle, and Foot, by Dr. Holcombe; Contagious Diseases, by Dr. R. S. Huidekoper; and Shoeing, by Dr. Wm. Dickson.

The work will be illustrated with 44 carefully prepared plates. An extra large edition will be issued of this bulletin in anticipation of a very large call for the work. At the same time, experience in reference to the bulletin on Parasites of Sheep, of which a second edition has already been called for, indicates that those who are anxious to obtain a copy of "Diseases of the Horse" at an early date should apply for it at once, addressing either the Secretary of Agriculture or Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, Washington, D C.

Cinchona Cultivation in India.

[Written for the RURAL PRESS by LORENZO G. YATES, F. L. S.]

From the Annual Report of the Government Cinchona Plantations in Bengal for the year 1889-90, we learn that at the end of the year the number of cinchona trees of various ages under cultivation at the plantation amounted to 4,682,401 and a nursery stock of 264,000 seedlings.

The crop of bark collected during the year amounted to 304 705 pounds, from which was manufactured 6393¾ pounds of febrifuge; 1252 pounds of quinine, and 34 pounds of crystalline febrifuge which was distributed to the various medical depots and Government officers and upon which the Government realized a handsome profit—the result of careful and skilled cultivation and management by the superintendent and his associates.

Santa Barbara, Nov. 12, 1890.

THE Northern Pacific Railroad is preparing to erect coal bunkers at Sprague to cost $10,000.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

EXTENSIVE TREE-PLANTING.—Oroville, Nov. 16: Quite an extensive planting of fruit trees will occur during the coming winter along the Feather river. S. B. Hutchins will set out an orchard of 300 acres; W. R. Strong & Co. will plant between 300 and 350 acres six miles south of Oroville; Harmon & Alexander will put out about 300 acres; John D. Tufts & Son will plant on the east side of the Feather river about 275 acres: a 200-acre olive orchard will be planted in Palermo; there will be many additions to Palermo and Thermalito; P. R. Welch will plant a fine orchard south of Oroville; Dr. W. E. Mack will plant 35 acres of orange trees; E. Boalt and B. F. Corwin of Palermo will extend their orange groves during the coming winter, and Judge Collins of Santa Cruz will plant a five-acre tract in oranges. The oranges are ripening rapidly in the neighborhood of Oroville, and by the end of the year there will be a great quantity ready for the market.

FRUIT SHIPMENTS —Palermo *Progress*, Nov. 15: Three thousand pounds of dried fruit were shipped from Palermo depot Tuesday morning to Sacramento, by Geo. Wheeler and John Watkins, who raised the same on their places between Palermo and Wyandotte. This is the first large shipment of dried fruit Palermo has made, although several smaller shipments of both green and dried fruit were made during the past summer. Next season we may expect to ship a large quantity of fruit, as a large proportion of the deciduous fruit trees will come into active bearing, while several orange groves in Palermo will produce considerable fruit for shipment this winter, the trees in many places being loaded down with oranges. This speaks well for a three-year-old colony.

Humboldt.

POTATO PROFITS.—Eureka *Standard*, Nov. 13: A farmer living near Rohnerville last year raised and sold from five acres potatoes which brought him $702 80, after reserving what his family needed for the year. His crop netted him $140.60 per acre, besides what he used at home. This will serve to demonstrate that such land is not dear at $150 per acre.

Inyo.

CAUTION AGAINST CODLIN MOTH.—Independence *Independent*, Nov. 14: Parties coming into Owens valley by rail frequently bring along a few apples to eat by the way. Many of these apples are affected by codlin moth. There is great danger that in this way the pest may be introduced here. It will inflict great damage and loss if it ever gets started in the valley.

Kern.

AGITATION FOR IRRIGATION. — Bakersfield *Echo*, Nov. 13: Some of the farmers on the Weed patch are preparing to plant vineyards next spring and irrigate them from wells. The marked success enjoyed by Messrs. Smith & Swain last year has encouraged others to try the same plan. Still we hear that the idea of an irrigation district is growing in favor and it seems probable that within a short time the necessary petition may be circulated for signatures.

Lassen.

FARM NOTES.—Susanville *Advocate*, Nov. 13: T. Ashby of Secret was in town this week on more legal business. His little strip of land, watered by a few springs in the midst of the most desolate sagebrush country, does some wonderful things in the way of crops. This year he has oats that weigh 48 pounds to the bushel; potatoes that weigh three pounds apiece. Three years ago he raised 10,000 pounds of potatoes from three sacks of seed, and six of the potatoes weighed 32½ pounds. This is without irrigation, the natural moisture from the seepage of the springs being all the ground needs. Sam Alexander has a few acres of garden on his ranch at the foot of Antelope grade, which is quite a pavilion in itself, so far as agricultural exhibits are concerned. He has raised this year cabbages 40 pounds in weight, solid, and white as snow to the heart, he has beets weighing 20 pounds; turnips weighing 20 to 30 pounds, and carrots standing two feet out of the ground. On August 21 he sowed some white flat turnips, and to-day they are three times as large as the ordinary Eastern turnip, and just as sweet.

Los Angeles.

THE WINE-GRAPE CROP.—Pomona *Progress*, Nov. 13: The wine-grape crop in this valley has been gathered and sold for this season. It has been the largest ever known here, and at the lowest estimate has brought $18,000 to the pockets of the growers. Some people estimate the sum at about $21,000. The crop consisted of over 1600 tons. Of this amount, Eli W. Keller bought and shipped to the Stearns & Sons winery, in Los Angeles, 550 tons; the Pomona Wine Company bought 520 tons; Cook & Langley or Leo Park bought and dried 340 tons, and G. Mirandi handled, at his winery, over 150 tons more.

Monterey.

LARGE ACREAGE BEING SOWN.—San Miguel *Courier*, Nov. 13: The farmers of the Upper Salinas valley have been busily engaged in plowing and sowing grain during the past month. Thousands of acres of summer-fallow have been seeded, besides a large amount of dry plowing. The acreage of wheat in this region the coming season, judging from what we have been told and from present appearance, will be fully twice as much as that of any previous year. Especially is this the case in the Cholame valley. Many of the extensive farmers in that section already have more land sown to grain than they put in last year, and they will put in fully as much more. The settlers generally will sow twice as much as usual. The introduction of improved farming machinery enables them to get over a large acreage in a short time.

Orange.

FRUIT NOTES.—Santa Ana *Blade*, Nov. 13: The industry of orange-growing has never been so bright in this county as it is now. The crop is larger than ever before, and buyers are at hand to take the entire crop on the tree at advanced prices. In fact, most of the crop has already been sold. The estimated output of oranges in Southern California is 3400 carloads. Many groves begin to show the need of fertilization. Those fertilized already show the good results. The crops of apricots, peaches and prunes were never before so large as they were this year. The apple and pear crop were badly injured by the codlin moth. On the east side of the Santa Ana river they were ruined.

Placer.

ORANGE AND FIG CULTURE.—San Francisco *Alta*, Nov. 16: Mr. H. E. Parker of Penryn, Placer county, is on a visit to our city. He reports that horticultural matters in his section are looking well. Orange trees are laden with fruit, which is now assuming the golden hue. The opinion seems to prevail among orange producers that this city is the proper place to hold the State Citrus Fair next January. The new settlers in Placer county are getting excited over oranges, and are planting them in every available space. Nearly all these trees do well and give promise of an abundance of fruit. A rocky ridge near Penryn has been terraced for over a mile, and orange trees planted where a few years ago nothing but rock was perceptible. The Smyrna fig trees are bearing heavily in that vicinity this year. The fruit is white and tender and packs well.

Sacramento.

BRANNAN ISLAND RECLAMATION —Rio Vista *News*, Nov. 15: Negotiations are pending for the transfer of a portion of Brannan island property to some enterprising capitalists who will give their attention to the organization of a thorough reclamation district. The only drawback to Brannan island is the absence of a thorough reclamation, and now that the prospects are good for a strong organization, Brannan island will probably soon be under cultivation and in a prosperous condition.

ISLAND NOTES.— *Record-Union*, Nov. 13: The people of the upper portion of Andrus Island are building larger levees, and intend cutting a canal and putting in pumping apparatus in the near future to relieve that portion of the island of the water that came in last winter. The affairs of Land District No. 3 are in a very prosperous condition. In another month or so the levees will be completed, and they are of so complete and solid a character that the embankments built in former years bear no comparison to the present ones. There is a large dredger now engaged in digging a canal from the pump, at the lower end of Grand Island, up through its center. The canal is nearly 40 feet wide, and 10 or 12 deep, and when excavated about a mile farther the pump will make short work of what little water remains in the center of the island. Many persons are taking long leases of land on the island, some paying from $5 to $10 cash per acre per year rental, and others paying one-fourth of their crops. This is for raw tule land. Tom Williams is getting his land in shape, either to sell or rent, and in all probability the greater portion of the island will be under cultivation the coming season. The swamp land-owners everywhere are getting rich, as is evidenced in the activity in building levees, roads, and handsome houses.

San Bernardino.

ORANGE PRICES.—S. B. *Times-Index*, Nov. 15: It is reported that orange buyers are already here offering $1 50 on the tree for Seedlings, $2 for Mediterranean Sweets and $2 50 per box for Navels.

San Diego.

FARM IMPROVEMENTS —Otay *Press*, Nov. 13: The prospects for this surrounding agricultural section were never better; over 800 acres of ground is now being cleared and made ready for the plow, and farm improvements are rife on every hand and a vast amount of soil will be turned over this season. The work of preparing 120 acres for the planting of orange trees and for the sowing of grain is progressing on the Chula Vista tract; about 20 teams are grading and harrowing the ground. A walnut orchard of 30 acres is to be planted in the Sweetwater valley as an experiment. Twenty acres will be put out by the Sweetwater Fruit Company and 10 acres by Dr. S. F. Dickinson, who will plant peach stock with walnuts alternating, the peach trees to be taken up when the walnuts come into bearing.

LARGE POTATO FARM.—*San Diegan*, Nov. 14: Mr. Walker, the strawberry man, has purchased a carload of Burbank potatoes to be used for seed on about 100 acres of ground to be planted in January.

TREE PLANTING.—Escondido *Times*, Nov. 13: Our tree men all report large orders for both deciduous and citrus stock for the winter plant. They are having considerable difficulty to supply the demand for prunes. Three years of experience with orange trees has satisfied every one in this valley that Escondido can produce just as fine oranges and lemons as any other locality in Southern California.

ANOTHER PACKING-HOUSE. — San Diego *Union*, Nov. 13: Mr. Richards has realized 50 tons of raisins this year from his 200-acre vineyard in Cajon, and by next year the vines will all be bearing. He informed a San Diegan Saturday that he should add another packing-house to the valley next season. In a day or two the packing activity will have ended.

FOOTHILL CORN.—San Diego, Nov. 13: In new ground, merely cleared and plowed, D. W. McKay last season sowed "Yankee yellow" corn. He has just harvested a large crop, the ears averaging a foot.

Santa Cruz.

BEET-SUGAR MILL TO START UP.—*Pajaronian*, Nov. 13: Owing to scarcity of beets, the crushing was stopped at the factory last Saturday night. A large supply of beets is now coming in from the Moro Cojo and the mill will start up in about one week.

FIRST COTTON SHIPMENT.—Perris *New Era*, Nov. 10: The first cotton to be marketed from Perris was sent last week by G. A. Chandler to a San Francisco firm, who ordered 3000 bolls to illustrate this subject in school. This cotton was raised without irrigation on Mr. Chandler's place, north of Perris.

Sonoma.

OLIVES ON RUSSIAN RIVER.—EDITORS PRESS: Without knowing much about olives, I wish to note what the *Italian Swiss colony* are doing in the way of cultivation—thus making a record of what these experienced men know. About seven years ago they planted, say, 1000 small trees in their grounds here, on a plateau rising from perhaps 50 to 150 feet above Russian river. Soil good for vines—a clay loam, in places gravelly. The trees have grown, say six feet, and now the owners have manured heavily with stable manure.—J. B. A., *Cloverdale*.

MUST SHIPMENTS TO LONDON.—Healdsburg *Tribune*, Nov. 13: The Must Condenser Co. of Geyserville completed operations last Friday after consuming nearly 2000 tons. The extract is now being shipped in 50-gallon barrels direct to London. The shipment will require about 80 cars.

Tulare.

A PROFITABLE CROP.—Porterville *Monache Tidings*, Nov. 15: Last June S. L. Welton planted on the Pioneer tract, one mile from Porterville, three-eighths of an acre in sorghum after taking off a crop of wheat. He fed out the young stalks to stock quite freely, consuming fully half the total product. He recently cut it all and made it into syrup, making 63 gallons, which is worth from 80 cents to $1 a gallon. It still continues to furnish fodder for stock, and he has gathered eight sacks of seed for next year's planting. With proper cultivation, Mr. Welton thinks he can make 250 gallons of syrup to the acre, and he proposes to put in five acres or more next year.

A SPECIMEN VINEYARD.—Porterville, Nov. 15: Mr. Oliver Henry, who shipped his raisins from his five acres of five-year-old vines just east of town, reports that for the 15 tons he received $1.75 per box of 20 pounds each, or the neat little sum of $2625, of which he estimates that fully $2000 is clear profit. He packed them himself and did not sell them in the sweat-box, as many do. This is no more proportionally than what others have made elsewhere in this county off of raisins.

PROFIT IN TURKEYS.—Traver *Advocate*, Nov. 13: Mrs. John Bare, wife of our road-master, has this year, as she has for several years past, made a snug little sum by raising turkeys. She raised 200 of the fowls this year, and they were as fine a lot of turkeys as we ever saw as they were brought into town Monday, H. Brownstone, the Traver merchant, having purchased a portion of them. They were half-breed Bronze turkeys—large, fat and healthy looking. The average weight of the flock was 15 pounds, and some of the birds would weigh 18 and 20 pounds—good weight for turkeys hatched last spring. The price paid by Mr. Brownstone for those he bought was 15 cents per pound. When it is taken into consideration that Mrs. Bare raised these turkeys at small expense at her colony tract just northeast of Traver, and tended to them besides performing her household duties, and that a large amount of alfalfa and fruit was raised on the place at the same time, it is easy to see that she has been well paid for her trouble.

ROOTED GRAPE —Traver, Nov. 13: The price of rooted grapevines is gradually falling. Some time ago they were worth $15 a thousand, but the price has gradually come down, and we heard on good authority yesterday that some lots were being sold at $8

EXPERIMENTAL HAY SHIPMENT. — Visalia *Times*, Nov. 13: David Toomey of this city last week sold 90 tons of grain hay to Joseph Clark of Tulare, and the latter-named gentleman is shipping the same to San Francisco. Hay commands from $8 to $8 50 per ton here. Should this experiment of shipping to San Francisco prove profitable, 500 tons of hay will be shipped there from this city by Mr. Clark.

DATE TREES.—Visalia, Nov. 13: E. T. Ragle has two date trees growing on his ranch, 14 miles east of this city, that are now 18 years old. One of these trees is bearing fruit for the first time this year. These are probably the only date trees in the San Joaquin valley, though several more were planted at the time Mr. Ragle secured his. The bearing tree has about 50 dates on it.

Yolo.

HOW ALFALFA PAYS. — Winters *Express*, Nov. 13: J. H. Hill believes alfalfa to be a paying crop, and is making an effort to grow it in sufficient quantity to help keep his stock. He has two or three acres growing now which gives support to hogs, calves and cows; and he has leveled, checked and sowed four or five acres more, intending soon to increase the patch to about eight acres.

GRAPE SYRUP.—Woodland *Mail*, Nov. 15: Messrs. Snavely & Baker, the proprietors of the Woodland winery, disposed of 10,000 gallons of syrup this season at a larger price than that received last year. A new still costing $70 has been put up in the place of the one that was blown up some weeks ago, and the brandy department of the winery is now running in full blast.

ARIZONA.

MARICOPA FRUIT NOTES.—The annual report of the Governor of Arizona contains the following: There are few counties that possess a soil and climate so well suited to the business. Already farmers are discovering that there is more money in fruit than in the raising of grain and grasses. The rapid growth and marvelous yield is a prime factor in inducing people to engage in the pursuit. In the Gila and Salt River valleys the produce is ripe and ready for market fully a month before that of Southern California. Fruit-raisers can readily see the advantage which this gives them. Fruit from these valleys can be laid down in the seaboard cities earlier than that of any other section of the Union. This means a ready sale and high price. The yield is phenomenal. The fig, which succeeds in so few places in the United States, seems to be indigenous to the valleys of Arizona, and grows as strong and as thriftily as the cottonwood tree. It yields two, and sometimes three, crops a year. This seems hardly credible, but it is an actual fact. The fruit is large, rich and luscious, and has only to be tasted to be appreciated. Grape cuttings from California will bear in eighteen months, and two crops a year is not uncommon. During the present season apricots have been shipped from the Salt River valley to Los Angeles a month before the fruit was ripe in that section. One of the most profitable fruits grown in the United States is the raisin grape. Few localities are adapted to its cultivation. The curing of the fruit requires a dry climate, and this Arizona possesses. There are only two or three places in California suited for raisin-making, and even on them the conditions are not altogether satisfactory. The largest raisin producer in the United States has recently visited Southern Arizona, and after a thorough examination, declares that there is no part of the United States to equal it for raisin-making. He secured an extensive tract of land which he will plant next season. When it is remembered that 90 per cent of all the raisins consumed in this country are imported, the opportunities here presented will be fully understood. Besides the orange and the lemon, the olive and banana thrive in Maricopa county. Grape-picking begins 40 days earlier in the Salt River valley than in California, and the first raisins packed anywhere in the United States this season have been packed in this county. Both figs and raisins are now being packed for export. One party alone has a fig farm containing 640 acres, and there are many smaller ones where figs are raised in abundance. The fruit, when prepared for shipment, presents as fine an appearance as any to be found in the world. It is large, rich and juicy, and as good as it looks. Raisins are being dried and packed in large quantities. They are excellent in quality and can be grown and prepared for market at the minimum expense, on account of superior climatic advantages.

NEVADA.

NORTHERN CATTLE.—Reno *Gazette*, Nov. 13: Dr. Patterson had a band of 500 beef cattle arrive from the northern country last Friday. Ayers & Poor have a drove of 300 head to arrive Tuesday or Wednesday, and R. W. Minto has 150 that will be here in a week or ten days. These lots, with about 100 head to come in from Jess valley, will about clean up the fall cattle from the Surprise Valley country. The stockmen of that section have plenty of hay this season and will feed some at home. Dr. Patterson will feed at his home ranch about 400 head which will be driven this way during the winter or early spring.

RESPIRATION OF INSECTS.—Mr. Contejean has studied in the grasshopper the little known phenomenon of the respiration of insects. He finds that, contrarily to what occurs in vertebrates, the movement of inspiration is passive, while that of expiration is active. The air is expelled from the insect's body by a contractile effort. The result is, that if the animal be wounded, we observe blood to flow at every expiration. Decapitation does not arrest the respiratory movements, no more than does the absorption of curare, which in man produces an immediate cessation.

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Hair Balls in Stomachs of Animals.

A collection of these interesting deposits has been placed in the University museum and described by the *Occident* as follows:

Aegagropile is a name given to certain felted balls of hair that occur occasionally in the stomachs of cattle and some other animals. During the seasons when the shedding of the old coat of hair takes place is the period which is productive of increase of the hair ball in the stomach, for some of the loose hair gets mixed with the food that the animal partakes of, but the greater quantity gets into the stomach through the primitive method of combing and brushing their hair with their tongue. The hair being indigestible, it remains in the stomach and becomes a massive ball of felted hair. The museum contains six examples of these curious aggregations. The first series of these was presented by Mrs. J. West Martin of Oakland, who presented two, both of which were from the stomachs of cows; the circumferences of these balls are 6 inches and 14 inches respectively. One was added by Dr. Bonte, who found it on a mountain near Summit, Nevada. This is a small one, and probably from the stomach of a deer. Its measurement gives but 4½ inches in circumference. Another was found by Curator Rivers on the bay shore near Batchertown, Berkeley, and gives a circumference of 5½ inches. The next and largest ball was donated by Mr. John Tuohy of Berkeley, who brought it from his ranch at Lewes Creek, Tulare Co., Cal. This example furnishes the measurement of 17 inches circumference, and was from the stomach of a hog. The last to be mentioned was recently donated by Miss C. J. Cornwell, who brought it from Napa City. This is a very peculiar specimen and not at all spheroid, but had felted in the shape of the animal's stomach, that of a hog, and its measurement may be given as 7½ by 5½ inches.

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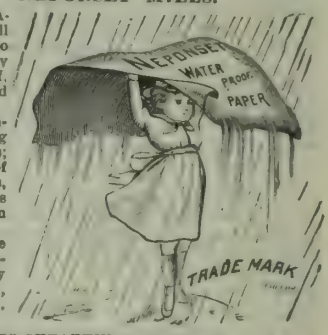
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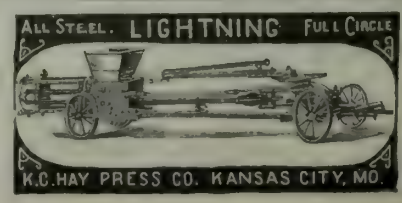
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During the last ten years the trend of population has been toward our villages and cities. The increase of this population, as compared with the growth of the country, has been far beyond anything in the history of our nation. It is an economic question that has given food for thought to our political economists and statesmen, and as yet they have found no remedy to change the status of affairs.

With the growth of the villages and cities it has invited a spontaneous effort to adapt sanitary regulations and improvements and attractions that should make city life conduce to longevity, and with the advantage of schools and associations, it seems that this system will continue to enlarge rather than diminish.

The city of Sacramento is built upon a level plain, and during the winter months the streets have been almost impassable on account of the sticky, adobe mud. Recently, by an almost unanimous vote, a large amount of money has been appropriated to make the road-beds and streets of Sacramento equal to, if not superior, to any city on the coast. Fortunately for them, about four miles out is one vast gravel-bed made up of pebbles from the size of a walnut to a hen's egg, without any bowlders and with just enough dirt intermixed to form a cement that makes a road-bed that is always firm in wet weather and smooth and well adapted for carriage driving.

Recently the trustees have employed all the teams they could hire to improve the streets, but finding the old method too slow, they have called into requisition the services of "Pathfinder," one of the traction engines built by Daniel Best.

The accompanying cut is a good reproduction from a photograph taken at Sacramento while at work in hauling earth from the gravel-bed, four miles out from the Capital City. This train is run night and day, making from six to seven trips at a cost so low that the authorities are contemplating the project of graveling the streets generally in the city.

We quote the following publication concerning this valuable invention:

It was declared at the late California State Fair, held in Sacramento, after a three days' plowing contest, that the Best traction engine has no superior, the first prize of $500 having been awarded to its inventor and manufacturer, Mr. Daniel Best of San Leandro. Up to the year 1887, field locomotives had been partial failures. It is to the credit of Mr. Best that, of twenty-five or thirty engines built at his manufactory in San Leandro, each one has been in continual and practical use ever since. He has recently received three orders for engines to work in the Sierra Nevada mountains, hauling lumber, ore, etc. One of his machines has invaded the Sandwich Islands, where it is engaged by day in plowing sugar and cane fields, while by night it runs a dynamo at the factories, for the purpose of furnishing electric light. In Sacramento his premium engine, "The Pathfinder," is employed in hauling gravel to pave the streets of the city. During the fair his engines were used to convey people to and from the park. We quote the following from the State Fair Daily 1890:

"Have you seen the Best steam harvester in operation on the vacant lot adjoining the pavilion? If not, attend to the matter at once and you will witness one of the grandest sights of the nineteenth century. You will see a mammoth traction engine, with a huge combined harvester attached, rushing about, now turning sharp curves, now backing as swiftly as it moved forward, now stopping suddenly, now starting, now reversing with as much ease as a locomotive, and in general exhibiting all the traits necessary to the complete success of a steam traction engine. Crowds are daily witnessing this great spectacle. Best's steam harvester may be utilized as a stationary threshing outfit by simply bringing the machine to a standstill whenever desired, and throwing in the material to be threshed. It will plow and harrow, haul grain, lumber, wood, coal, ore, etc.; run any apparatus connected with it, and assist to grub and clear land. It has a steady, uniform motion, travels at the rate of three miles an hour, plowing an average of 50 acres per day, and harrows 125 acres a day."

A RURAL representative visited the Best Agricultural Works at San Leandro, last week, and found a full force of men engaged on traction engines. There were six on the stocks and one nearly completed for filling an order for plowing this season. The gold medal awarded by the State Agricultural Society has been forwarded to our genial inventor, Mr. Best, who is naturally proud of his successful contest.

Christian Socialism.

The phrase "Christian Socialism" has been heard so much of late that it is worth while to ask the purport of the movement which it represents.

Socialism, rightly so-called (we mean the genuine, not the sham)—true socialism contemplates the reconstruction of society, with a more just and equitable distribution of property and labor, "substituting the principle of association for that of competition in every branch of human industry." (Brande.)

Those who have banded themselves together under the name of "*Christian* Socialists," according to their Declaration of Principles, adopted in Boston, April 15, 1889, believe that all social, political and industrial relations should be based on the Fatherhood of God and the Brotherhood of Man, in the spirit and according to the teachings of Jesus Christ. They hold that the present commercial and industrial system is not thus based, but rests rather on economic individualism, the results of which are:

(1.) That the natural resources of the earth and the mechanical inventions of man are made to accrue disproportionately to the advantage of the few instead of the many. (2.) That production is without general plan, and commercial and industrial crises are thereby precipitated. (3.) That the control of business is rapidly concentrating in the hands of a dangerous plutocracy, and the destinies of the masses of wage-earners are becoming increasingly dependent on the will and resources of a narrowing number of wage-payers. (4.) That large occasion is thus given for the moral evils of mammonism, recklessness, overcrowding, intemperance, prostitution, crime.

And their avowed objects are:

(1.) To show that the aim of Socialism is embraced in the aim of Christianity. (2.) To awaken members of Christian churches to the fact that the teachings of Jesus Christ lead directly to some specific form or forms of Socialism; that, therefore, the Church has a definite duty upon this matter, and must, in simple obedience to Christ, apply itself to the realization of the Social principles of Christianity.

The society has an organ in the shape of a neat little magazine, *The Dawn*, edited as a labor of love by Rev. W. D. P. Bliss, with such contributors as Rev. E. E. Hale, Rev. Heber Newton, Rev. Washington Gladden, Lawrence Gronlund, Prof. Rich. T. Ely, Edward Bellamy, Mary A. Livermore and Frances E. Willard. Sample copies may be had for the asking* by any one who would pursue the subject further or feels moved to co-operate with the society.

*Address *The Dawn*, 36 Bromfield St., Boston, Mass.

AS AN indication of the increasing business of the country, the Baldwin Locomotive Works are driven with work and are hardly able to fill orders; they are also sending many to Central and South America. The newly invented compound locomotive is a novel feature of this industry. The great advantage to be found in this style of engine lies in the fact that the steam which is exhausted at high pressure is used again at low pressure, causing an economy in freight and heavy passenger service of about 20 per cent as compared with an ordinary engine. In express trains, where economy is sacrificed to speed, the difference is not so noticeable. Orders for 190 engines for American roads are now being filled. The new shop is rapidly nearing completion. The two new cranes being built for it will be the largest twin cranes in the world.

WHAT CURES?

Editorial Difference of Opinion on an Important Subject.

What is the force that ousts disease; and which is the most convenient apparatus for applying it? How far is the regular physician useful to us because we believe in him, and how far are his pills and powders and tonics only the material representatives of his personal influence on our health?

The regular doctors cure; the homœopathic doctors cure; the Hahnemannites cure; and so do the faith cures and the mind cures, and the so-called Christian scientists, and the four-dollar-and-a-half advertising itinerants, and the patent medicine men. They all hit, and they all miss, and the great difference—one great difference—in the result is that when the regular doctors lose a patient no one grumbles, and when the irregular doctors lose one the community stands on end and howls.—*Rochester Union and Advertiser.*

Nature cures, but nature can be aided, hindered or defeated in the curative process. And the *Commercial's* contention is that it is the part of rational beings to seek and trust the advice of men of good character who have studied the human system and learned, as far as modern science lights the way, how far they can aid nature and how they can best avoid obstructing her.—*Buffalo Commercial.*

It is not our purpose to consider the evils that result from employing the unscrupulous, the ignorant, charlatans and quacks to prescribe for the maladies that afflict the human family. We simply declare that the physician who knows something is better than the physician who knows nothing, or very little indeed about the structure and the conditions of the human system. Of course "he does not know it all."—*Rochester Morning Herald.*

I have used Warner's Safe Cure, and but for its timely use would have been, I verily believe, in my grave from what the doctors termed Bright's Disease.—D. F. Shriner, senior Editor Scioto *Gazette*, Chillicothe, Ohio, in a letter dated June 30, 1890.

Easy Binder.

Dewey's patent elastic binder, for periodicals, music and other printed sheets, is the handiest, best and cheapest of all economical and practical file binders. Newspapers are quickly placed in it and held neatly, as in a cloth-bound book. It is durable and so simple a child can use it. Price, size of Mining and Scientific Press, Rural Press, Watchman, Fraternal Record, Masonic Record, Harper's Weekly, and Scientific American, 75 cents; postage, 10 cents. Postpaid to subscribers of this paper, 60 cents. Send for illustrated circular. Agents wanted.

First Shipment of Oranges.

VACAVILLE, Nov. 18.—Mrs. C. Martel to-day made the first shipment of oranges for the season from her ranch in the Vaca valley. They were of the Navel and Mediterranean sweet varieties and were remarkable for their size. This shipment is about 18 days later than last year. The last carload of green fruit will leave here in a few days for Eastern points.

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Electric-Lighted and Steam-Heated Vestibuled Trains between Omaha, Council Bluffs and Chicago.

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WESTERN SEEDS.—The house of Trumbull, Strean & Allen Seed Co. of Kansas City, Mo., offers, through their advertisement in our columns, standard seeds in quantity at favorable rates, and issues a catalogue describing them. They make specialties of timothy, red top, clover, blue grass, orchard grass, Hungarian millet, flax seed, castor beans, hemp seed, seed grain, onion sets, garden seeds, tree seeds. The house would like to extend its trade and correspondence on this coast, and we call general attention to their announcement.

GOOD LAND TO RENT.

Terms Unequaled.

SEVEN ACRES OF BEARING ORCHARD, FOR CASH OR ON SHARES, SEVEN MILES FROM TULARE.

IMPROVED LAND.—160 acres within half a mile of Tulare City; 160 acres seven miles from Tulare; 320 acres adjoining the last named.

FOR LOW CASH RENT, or Reasonable Share, the above will be let.

UNPLOWED LAND.—Very level and easily tilled. 160 acres 1½ miles from the last named; good soil; water at small cost if desired. Rent free first year and preference given for second. Also, one section (640 acres) of similar land three miles S. W. of Pixley on the same terms as last named, but without irrigation. Will rent in subdivisions if necessary.

Inquire of E. M. DEWEY, Porterville, Tulare Co., or at the office of this paper.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

ERCHERON HORSES.—Pure bred horses and mares, all ages, and guaranteed breeders, for sale at my ranch near Lakeport, Lake Co., Cal. New catalogue now ready. Wm. B. Collier.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. None better.

REGISTERED HOLSTEIN CATTLE. Also best thoroughbred Poultry and Eggs. Address Hibbard & Ellis, Santa Rosa Breeding Association, Cal.

P. H. MURPHY, Perkins, Sac. Co., Cal., Breeder of Recorded Shorthorn Cattle and Poland China Hogs.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

PURE-BRED HOLSTEIN FRIESIAN Cattle for Sale. Bonnie Brae Cattle Co., Hollister, Cal.

JOHN LYNCH, Petaluma, breeder of thoroughbred Shorthorns. Young stock for sale.

JERSEYS—The Best Herd, all A. J. C. Registered, is owned by Henry Pierce, San Francisco.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

M. D. HOPKINS, Petaluma, importer and dealer in Eastern registered Shorthorns, Red Polled Cattle, Holsteins, Devons and Shropshire Sheep.

GEO. B. POLHEMUS, Coyote, Cal. Holstein-Friesian cattle, comprising males and females on advanced register. First premium in great milking test at State Fair, 1889, was won by a member of this herd.

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JERSEY BULL No. 468 P. C. J. C. C. for sale cheap. A fine four-year-old animal. Address Dellwood Poultry Yards, Napa, Cal.

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J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Cross-bred Merino and Shropshire Sheep. Rams for sale.

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KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

L. U. SHIPPEE, Stockton, Cal., importer and breeder of Spanish Merino Sheep, Durham Cattle, Jacks and Jennys & Berkshire Swine high graded rams for sale

ANDREW SMITH, Redwood City, Cal.; see adv't.

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TYLER BEACH, San Jose, Cal., breeder of thoroughbred Berkshire and Essex Hogs.

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APIARIAN SUPPLIES for sale by Mrs. J. D. Enas, Napa City, Cal.

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Italian Queens, $2.50 each; Black Queens, $1 each. Swarms from $2.50 each; Smoker, $1. Comb Foundation, $1.25 per pound; V-groove Sections, $4 per 1000 Comb Honey wholesale and retail; Hives, etc. W. STYAN & SON, The Homestead Apiary, San Mateo, Cal.

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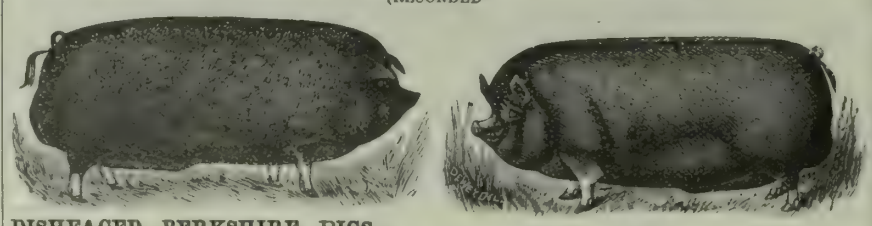
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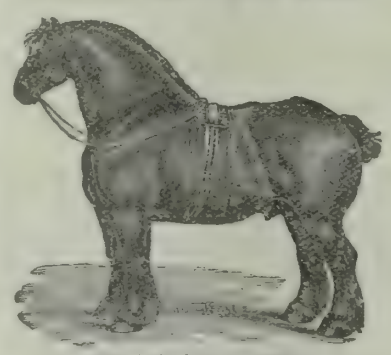
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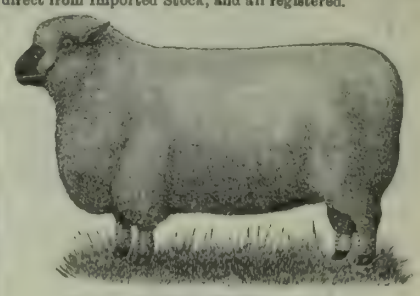
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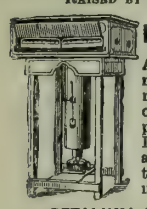
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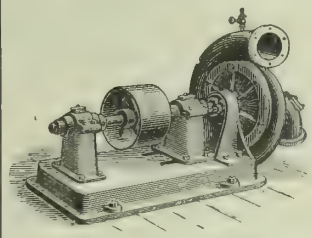
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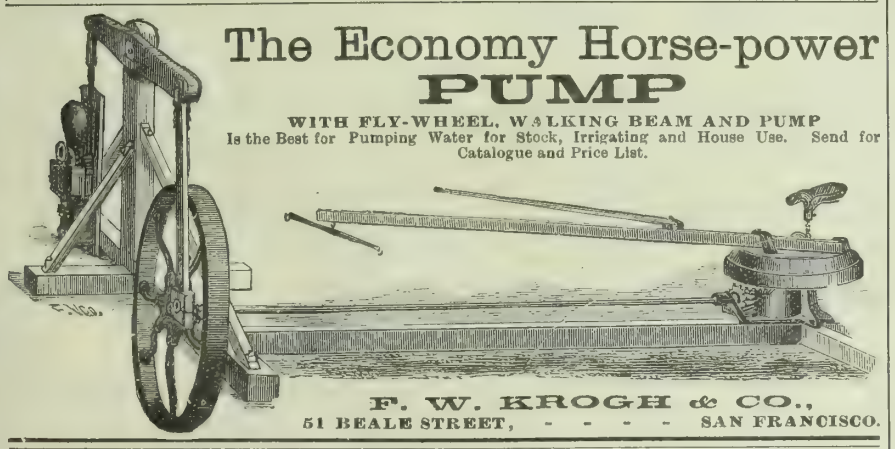


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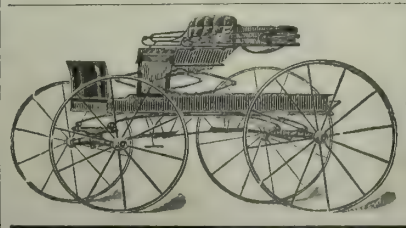
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Nov. 19, 1890.

Trade the past week in farm products has been fair. The advanced season necessarily lessens the number of articles dealt in, still the list is quite long. The money market has been working closer, which interferes with trading in cereals. The wheat markets abroad and at the East have shaded off. This is largely due to the close money markets in London and in New York, and also to lower prices for silver. The following is to-day's London cablegram:

LIVERPOOL, Nov. 19.—Wheat—Depressed. California spot lots, 7s 4d@7s 6½d; cargoes off coast, 38@38 6d; just shipped, 37s; nearly due, 37s 6d; cargoes off coast and on passage, slow; Mark Lane wheat, slow; French country markets, steady; wheat, and flour in Paris, quiet.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Nov.	Dec.	Jan.	Feb.	Mar.	April
Thursday	7s6d	7s6¾d	7s7¼d	7s7½d	7s8¼d	7s8½d
Friday	7s7d	7s7½	7s7¾	7s8¼d	7s8½d	7s8¾d
Saturday	7s6¾d	7s6¾d	7s6¾d	7s8d	7s8¼d	7s8¼d
Monday	7s6¾d	7s6¾d	7s6¾d	7s6¾d	7s6¾d	7s6¾d
Tuesday	7s6¾d	7s6¾d	7s6¾d	7s6¾d	7s6¾d	7s8½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	38s0d	37s6d	38s0d	Steady.
Friday	38s0d	37s6d	37s9d	Easier.
Saturday	38s0d	37s6d	37s6d	Quiet.
Monday	38s0d	37s6d	37 9d	Quiet.
Tuesday	38s0d	37s6d	37s9d	Dull.

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per bushel:

Day.	Nov.	Dec.	Jan.	Mar.	May	July.
Thursday	104	103	104¼	107	107⅝	...
Friday	99½	100⅜	101¼	104⅛	105⅛	103¼
Saturday	98½	99⅛	101	....	104⅝	...
Monday	100	101⅛	102¼	104⅜	105⅝	...
Tuesday	98⅛	99	100⅜	103⅛	104⅝	...

The closing prices for wheat have been as follows at Chicago for the past week, per bushel:

Day.	Dec.	May.	June.	July.
Thursday	96	102¼	...	...
Friday	94⅛	101⅛	....	....
Saturday	92⅝	100	....	....
Monday	93⅝	101⅛	....	....
Tuesday	91⅝	98⅝	....	....

NEW YORK, Nov. 19.—Wheat—98¼c for cash, 97⅜c for December, 99c for January, $1.02⅜@1.02½ for May, and 97⅞ for July.

CHICAGO, Nov. 19.—Wheat—89¾c for December and 97⅛c for May.

Foreign Grain Review.

LONDON, Nov. 17.—The *Mark Lane Express* says: English wheats are steady. Foreign is weak, owing to heavy Russian shipment. Foreign flours in the Scotch markets have dropped 6d, and in the English markets are flat and unchanged. Corn is firm. Oats are up 6d. At to-day's market English wheats were weaker and foreign were down 6d for California, Australian and Russian, but Indian was firmly held. American flour was steadier; corn was dull, and oats were in demand at a further advance of 6d.

Department of Agriculture Report on California Products.

WASHINGTON, Nov. 15.—The report of the Department of Agriculture on crops for November, issued to-day, says: The season has been the worst for fruit that the Department has reported. The extraordinary mildness of the winter, causing winter blooming and great tenderness of bud growth, rendered the frosts of March almost universally destructive. Peaches have been almost unknown in many parts of the growing sections, and apples are a rarity in great apple-producing sections, such as the Missouri river Bluffs and contiguous areas. The Ben Davis variety, which some people regard as better than nothing, is the mainstay of many markets. Pears have been almost equally scarce and necessarily high in price.

This dearth of fruit has brought into unusual prominence the products of California, which must always be considered separate and apart from the rest of the country. Millions have gone into the coffers of the growers of California peaches, plums, grapes, and citrus fruits. The raisin industry is driving Spanish raisins out of the country, and the olives of the Pacific Coast are competing with those of Spain.

The Florida orange crop is reported to be about two-thirds of a full yield. Pineapples, bananas, guavas, and other sub-tropical fruits are increasing their areas. It should be admitted that grapes are fairly abundant and prices reasonable.

The State agent says that hops in California have been a fair to medium crop of excellent quality and growers expect about 35c a pound for them, which will make the crop very remunerative. Beans are gaining in importance every year as a staple crop and the product has been up to the full average. The crop of peaches, apricots, cherries, plums, and prunes has been about 5 per cent of a general yield, the deficiency being caused by the unusually wet winter. The deficiency, however, has been fully made up by the higher prices obtained.

Figs are becoming more and more prominent and promise to be one of the leading fruits of the State. Almonds and walnuts have produced good crops and are very remunerative to producers. Oranges and lemons promise a full crop, and as the crop of this State comes in just when Florida's goes out, it bids fair to be a very paying industry. The grape crop has turned out better than expected, and the product has been very fine. The vintage is put down at 18,000,000 gallons, while large quantities of wine grapes have been dried, and the raisin crop will exceed that of last year.

Breadstuffs and the Panic.

NEW YORK, Nov. 16.—Few Exchange items escaped the financial blizzard that raged more or less during the week. Exhausted margins, frantic haste to realize or unload and peremptory selling advices from numerous mill producers caused some line or another of breadstuffs to suffer a semi-panic each day. The exporters took some advantage of the turmoil and secured considerable wheat and corn, but no legitimate demand could have absorbed the volume of property pressed for sudden sale, and in the uncertain outlook prices could not be attractively adjusted for speculation to any material extent.

Hops.

NEW YORK, Nov. 15.—Hops are reported in slightly better demand, chiefly for export account, but the offers made are invariably low, and little business has resulted. The absence of any pressure to sell under existing adverse conditions in financial circles is taken as strong evidence that dealers have confidence in the situation, and growers have only to follow the policy of city dealers to keep the values steady until the money situation changes for the better. With money easier, hops would very probably find freer movement. The foreign hop market is unchanged. The situation is about the same as here.

Visible Supply of Grain.

NEW YORK, Nov. 17.—The visible supply of grain is as follows: Wheat, 23,197,000 bushels, an increase of 497,000; corn, 5,658,000, a decrease of 726,000; oats, 3,971,000, a decrease of 14,000; barley, 4,765,000, an increase of 43,000.

Dried Fruits.

NEW YORK, Nov. 14.—The *Commercial Bulletin* says: No less than six packers of California raisins have already withdrawn quotations on strictly first-class loose and layers. In other words, they are out of the market apparently for the balance of the season. The packers referred to in some instances state plainly that it is impossible to fill all the old orders in full. Nearly everything coming forward is taken up for delivery on contracts, leaving very little supply here outside what may be held by jobbers, and a few of the latter have more goods than their trade requires. The lower grades of raisins are in fair supply, and the chances are there will be a considerable quantity of the same here before the holiday season closes, and that such goods may eventually become rather cheaper later on, while the tendency of values for first-class stock is just in the opposite direction.

NEW YORK, Nov. 15.—California hurrying forward her products in fulfillment of contracts causes some pressure in shipments, but many lines of produce for winter and spring use are yet to be made, and it is advancing close to the uncertain season for transportation. The Sunset route by way of New Orleans put three steamers on these specialties to arrive this week. Two are here, and the other will be due Saturday. Within two days there have been delivered here 1389 bales of wool, 1524 bales of hops, 19,638 boxes of raisins, 9480 cases and sacks of dried fruit and prunes and 20,000 cases of canned goods. Most of the raisins were consigned directly to New England. Despite the assertions of Pacific Coast papers of a large supply of California raisins and prunes, the fact is denied here, and it is reported several packers are making cash settlements on three brands. Prunes sold ahead early in the season, instead of guaranteeing deliveries later on. It is said nearly everything in the line of first-class raisins and prunes that arrives goes for delivery on back orders, but buyers are very exacting and reject goods not up to expectations.

NEW YORK, Nov. 16.—Common California raisins neglected and easy, Valencia drawing off the trade. Prime, firm; clusters, $2.60; three-crown, $2@2.15; selections, in a small way, $2.25; bags, good order, 8¼c; useful rain-damaged, 6c. Three Sunset route steamers landed 29,719 boxes of raisins, 1500 bbls. of flour, 57,000 boxes of dried fruit and prunes, 2833 bales hops, 2961 lbs. wool, and about 30,000 cases of canned fruit. The raisins were chiefly for New England. Unpeeled dried peaches are decidedly sick; 15c, best price for best goods. Apricots, nominally quoted at 18@18½c in sacks, 19@20c for boxes. Fair inquiry for a prime quality of prunes; no better prices.

NEW YORK, Nov. 15.—A carload of 3-crown loose California raisins in bags is reported to have been sold at 8c ₩ lb. to arrive. A cargo of first-class California evaporated apricots is held at 20c ₩ lb. Supplies in first hands here are moderate at present. Genuine California Sultana raisins in boxes have sold as high as 12c ₩ lb. on the spot. Seedless Muscatels can be bought much lower.

The *Mercantile Journal* continues its complaints on the delayed railway service from California.

NEW YORK, Nov. 18.—The distribution of California raisins, prunes, apricots, peaches, etc., in delivery on back orders continues to absorb the greater portion of the supply going forward from primary points, and now a satisfactory settlement having been made in instances where weather conditions have placed packers at some disadvantage, it is presumed matters in this branch of the trade will proceed smoothly during the balance of the season. There are at present no signs that the supply of first-class goods will turn out larger than indicated one week ago. The indications are, however, that the relation of supply and demand, independent of a speculative movement, will hold values firm.

Eastern Wool Markets.

NEW YORK, Nov. 14.—*Bradstreet's* will say tomorrow: Since the election a quieter feeling has prevailed in the wool market. There is a better demand for the finer grades than for medium or lower grades of wool. During the past week sales of Ohio X and fine long staple Wyoming wools have been made at higher figures than at any time during the year. Manufacturers are showing more care in their selections of wools. They are accepting quotations on fine wools, but they are not paying the price asked for inferior wools. There is a good steady demand for Ohio and Michigan wools, and prices are ruling very firm. Territory are still selling well. There are few Texas wools to be had, and values are very high for those which dealers happen to have. California wools are moving well. Sales of Australian wools have not been large. Advices received from Melbourne state that the supply in market is light and the quality is below the average. Carpet wools are quieter. There is some call for pulled wools. Quotations have not been changed.

New Mexico's Wool Clip.

ALBUQUERQUE (N. M.), Nov. 17.—Now that the wool season is over in New Mexico, local dealers estimate that the entire crop of the Territory will foot up to 15,000,000 pounds, divided as follows among the dealers here: Eisemann Brothers, 4,500,000; George Oberne & Co., 2,225,000; H. M. Hosick & Co., 2,000,000, and Benjamin McLean & Co., who deal principally in hides and pelts, 300,000 pounds. The four dealers named have handled over 9,000,000, and it is safe to state that at least 200,000 pounds more were purchased and shipped by private individuals. The next largest market is Las Vegas, but Albuquerque buyers have this year controlled that market; then comes Santa Fe, Springer, Los Lunos, Raton and the San Juan country.

Local Markets.

BARLEY

	Buyer Season. H.	L.	Seller 1891 H.	L.	Buyer 1890. H.	L.
Thursday	156⅛	155½	...	...	149⅜	149⅛
Friday	156½	155⅝	112	112	151	150⅜
Saturday	156⅜	155	...	...	....	....
Monday	157	156⅜	112¼	112¼	151⅜	151⅛
Tuesday	157	156⅜	...	...	151⅜	150½

WHEAT

	Seller Season.	Buyer 1891.	Buyer 1890.	Buyer Season.	Seller 1890
Thursday	h.	....	135⅝	143⅜	....
	l.	....	135¼	143⅛	....
Friday	h.	....	134⅝	143⅜	....
	l.	....	134⅜	143	....
Saturday	h.	....	134⅜	143	....
	l.	....	134⅛	142⅝	....
Monday	h.	....	134⅞	143⅛	....
	l.	....	134⅝	143	....
Tuesday	h.	....	133	142	....
	l	....	131⅛	141⅝	....

BAGS — The market for standard-sized hand-sewed continues dull and easy at 6¼@6½c for May-June delivery.

BARLEY—The sample market has made another upward move under light supplies and a steady demand. On Call, trading has been more active, with a slight advance recorded. The following are to-day's reported sales:

Morning Session: Buyer 1890—100 tons, $1.52; 200, $1.51⅞. Buyer season—400 tons, $1.57; 100, $1.56¾; 300, $1.56½; 100, $1.56⅜; 100, $1.56⅝ ₩ ctl. Afternoon Session: Buyer 1890—100 tons, $1.51⅝; 100, $1.51¼; 200, $1.51⅜. Buyer season—100 tons, $1.56⅜; 300, $1.56⅜; 100, $1.56¾; 300, $1.56¼; 200, $1.56⅛ ₩ ctl.

BUTTER—The market shows another slight advance for choice to gilt-edged. The supply is light, while the demand is free. Gilt-edged pickled sold as high as 35c the past week. Many dealers are using solid butter in preference to roll.

CHEESE — The market continues to creep up under lighter receipts and a fair demand.

EGGS—There is a good holiday demand, which keeps prices well up in the face of free receipts. The receipts of Californian the past week were larger than for some time past.

FLOUR—The market is weaker, with concessions said to be obtainable.

WHEAT—The sample market has been dull, with buyers naming lower prices. Large holders are indifferent sellers, preferring not to offer on such a market. In futures, trading has been light. The following are the reported sales made on to-day's Call:

Morning Session: Buyer 1890—200 tons, $1.31; 100, $1.31⅛; 500, $1.31¼; 300, $1.30¾. Buyer season—200 tons, $1.40⅞; 300, $1.41; 200, $1.40⅝; 100, $1.40¾; 200, $1.40⅝ ₩ ctl. Afternoon Session: Buyer 1890—400 tons, $1.31; 300, $1.31⅛. Buyer season—200 tons, $1.41; 100, $1.41⅛ ₩ ctl.

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Nov. 18th, were as follows:

Flour, qr. sks.	73,997	Middlings, sks.	2,562
Wheat, ctls.	343,065	Alfalfa, "	....
Barley, "	15,034	Chicory, bbls.	45
Rye, "	400	Broomcorn, bdls.	....
Oats, "	8,031	Hops, bls.	133
Corn, "	10,165	Wool, "	919
*Butter, "	417	Hay, tons	1,931
do bxs	148	Straw, "	113
do bbls	6	Wine, gals.	202,440
do kegs	4	Brandy, "	29,110
do ½ do	....	Raisins, bxs	8,882
†Cheese, ctls	373	Honey, cs	327
do bxs	10	Walnuts, sks.	1,127
Eggs, doz.	47,190	Flaxseed, sks	3,027
do " Eastern.	105,420	Mustard, sks	1,850
Beans, ctls.	5,551	Almonds, sks	746
Potatoes, sks.	32,067	Peanuts, sks.	....
Onions, "	605	Popcorn, sks.	66
Bran, sks.	15,195	Beet sugar, bbls.	....
Buckwheat, sks.	174	do do sks.	2,419

*Overland 4 ctls. †Overland 231 ctls.

Cereals.

The local wheat market the past week ruled dull and inactive. The stock panic abroad and at the East has much to do with the present condition of the world's wheat market. The difficulty of securing liberal accommodations on cargoes for shipment throws the burden of purchases upon large financial, speculating firms who are never slow in reaping a harvest of low prices when given the opportunity. Until the present panic subsides, it will be hard to give correct information on the markets abroad, so as to guide us more intelligently in outlining the probable course of prices here. It now looks as if exporters will hasten their shipments of wheat so as to clear up their holdings to take advantage of any forced sales due to sellers raising money to meet their annual taxes. The wheat situation throughout the world is undoubtedly in favor of holders, yet temporary inconveniences (close money markets being the principal) are against them. It now looks as if these will be removed before the turn of the year, after which better prices ought to obtain. The tonnage situation with us is against wheat in the immediate future, but as the supply afloat is quite large, larger than at this time in 1889, there appears to be a silver lining for those who do not sell at present.

Barley has moved up another peg. The demand continues quite strong. It appears to be based legitimately and not speculatively. The high prices have been instrumental in keeping large speculators from loading up, fearing they were fictitiously founded. Speculators not buying, goes far in confirming the general opinion that the slow but steady up movement may continue for a time at least. The dry weather is in favor of holders. Oregon and Washington are sending us fair supplies, but in those States the visible supply is said to be light.

As intimated by this paper over a month ago as liable to occur, oats have steadily appreciated in prices, with quite an advance the past week. The consumption or feeding of oats is steadily enlarging on this coast. This is natural, as attention is drawn to the breeding of thoroughbred horses. In this city the majority of owners of fast animals are reported as confining their feed as much as possible to oats in preference to other cereals.

Corn has made another up move. Judging from appearances it looks as if a successful corner is being run by one or more large firms in this city. The crop in this State did not turn out as well as was expected, while the demand has been uniformly good.

Rye is steady at full prices. Holders do not appear to be pressing the market.

Buckwheat is without essential change.

Feedstuff.

In ground feed there is a continued free demand. Middlings have shaded off some, but rolled barley, cracked corn and feedmeal are stiff at a slight advance. Oregon and Washington are sending us liberal supplies of bran, screenings, and fair supplies of middlings.

Choice to extra choice hay holds steady, although there is a movement to break prices. The scarcity of cars has unquestionably had much to with the market, yet it is doubted by some that a free supply of cars for shipping hay to market will have now any material effect. This opinion is claimed to be founded on advices that the stock to be drawn from is light.

Fruit and Canned Goods.

The shipments of fruit and canned goods to the East by rail in October were as follows:

From	Canned Goods	Dried Fruit.	Green.
San Francisco, lbs.	8,872 810	982,440	20,930
Los Angeles	25,110	98,780	73,440
Sacramento	2,966,490	3,339,190	6,497,070
San Jose	4,549,900	4 646,150	3,482,430
Marysville	1,286,230	480,470	129,150
Colton	304,190	613,230	.....
Stockton	325,040	2,168,660	698,440
Oakland	136,950	252 480	697,680
Totals	17,966,720	12,581,400	11,599,440
July	4 839,930	2,869,140	13,194,260
August	14,965,470	5 410,850	20.768 260
September	18,489,460	10,710,360	17,559,840
Since July 1	56,261,570	31,571,750	63,121,800

The total shipments of raisins from the State in the past month were 8,973,670 lbs. against 3,478,780 in September. None were sent East in July or August. During the four months ending Oct. 31, 1889, the shipments were as follows: Canned goods, 24 462,490 lbs.; dried fruit, 25 414,420 lbs.; green fruit, 38,281,100 lbs.; raisins, 10,886,380 lbs.

The totals for the past ten months compare as follows with the shipments in 1889:

Articles.	Ten Months 1889	1890.
Canned Goods	30,102,230	70,161,490
Dried Fruit	28,174,900	33 966,450
Green Fruit	62,319,910	84,587,030
Raisins	11,575,790	14,029,470
Totals	132,072,880	202,744,440

Showing the following gains for 1890: Canned goods, 40,159,210 lbs.; dried fruit, 5,791,550; green fruit, 22,267,120; raisins, 2,453,680.

Fruits.

Frosts the past week touched, in some localities, the grapevine, but as the season is drawing to a close no damage is expected. Lighter receipts of grapes caused the more choice good keepers to strengthen toward the close. Free shipments were made up north during the week. Wine grapes are so far out of season as to cause quotations to be nominal, consequently they are withdrawn.

Apples are fairly steady. The market remains remarkably steady considering the heavy receipts; it is only at times that concessions are necessary to close out a consignment. The above refers to the more choice, as common and defective are hard to place at any time. Choice northern and foothill Spitzenbergs command, at present, the highest prices.

Pears are virtually unchanged.

Raisins continue to go East on contract purchases. The shipments so far this season aggregate over 850,000 boxes. This indicates that the pack this year will be all of 1,500,000 boxes. Taking the pack as a whole, it grades better than it did in 1889. There has been better curing, grading and packing. It now looks as if the pack, large as it is, will go into distribution before the spring months are passed.

Vegetables.

Frosts have killed the different vines, making quotations for several kinds of vegetables worthless, consequently they are withdrawn.

Cauliflower is large sized, but with heavier frosts it will soon be of the past. Celery is in fair receipt. Cabbages continue to come in fairly free. The demand is good. In root vegetables there is nothing new to report.

The receipts of onions continue light, but as the demand is only fair, prices do not show any material change. Oregon is sending us small consignments.

The receipts of potatoes have been quite large, yet the market held up fairly well. Many of the consignments consist of poor potatoes which always have an unfavorable influence on the market. Choice Burbanks from Oregon and choice Peerless from Salinas are said to command the highest prices. The shipments by overland rail have fallen off, which is against the market. There has been some buying of seed potatoes.

Live-stock.

Bullocks continue easy. Interior roads being remarkably good admit of free marketing of cattle. Their condition is said to be better than at this time last year. Mutton sheep are offering fairly free. Hogs continue firm for the block and also for packing. Lambs and calves are firm under moderate offerings. In milch cows and horses there is nothing new to report.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS — On foot, light grain fed, 4½@4½c ₩ lb; dressed, 7@8c ₩ lb.; heavy, 4@4¾c ₩ lb.; dressed, 6½@7½c ₩ lb. Stock hogs, 3@3½c ₩ lb.

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¼@5¾c ₩ lb.; second quality 4¾@5c ₩ lb.; third quality, 4c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6½@8½c ₩ lb.; large, 6@7c.

MUTTON—Wethers, 7c ₩ lb.; ewes, 6½c ₩ lb.; lamb, spring, 8@9c.

Miscellaneous.

In quoting Call Board sales of grain the term "buyer" means that the buyer can call for the stuff

bought at any time before the contract time expires. The term "seller" means that the seller can deliver the stuff at any time before the contract time expires. All deliveries must be made before the contract time expires.

Exceptionally heavy receipts of poultry from points on the Missouri river broke the market and caused low prices to obtain throughout the week, although toward the close there is a firmer tone, owing to the market being cleaned up. There is a Thanksgiving demand for turkeys and large, fat chickens.

Dried peas are higher and strong at the advance.

Beans are in steady demand, with bayos strong at a slight advance.

All kinds of game are in heavy supply, causing an unsatisfactory market.

Hops are firm at full prices. Receipts are light. The demand is fair. The stringent money market at the East and abroad has not, so far, had any depressing influence on the market.

Wool is quiet but steady. A change in the cut of men's wear caused a slightly improved demand for some grades of wool to meet the demand for men's cloth goods. The feeling here is hopeful of a fairly active demand next season, but no improvement in prices is looked for, owing to the high tariff on necessary foreign wools for mixing.

Honey and beeswax are firm, with a good demand ruling for the season.

The exports by sea the past week aggregate as follows: Wheat, ctls, Fleetwood, 58,923; Cork. 129,050; Liverpool, 85,695. Flour, bbls, Nanaimo, 265; Honolulu, 217; Japan, 2317; Manilla, 500; Central America, 3237; Panama, 402; Victoria, 111. Beans, lbs, Sydney, 2436; Auckland, 675; China, 1948; Boston, 35,384. Canned fruits, cs, Auckland, 75; Townsville, 145. Corn, ctls, Central America, 1034. Raisins, bxs, Auckland, 75; Nelson, 25; Honolulu, 20; Central America, 914; Victoria, 60. Dried Fruits, lbs, 4450. Hay, bls, Honolulu, 211. Wine, gals, Japan, 2400; New York, 39,782; Central America, 779.

The railroad shipments last week aggregate as follows, in pounds: Beans, 4,581,350; brandy, gals, 407,390; canned goods, 17,966,720; fruit, dried, 12,581,400, deciduous, 11,599,440; hops, 1,518,190; mustard seed, 74,830; potatoes, 1,813,430; raisins, 8,973,670; wine, gals, 6,587,090; nuts, 541,010; honey, 150,350; wool, grease, 2,209,860, pulled, 125,570, scoured, 929,260.

From the *Commercial News* of Nov. 18th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	279 013	211,665
On the way to neighboring ports	17,358	10,409
In port, disengaged	16,741	26,963
In port, engaged for wheat	48,170	78,440
Totals	361,282	327,467

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Nov. 12, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	3,979 461	4,282 999
Flour, bbls	427,785	421,316
Barley	160,459	778,603

Dried Fruits, Etc.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations.

Prices named, unless otherwise specified, are for fruit in sacks. Add for 50-lb. boxes ½c per lb., and for 25-lb boxes ½c to 1c per lb.

Apples, sun-dried, quarters, common	6½@ —
" " " prime	7 @ —
" " " choice	8 @ —
" " sliced, common	7½@ —
" " " prime	8 @ —
" " " choice	8½@ —
" Evap. bleached, ring, 50-lb boxes	10¾@ 11½
Apricots, sun-dried, unbleached, common	10½@ —
" " " prime	12½ @ —
" " " choice	13½@ —
" " bleached, prime	16 @ —
" " " choice	17 @ —
" " " fancy	18 @ —
" Evap. choice, in boxes	18 @ —
" " fancy, "	19 @ —
Figs, sun-dried, black	2½@ 3½
" " white	— @ —
" " " washed	@ —
" " " fancy	8 @ 10
" " " pressed	4 @ 6
" " " unpressed	2½@ 3½
" Smyrna boxes	12 @ 14
" do sacks	10 @ 12
Grapes, sun-dried, stemless	3½@ 4½
" " unstemmed	2 @ 3½
Nectarines, Red, sun-dried	10 @ 13
" evaporated, in boxes	13½@ 14½
" white, sun-dried	12 @ 15
" evaporated	17 @ 19
Peaches, sun-dried, unpeeled, common, bleached	9 @ 9½
" " " prime, "	10 @ 11½
" " " choice, "	13 @ 14½
" " " fancy	15 @ —
" evaporated " choice	15 @ 16
" " " fancy	18 @ —
" sun-dried, peeled, prime, bleached	20 @ —
" " " choice	23 @ —
" " " fancy	24 @ —
" evaporated, " in boxes, choice	26 @ —
" " " fancy	27½@ —
Pears, sun-dried, quarters	7 @ 9
" " sliced	9 @ 10
" evaporated, " in boxes	10 @ 11½
" " ring "	12 @ 13
Plums, pitted, sun-dried	9½@ 11
" " evap. in boxes, choice	11 @ 12
" " " fancy	13 @ 14
" unpitted	5 @ 8
Prunes, Cal. French, ungraded sizes	9 @ 9½
" " " graded " 90 to 100	8½@ —
" " " " " 80 to 90	9 @ —
" " " " " 70 to 80	9½@ —
" " " " " 60 to 70	9¾@ —
" " " " " 50 to 60	10½@ —
" " " " " 40 to 50	11½@ —

Fancy sell for more money.

RAISINS.

Halves, quarters and eighths, 25, 50 and 75 cents higher respectively than whole box prices.

London Layers, choice, ¾ bx	$1 80 @ 2 10
" fancy, "	2 25 @ 2 50
Layers, ¾ bx	1 50 @ 2 00
Loose Muscatels, common, ¾ bx	1 15 @ 1 35
" choice, "	1 50 @ 1 75
" fancy, "	1 80 @ 1 90
Unstemmed " in sacks, ¾ lb	4 @ 6
Stemmed " " "	4 @ 7
Seedless " " "	6 @ 7
" " ¾ 20-lb bx	1 15 @ 1 25
" Sultanas, unbleached, in bxs	1 15 @ 1 25
" " bleached "	1 25 @ 1 30

CALIFORNIA HONEY.

Comb, dark, 2-lb. frames, 60-lb. cases, ¾ lb	4 @ 5
" amber, " " cs. new "	4½@ 5½
" white " " " "	9 @ 12½
Extracted, dark, 5-gal. cans, 2 cans to case, ¾ lb	4 @ 4½
" amber, " " "	4½@ 5
" white, " " "	5½@ 6
Comb, 2-tins, 2 doz. to case, ¾ doz	— @ —
Extracted, " "	— @ —
" 4-lb. tins, 1 doz. "	— @ —
Beeswax, per pound	22½@ 25

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Nov. 19, 1890

BEANS AND PEAS.

Bayo, ctl	4 00 @ 4 10
Butter	2 75 @ 3 05
Pea	2 50 @ 3 00
Red	2 50 @ 2 75
Pink	2 10 @ 2 35
Small White	2 50 @ 2 70
Lima	3 50 @ 3 80
Fld Peas, blk eye	1 50 @ 1 70
do green	2 50 @ 2 75
do Nies	1 35 @ 1 55
Split	6 @ —

BROOM CORN.

Choice to Extra	60 00 @ 75 00
Fair to Good	45 00 @ 55 00
Poor	40 00 @ —

CHICORY.

California	5½@ 6
German	6 @ 6¾

DAIRY PRODUCE, ETC.

BUTTER.

Cal. Poor to fair, lb	15 @ 27½
do good to choice	30 @ 37½
do Giltedged	40 @ 42½
do pickled	27½@ 35
do in kegs	22½@ 27½
do Creamery in rolls	42½@ 45
Eastern do	— @ —
do do, in tubs	30 @ —

CHEESE.

Cal. choice mild	12 @ 13
do fair to good	10 @ 11½
do gilt edged	13 @ 14
Young America	13 @ 15
N. York Cream	13 @ 15
Western	11 @ 13

EGGS.

Cal. ranch, doz	42½@ 45
do do sel'cted	45 @ 47½
do. store	35 @ 40
Est'rn, cld st'rage	@ —
do fresh	25 @ 30
do selected	32½@ —

FEED

Bran, ton	20 00 @22 00
Feedmeal	29 00 @30 00
Gr'd Barley	32 00 @35 50
Middlings	25 00 @27 00
Oil Cake Meal	25 00 @27 00
Manhattan Food Per 100 lbs	7 50 @ —

HAY.

Compressed	14 00 @19 00
Wheat, per ton	12 00 @17 00
do choice	18 00 @ —
Wheat and Oats	12 00 @15 50
Wild Oats	12 00 @15 00
Tame do	12 00 @15 00
Barley	9 00 @13 00
Barley and Oats	10 00 @14 00
Alfalfa	12 00 @13 00
Straw bale	70 @ 80

FLOUR.

Extra, City Mills	4 25 @ 4 50
do Co'try Mills	4 20 @ 4 50
Superfine	3 25 @ 4 00

GRAIN, ETC.

Barley, feed, ctl	1 47½@ 1 52½
do Choice	1 55 @ —
do Brewing	1 55 @ —
do do Choice	1 57½@ —
do do giltedg'd	1 65 @ —
Chevalier cace	1 55 @ 1 60
do com to good	1 40 @ 1 50
Buckwheat	2 00 @ 2 25
Corn, White	1 37½@ 1 42½
Yellow, large	1 37½@ 1 42½
do, small	1 37½@ 1 42½
Oats, milling	2 00 @ 2 05
Surprise	1 95 @ 2 10
Choice feed, ch'c	2 00 @ —
do good	1 80 @ 1 90
do fair	1 70 @ 1 77½
do Gray	1 75 @ 1 80
do Black	1 70 @ 1 90
do do for seed	2 00 @ 2 05
Rye	1 30 @ —
Wheat, milling. Gilt edged	1 40 @ —
do Choice	1 37½@ —
do fair to good	1 33½@ 1 35
Shipping, cho'ce	1 35 @ —
do good	1 32½@ —
do fair	1 30 @ —
Sonora	1 30 @ 1 32½

HIDES.

Dry light to h'vy	10 @ 11
Salted	5 @ 8½

HOPS.

Oregon, 1890	32½@ 40
Cal 1890 Choice	37½@ 40
do Fair to G'd	32½@ 35

NUTS—JOBBING.

Walnuts, Cal. lb	8 @ 9
do Ch'ce	9 @ 11
Almonds, hd shl.	6 @ 7
Softshell	14 @ 15
Paper shell	15 @ 16½
Brazil,	19 @ 20
Pecans mall	11 @ 14
do large	17 @ 18
Peanuts	4½@ 5½
Filberts	11 @ 13
Hickory	6 @ 8
Chestnuts	12 @ 15
Pine nuts	7 @ 8

ONIONS.

Silver Skin	3 00 @ 3 25

POTATOES.

Early Rose, sks	60 @ 75
Chile	95 @ 1 10
Peerless	70 @ 90
do Salinas	1 00 @ 1 10
River Reds	90 @ 1 00
Humboldt	— @ —
Burbanks	80 @ 90
do Salinas	1 00 @ 1 40
Sweet	2 00 @ 2 50

POULTRY AND GAME.

Hens, doz	4 50 @ 6 50
Roosters, old	5 00 @ 6 00
do young	4 50 @ 5 50
Broilers, small	2 50 @ 3 50
do large	4 00 @ —
Fryers	4 50 @ —
Ducks, tame	4 00 @ 5 50
do large	6 00 @ 7 00
Geese, pair	1 75 @ 2 25
Turkeys, Gobbler	13 @ 15
Turkeys, Hens	14 @ 16
do dressed	15 @ 17
Pigeons	1 75 @ 2 50
Rabbits, doz	1 00 @ 1 25
Hare	1 25 @ 2 00
Venison	6 @ 8
Dove	50 @ 75
Quail	75 @ 1 00
Snipe, English	1 25 @ 1 50
do Jack	50 @ 60
Ducks, Mallard	3 00 @ 4 00
do Canv'sback	4 00 @ 5 00
do Sprigs	1 50 @ 1 75
do Teal	1 25 @ 1 50
do Widgeon	1 00 @ 1 25
do Small	75 @ 1 00
Geese, Gray	2 25 @ 2 75
do white	1 00 @ 1 50
Brant	1 00 @ 1 50
Honkers	4 00 @ 5 00

EGG FOOD.

Manhattan, ¾ lb	12 @ —

PROVISIONS.

Cal. Bacon. Heavy, lb	10½@ 11
Medium	12 @ —
Light	13 @ 13½
Lard	9 @ 11
Cal. Sm'k'd Beef	11 @ 12
Hams, Cal	13 @ 14
do Eastern	14 @ 15

SEEDS.

Alfalfa	8 @ 8½
Canary	3½@ 4
Clover, Red	11½@ 11½
White	17½@ 20
Cotton	20 @ —
Flaxseed	2 @ 3
Hemp	4 @ 5
Italian Rye Grass	10 @ 11
Perennial	7 @ 9
Millet, German	5 @ 6½
do Common	5 @ 6
Mustard, yellow	1 90 @ 2 25
do Brown	2½@ 3
Rape	1½@ 1½
Ky. Blue Grass	14 @ 16
2d quality	13 @ 14
Sweet V. Grass	75 @ —
Orchard	12 @ 14
Hungarian	7½@ 8
Lawn	27½@ 40
Mesquit	6 @ 7
Timothy	6 @ 7

TALLOW.

Crude, lb	3 @ 5
Refined	6 @

WOOL, ETC.

SPRING—1890.

Humboldt and Mendocino	19 @ 24
Sac'to valley	15 @ 22
Free Mountain	18 @ 24
S Joaquin valley	12½@ 17
do mountain	17 @ 22
Cala'v & F'th'l	15 @ 24
Oregon Eastern	13 @ 22
do valley	20 @ 25
So'n Coast, def	10 @ 14
So'n Coast, free	12½@ 19

FALL—1890.

North'n, choice	16 @ 18½
do defective	14 @ 16
Mountain Free	13 @ 15½
San Jo quin defective	9 @ 11½
Southern do	9 @ 11½

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE, Nov. 12-18.	Olympia. Rain	Temp.	Wind	Weather	Portland. Rain	Temp	Wind	Weather	Eureka. Rain	Temp	Wind	Weather	Red Bluff. Rain	Temp.	Wind	Weather	Sacramento. Rain	Temp	Wind	Weather	S.Francisco. Rain	Temp	Wind	Weather	Fresno. Rain	Temp	Wind	Weather	Keeler. Rain	Temp	Wind	Weather	Los Angeles. Rain	Temp	Wind	Weather	San Diego. Rain	Temp	Wind	Weather
W.	.00	52	S	Cy.	00	44	N E	Cl.	.....	.....	.....	.....	.00	72	N	Cl.	.00	66	S E	Cl.	.00	66	SW	Cl	00	68	S	Cl	.00	64	N	Cl	00	66	W	Cl.	.00	62	SW	Cl
T.	.00	50	W	Cl	.00	52	N	Cl.	.00	52	SW	Cl.	.00	76	Nw	Cy.	.00	66	S	Cl.	.00	62	W	Cy.	00	66	N	Cl.	.00	62	N	Cl	00	72	E	Cl.	.00	66	0	Cl.
F.	.00	46	N	Cl.	.00	46	Nw	Cl.	.00	58	S E	Cl.	.00	72	Nw	Cl.	.00	62	0	Cl.	.00	68	N E	Cl.	.00	68	Nw	Cl	.00	66	E	Cl.	00	64	Nw	Cl.	00	62	Nw	Cl
S.	.00	48	SW	Cl.	.00	52	0	Cy.	.....	.....	.....	.....	.00	66	S E	Cy.	.00	62	N	Cl.	.00	53	SW	Cy.	00	70	0	Cy	.00	58	Nw	Cy	.00	64	Nw	Cy.	00	70	W	Cl
S.	.00	50	N	Cy.	.00	48	W	Cl.	.....	.....	.....	.....	.00	64	S	Cl.	.00	62	0	Cl.	.00	56	SW	Cl.	00	70	W	Cl	.00	54	N E	Cl	00	72	W	Cl.	.00	66	N	Cl.
M.	.00	52	S W	Cy.	.00	50	SW	Cy.	.00	48	Nw	Cl.	.00	64	S E	Cl.	.00	60	0	Cl.	.00	64	Nw	Cl.	00	68	W	Cl.	.00	56	E	Cl	00	68	W	Cl	00	66	0	Cl.
T.	.00	48	Nw	Cl	.00	50	N	Cl.	.00	50	N	Cl.	.00	66	S E	Cl.	.00	66	N	Cl.	00	64	N	Cl.	.00	68	N	Cl	.00	54	N	Cl	00	68	W	Cl.	.00	62	SW	Cl.
	.00				.00				.00				.00				00								.00				.00				00				00			

EXPLANATION. Cl. for clear; Cy, cloudy; Fr., fair; Cm., calm; – indicates too small to measure. Temperature wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Nov. 19, 1890.

Bananas, bunch	1 25 @ 2 50
Cranberries	9 00 @12 00
Limes, Mex	4 00 @ 5 50
Lemons, Cal., bx	2 00 @ 5 00
do Sicily, bx	7 00 @ 8 50
do Malaga	7 00 @ 8 50
Pineapples, doz	3 00 @ 5 00
Strawberries chest	9 00 @11 00
Pears, bx	75 @ 1 50
Apples com box	25 @ 60
do good	90 @ 1 15
do choice	1 25 @ 1 50
do do Red	1 50 @ 2 00
Grapes, box	20 @ 50
do Muscats	35 @ 50
do Rose of Peru	35 @ 45
do Tokay	40 @ 60
do Blk Hamb'rg	25 @ 50
do Isabella	40 @ 60
do Malvoise	35 @ 45
do Cornichon	60 @ 75
Crabapples, box	75 @ 1 00
Quinces, box	50 @ 75

VEGETABLES.

Okra, dry, lb	6 @ 10
do green bx	1 00 @ 1 25
Parsnips, ctl	1 25 @ —
Peppers, dry, lb	12 @ —
do green, bx	40 @ 60
Turnips, ctl	75 @ —
Beets, sk	— @ 1 00
Cabbage, 100 lbs	50 @ 60
Carrots, sk	30 @ 45
Lima do	4 @ —
Marrowfat, ton	10 00 @12 00
Hubbard	5 00 @20 00
Garlic, lb	8 @ 10
Egg Plant, bx	60 @ 80
Cauliflower doz	50 @ 75

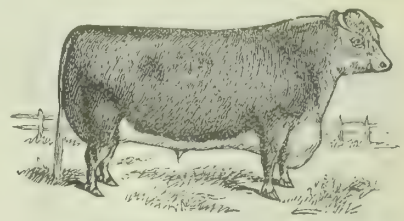
Rope.

Baling, Duplex, lb	11
" Manilla, lb	14
Twine, for hops, balls, tarred, lb, Manilla	15
" " grape vine, balls, lb	15½
" " " coils, lb	15½
" spring, lb	1
" binder (650 ft. to lb), lb	15

Duplex twine 3c per lb less.

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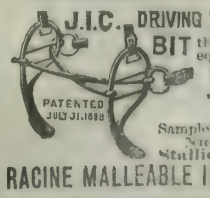


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THE RAPIDITY OF THOUGHT.—Much speculation has been set on foot in regard to the rapidity of thought; but Prof. Donders of Utrecht has recently made some interesting experiments in this direction by means of two instruments which he calls respectively the "neomatachograph" and the "nernatachometer." His experiments thus far show that it takes the brain one sixty-seven hundredths of a second to elaborate a single idea. He says: "Doubtless the time required for the brain to act is not the same in all individuals. I believe, however, that these instruments may be so far perfected that we shall be able to determine the mental caliber of our friends without our friends knowing that we are testing their aptness." And again: "For an eye to receive an impression requires seventy-seven hundredths of a second; and for the ear to appreciate a sound, one hundred and forty-nine hundredths of a second is all that is necessary, which, however, acts with nearly double the rapidity of the eye."

A SCIENTIFIC MOSQUITO BAR.—Word comes from Paris of the invention of what may be called the alternating mosquito bar. This consists of a mosquito net made of extremely fine copper wire woven into a cloth, which is strong and at the same time almost as pliable as a netting made of vegetable fiber. This net is made in the usual form of a canopy and falls in shining folds about the bed. In the dome of the canopy hangs a small electric lamp. Wires connect the netting with a weak pile battery placed under the bedstead, and by means of a converter are carried into the lamp. The lighted lamp attracts the attention of all the mosquitoes in the neighborhood, and they come sailing over and light upon the wire canopy. The battery presses the button, and the mosquitoes do the rest. M. Scherer, the inventor, says that on the first morning after his net had been put into use, his servant took up 3.22 litres, or nearly three quarts of dead mosquitoes.

A TIDE-LAND DECISION.—The United States Circuit Court at Tacoma, in the tide-lands case there, holds that under the land laws of the United States the line of high tide is the boundary between land and water, and that an Act of Congress cannot be construed so as to authorize the entry of mud flats on tide lands bare at low tide, but subject to daily overflow.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

H. KELLEY—Modoc and Lassen Cos.
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WM. M. HILLEARY—Oregon.
HENRY STACKY—Oregon.
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From a Recent Letter.

"Please find inclosed Wells-Fargo order for the sum of $6 for two years' subscription on the PACIFIC RURAL PRESS; and I wish to say it is always welcome in my home, and I think it is too good a paper to be without."

A CHICAGO firm lately received an order for $130,000 worth of machinery for China.

"Are n't you ever going to grow old, like the rest of us?" asked a man of an acquaintance he had n't seen for some time. "Well, not so long as I can purify my blood with Ayer's Sarsaparilla," was the apt reply. This man knew what he was talking about.

$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST market rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California St., San Francisco. **

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TO LOAN ON MORTGAGE ON RANCHES AND CITY real estate below market rates. HOWE & KIMBALL, 508 California St., S. F. **

BUGGIES, Buckboards, Spring Wagons, Surreys and Road Carts. Write for our new catalogue. Baker & Hamilton, San Francisco and Sacramento.

FOR DYSPEPSIA,
Ayer's Sarsaparilla

Is an effective remedy, as numerous testimonials conclusively prove. "For two years I was a constant sufferer from dyspepsia and liver complaint. I doctored a long time and the medicines prescribed, in nearly every case, only aggravated the disease. An apothecary advised me to use Ayer's Sarsaparilla. I did so, and was cured at a cost of $5. Since that time it has been my family medicine, and sickness has become a stranger to our household. I believe it to be the best medicine on earth." —P. F. McNulty, Hackman, 29 Summer st., Lowell, Mass.

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Ayer's Sarsaparilla

Is a certain cure, when the complaint originates in impoverished blood. "I was a great sufferer from a low condition of the blood and general debility, becoming finally, so reduced that I was unfit for work. Nothing that I did for the complaint helped me so much as Ayer's Sarsaparilla, a few bottles of which restored me to health and strength. I take every opportunity to recommend this medicine in similar cases." —C. Evick, 14 E. Main st., Chillicothe, Ohio.

FOR ERUPTIONS

And all disorders originating in impurity of the blood, such as boils, carbuncles, pimples, blotches, salt-rheum, scald-head, scrofulous sores, and the like, take only

Ayer's Sarsaparilla

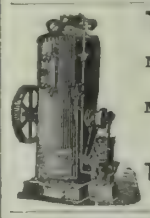
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SECOND-HAND AND SHOPWORN
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FOR NOVEMBER NOW READY. SEND STAMP FOR IT.
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DO NOT FAIL to SEE THE "DOMESTIC"
Before Buying a Sewing Machine.
It is the lead in practical progress. Send for price list
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THE KRIEBEL ENGINE
And Plain Vertical Boiler.
Mounted on a Combined Base.
A very Cheap and Economical Engine.
Made of the very best material.
2 & 3 HORSE-POWER.
Write for Prices.
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DOUBLE Breech-Loader $7.75. RIFLES $2.00 PISTOLS 75c **GUNS** All kinds cheaper than elsewhere. Before you buy, send stamp for Catalogue. Address POWELL & CLEMENT, 126 Main Street, Cincinnati, Ohio.

THE GIANT POWDER COMPANY.
PATENT OWNERS OF
NOBEL'S DYNAMITE,
NOBEL'S EXPLOSIVE GELATINE,
NOBEL'S GELATINE-DYNAMITE,
Best and Strongest Explosives in the World.

JUDSON POWDER,
The Only Reliable and Efficient Powder
For Stump and Bank Blasting. From 5 to 20 pounds blows any Stump, Tree or Root clear out of ground at less cost than grubbing. Railroaders and Farmers use no other.

As other makers IMITATE our Giant Powder, so do they Judson, by Manufacturing a second-grade, inferior to Judson.
BANDMANN, NIELSEN & CO. General Agents, San Francisco.

The Whole Country Needs Fertilization

ADMONITION TO FARMERS!

GUAYMAS, MEXICO, September 9, 1890.

R. B. CUNNINGHAM, ESQ., Agent Mexican Phosphate and Sulphur Company—DEAR SIR: In answer to your inquiries as to the value of phosphates for worn-out lands, I will state that it is my opinion the lands of the older settled portions of California afford a good field for the use of phosphates. These lands have been cropped for years without any restoration of the chemical constituents necessary for an abundant crop. They therefore show plainly that they need assistance artificially to produce crops good in quantity and quality, let the crop be whatever it may.

Take, for instance, San Joaquin and Santa Clara valleys, and what do you see? Many crops that are so imperfect in quantity and quality that the eye at once detects the defect. The only relief that can be resorted to must be infused into the soil to replace the chemical properties that have been extracted by previous crops, and the writer is of the opinion that a liberal supply of phosphates will accomplish this.

The attention of the cultivators of the soil is sharply turned to rotation of crops, hoping thereby to get wealth out of their lands without fertilization. Some have turned their attention to beet cultivation in soil worn out by other crops. Beet or other seeds will not grow successfully unless the soil will nourish them.

This summer I saw several crops of beets on excessively cropped lands, the majority of which showed that there was something wanting to complete the plants to ample size and in quantity that should be expected of sugar beets under favorable circumstances. If a good crop is not obtained, there is deficiency in profit. It costs as much to cultivate soil deficient in chemical properties as it does if ample nutrition was in the soil. Under the former condition a deficient crop is certain, while under the latter condition he may reasonably expect an ample crop with profit.

Fields often are allowed to go to weeds, supposing thereby to enrich the soil. This is an uncertain method and not profitable. Your weeds have grown up and seeded: the dead stems can only add a limited addition to fertilize the soil, while the seeds of the same will cause much expense to exterminate them from the future crops. Besides, while thus only weeds as a crop, no profit was realized, while if a supply of phosphates had been applied to the soil, a profitable crop of beets or corn would be had. Besides, the weeds would have been exterminated during the cultivation of the said crop. I am, Sir, your obedient servant,
EDWARD PALMER, M. D.

THE MEXICAN PHOSPHATE AND SULPHUR CO.

Manufacture three grades of this Superior Fertilizer of the following analyses:

GUARANTEED ANALYSIS.	Brand [A] for Sugar Cane, Sugar Beets, Etc.	Brand [B] for Grain, Gardens, Lawns, etc.	Brand [C] for Fruits, Vineyards, Etc.
Phosphoric Acid	10 to 11 per cent.	15 per cent.	12 per cent.
Potash	9 to 10 "	2 "	5 to 6 "
Ammonia	3 to 4 "	2 "	3 to 4 "

And will sell in lots to suit.

PARTICULARS AND CIRCULARS MAY BE HAD OF THE UNDERSIGNED.

H. M. NEWHALL & CO.,
AGENTS.
309 & 311 SANSOME STREET, SAN FRANCISCO, CAL.



Size No. 1. $13.50.

THE CELEBRATED
CHAPMAN-CLIMAX
SPRAY PUMP

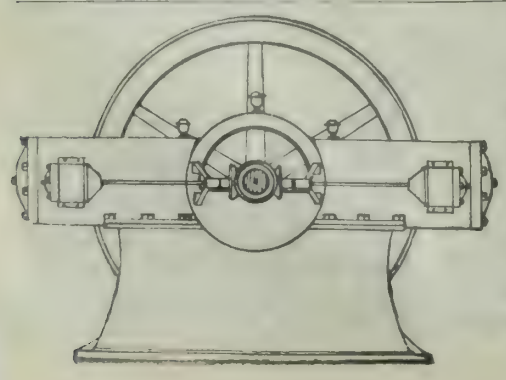
Is still ahead of all competitors, and is the most popular spraying machine in the market. The CLIMAX NO. 1, represented by this cut, is the cheapest reliable sprayer made, and its economy in the amount of wash required for a given amount of work will save its cost in a few days' operation.

IMPROVED CLIMAX NO. 2

Is a large double pump, made entirely of brass, and equipped complete with two lines of hose, four improved Pacific Cyclone Spray Tips, extensions, shut-off valves, etc. Guaranteed the safest, most satisfactory, and, in the end, the cheapest large spraying outfit in existence. Correspondence solicited. Address all communications to

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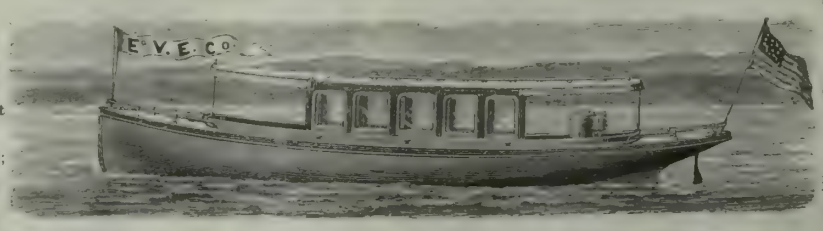
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A Specialty of Agricultural Drapers and Carriers.



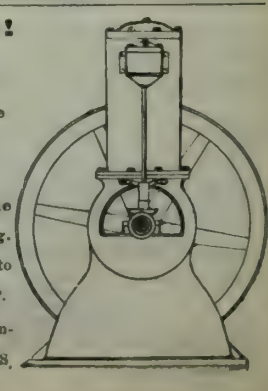
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Our Perfected "Safety" Engines cost to run only 6 cents per working day and upward; they make their own vapor, and REVERSE instantly.

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Boiler, Fire, Smoke, Steam, Ashes, Or Heat
No Engineer; No License; No Danger.



Single, Double and Quadruple Acting. ⅛ H. P. to 100 H. P.



Pumping Plants Yachts & Launches, Street Cars, Fire Engines, Water Works, Etc.

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Complete Plants of all kinds, Stationary or Mounted on Wheels.
U. S. AND FOREIGN PATENTS.

Seeds, Plants, Etc.

Oroville Nurseries.

Our Nurseries are on a rolling, well drained, foot-hill soil, one mile south of Oroville.

We offer for the coming planting season a large and healthy stock of

Fruit and Ornamental Trees,
Vines, Small Fruits, Etc.,
Orange and Lemon Trees,
Olives and Nut Trees,
Palms and Roses.
25,000 Sweet Seedling Orange Trees, one and two years,
20,000 Almond on Almond Root.

Price on application. Address

WILL & HOLLOWAY,
OROVILLE, CAL.

OLIVES.

400,000 OLIVES, 18 VARIETIES.

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Budded Orange and Lemon Trees.

—FOR SALE BY—

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Pomona, Los Angeles County, Cal.
Write and get Prices.

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Onion Sets, Grass, Clover, Vegetable, and Flower Seeds.

LARGEST STOCK AND MOST COMPLETE ASSORTMENT. Illustrated descriptive and priced seed catalogue, the most elaborate and valuable of its kind of any Pacific Coast publication, mailed free to all applicants. Address, E. J. BOWEN, 815 and 817 Sansome St., San Francisco, or 65 Front St., Portland, Oregon.

20,000 Olive Trees
FOR SALE.

MISSION, MANZALLIA, NEVADILLO AND PICHOLINE.
Write for prices.

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Arizona Everbearing Strawberry.

BY PLANTING QUITE A NUMBER OF THE LEADING varieties of Strawberry toge her for five years, I have produced a variety unlike any of the former. I have picked the fruit daily since April 20th to the present time, October 18th, and the vines are still full of bloom and berries. Roots are long and stand the drouth well. The berries are large, fine flavor and high color, and resemble the Jessie in shape somewhat. I am prepared to furnish them in small lots at $1.50 per doz., postpaid. R. E. FARRINGTON, General Nurseryman, Phœnix, Arizona.

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PEACH, PRUNE, WALNUT AND OTHER TREES for sale. Guaranteed to be entirely free from all insects. Peach and Prune grown without irrigation. Address,

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TREES! TREES!
—AT—
VENTURA NURSERIES.

300,000 Soft Shell English Walnuts and White Adriatic Figs a specialty. Price on application.

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Nurseries, four miles east of Ventura.

JAPANESE TREE CO.
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MAKE A SPECIALTY OF THE HARDY, SEEDLESS Oonshiu Orange Trees so highly recommended by all the leading horticultural papers. N. B —Our Manager, Mr. H. E. Amoore, who has lived 28 years in China and Japan, is now traveling there in search of new fruits. Address him at Yokohama, Japan. All kinds of Japanese and Domestic Fruit Trees. Order at once for winter and spring delivery.

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The undersigned has 10,000 one and two-year old trees of this popular variety, which will be ready for next season's planting.

The Knights Ferry White Adriatic is conceded by all be the best Fig produced in America.

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SEEDLESS GRAPE ROOTS.

These Grapes make the finest seedless raisins known. For sale by **J. P. ONSTOTT, Yuba City, Cal.**

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For the Season of 1890-91.

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All the Leading Varieties of APPLE, PEAR, CHERRY, PLUM, PRUNE, APRICOT, NECTARINE and ALMOND.

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The Only Stock of PERSIAN WALNUTS (Kaghazi) on the Pacific Coast.

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OLIVE, in Variety.
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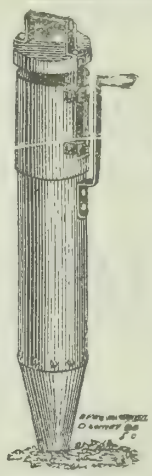
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Silver Medal Awarded by the State Fair of 1890.

This preparation is a Sure Destroyer of the SCALE, WOOLY APHIS and INSECT PESTS of any and all descriptions. It may be as freely used in the conservatory, garden or greenhouse as in the orchard or vineyard. It is non-poisonous and harmless to vegetation when diluted and used according to directions. It mixes instantly with cold water in any proportions. It is SAFE, SURE and CHEAP. No Fruit grower or Florist should be without it. Send for Circulars and Price List.

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Sole Agents for the Pacific Coast.



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Patent
Squirrel Exterminator.

This is an apparatus for burning straw and sulphur and also forces the fumes down their holes which never fails to kill. I will give $100 in case the exterminator does not kill (if properly applied) every ground squirrel that its deathly fumes comes in contact with. Thousands are in use. Price $3.00. Send for circulars to

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"Greenbank" 98 degrees **POWDERED CAUSTIC SODA** (tests 99 3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by

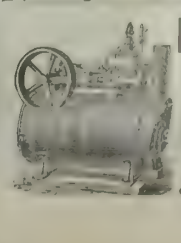
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PORTABLE
ENGINE and BOILER.

The Best, Lightest, Cheapest Engine in the world. Can be arranged to Burn Wood, Coal, Straw or Petroleum. 6 or 8 H.P. Mounted on skids or on wheels.

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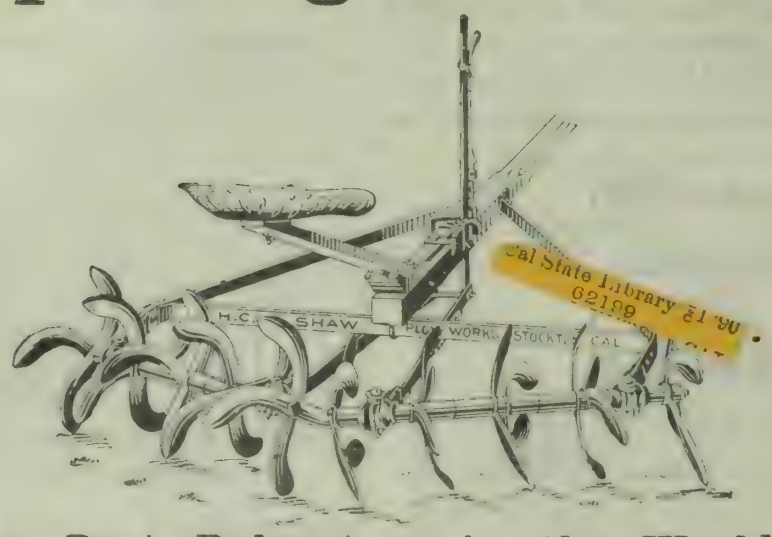
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Write us before buying.
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THE "TRIUMPH"

ALL METAL

Spading Harrow.



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The Best Pulverizer in the World!

JUST THE THING FOR WORKING SUMMER FALLOW LAND.

Specially Adapted for Orchards and Vineyards.

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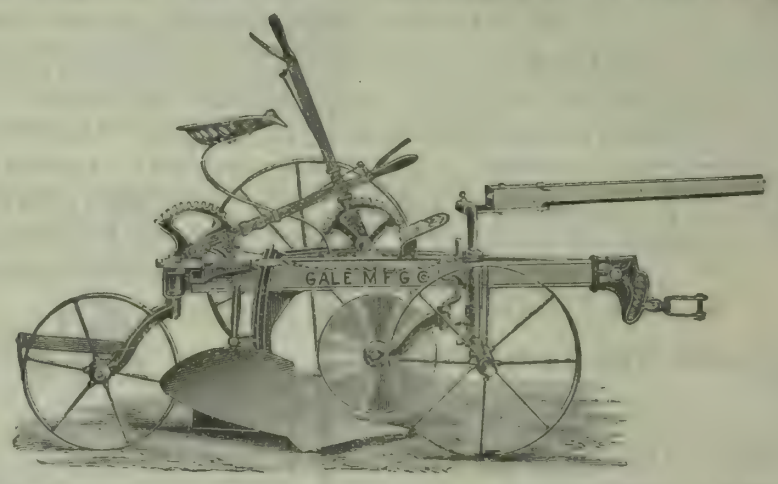
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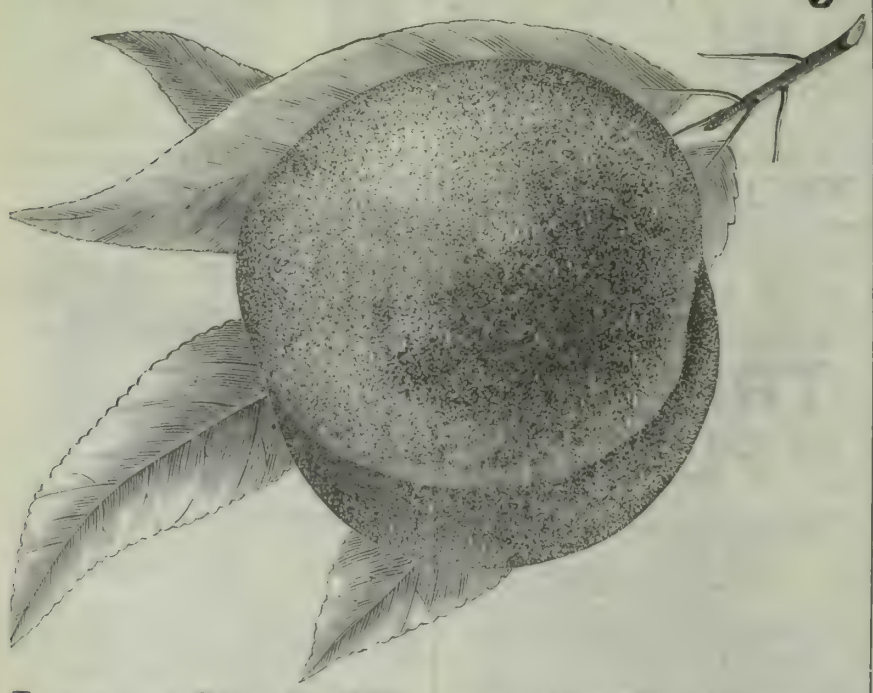
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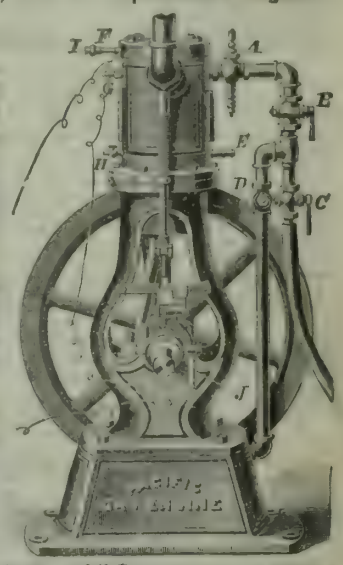
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Ayrshire Cattle.

We have often held in these columns that the Ayrshire breed is less heard of than its merits and adaptations demand. It is true that the Ayrshires stand well as dairy cattle and are generally respected, but the same tact and energy in popularizing the breed which promoters of other breeds have resorted to, have not been employed. And yet the breed has intelligent and earnest advocates and they have an association and registry—though far less active and effective than those of other breeds. No doubt something more can be done with the cattle at the leading shows, and by means of judicious advertising in the agricultural press with something of the same results which breeders of other popular breeds have attained, for the Ayrshire has merit and a field for wider usefulness in this country. We have a few breeders in California to whom we are always glad to give a lift in their efforts to spread the fame of the Ayrshire, and there are Eastern breeders who have animals with style, beauty and records which must command attention.

We display upon this page a very handsome herd picture showing animals owned by Robert M. Carrons of Washington, Pa., a prominent Eastern breeder. The cows in the drawing have earned an enviable reputation both as producers and as prize-winners. The white cow Juniper 4th, first on the left of the picture, has produced 52 lbs. of milk per day, 1436 lbs. in 30 days, and over 8000 lbs. in 10½ months; by actual test her cream producing 17 lbs. 11 oz. of butter in seven days. The next cow, Mollie Pender, has taken more premiums at the leading State and district fairs than any other Ayrshire cow in the country, having traveled from Pennsylvania to Missouri on two triumphal tours, besides being shown nearly every year at some of the leading State fairs, always with first honors. Besides being a wonderfully successful prize-winner she has made herself profitable in the dairy, giving over 7500 lbs. of milk in a season and making 15 lbs. of butter in a week. The cow Rosie Lorain made 12 lbs. of butter per week; she was a good second on one of the tours through the West. Bessie Bell 3d has a milk record of 8000 lbs. per season 15, lbs. 4 oz. butter in seven days. She also has been the rounds of the fairs with an enviable record in the ring. Duke of Hamilton 5th headed this herd of show cows at four different times in the show rings of the West Virginia State Fair and the Western Pennsylvania Fair, winning first honors and sweepstakes.

The engraving should attract attention to the breed by the beauty and capacity which these representative animals are clearly shown to possess.



ENGLISH SHIRE HORSES—PRIZE-WINNERS AT GREAT WESTERN FAIRS.



AYRSHIRE CATTLE—A GROUP OF HIGH-BRED ANIMALS.

Shire Horses.

The English Shire horses are getting a good foothold in California, as they are in other progressive sections of the country. We have often alluded to the breed and its leading characteristics, which are well brought out in the portraits on this page of two animals belonging to the well-known importers W. M. Field & Bro. of Cedar Falls, Iowa. The mare in motion is the three-year-old Spruce 2200, winner among the two-year-olds at the Iowa State Fair and also at the American Horse Show. The bay imbred Honest Tom stallion Tom 2d (6495) has run quite a career as a prize-winner. He was foaled in 1886, got by Griston Tom (2797) out of Griston Brisk by Royal Tom (1904), and has to his credit winnings at local shows as a foal and yearling, as well as a prize at the Brussels Exposition. After his importation, when in ordinary form, he was placed second to the great Sharp at the Iowa State Fair in 1888, in a ring of two-year-olds the equal of which has not since been seen on that ground. Last fall he headed his class at Des Moines and stood in the short leet in the hot fight among the three-year-olds at the American Horse Show.

The Stable

Breeding Roadsters.

Two writers for the *Rural New Yorker* give suggestions concerning the breeders of good roadsters, which will be read with interest and profit. Of course their specific advice in some directions is not applicable to this climate, but the well-informed local horseman can apply the principles to his own conditions.

Few lines of live-stock husbandry are more remunerative or hold out better inducements for the future than roadster horse-breeding. The fact that the work will necessarily be restricted as to men who can successfully engage in it, makes it all the more promising to the favored few. The roadster horse is not and never will be the product of hap-hazard breeding, careless feeding or thoughtless handling. Few men "build better than they know" in the production of fine live-stock. While I believe that in the near future we shall breed for and produce a certain degree of speed among our roadsters, as surely as we now produce weight among our drafts, I do not wish to say anything that might induce the average horse-breeding farmer to make *speed* the sole object in his breeding. Indeed, I would say, "go slow" to the hundreds of our American farmers who to-day are anxious to raise Axtells, Sunols and Nelsons. Thousands will fail here where one succeeds, and the risk is not worth taking.

In breeding roadsters, one should rather aim for a combination of qualities that can rarely fail to give him good results. Size, finish, style and a movement that is "trappy" if not rapid, are properties comparatively easy to obtain, and always recognized in our best markets. It matters little whether the horse trot in 2:40 or four minutes—neither rate of speed of itself makes him specially desirable or otherwise—but if his movement is stylish, and he is sound and smooth, of good disposition, and weighs from 1150 to 1300 pounds, he makes more money for his owner than if he had trotted a few seconds faster, but had no other specially desirable qualities besides his speed. The basis of good work is a careful selection of mares for breeding. I know men who in their anxiety to raise trotters are breeding grade draft mares to little 900-pound flyers. Others are breeding 900 and 1000-pound mares to stallions of about the same weight. These men are simply adding to the undesirable, unsalable class of horses already much too large upon our farms.

Select well-bred, well-formed roadster mares, sound and docile, of good style and action, and weighing from 1100 to 1300 pounds. Mate these with standard-bred roadster stallions of the best quality obtainable, weighing from 1150 to 1300 pounds. Don't let $5 or $10 in the service fee lead you to use an inferior animal. If the result be a 2:30 colt you are very fortunate. If not speedy, you have a fine carriage horse selling at good figures, or, failing in this, an animal of sufficient size to be useful in farm work. The draft colt can be raised with as little care and anxiety as a steer. This is not true of the roadster colt. He must be kept free from barbed wire cuts, blemishes and unsoundness to which his active, restless nature makes him more liable than his slower-going, quiet draft cousin. He should be generally fed oats, wheat bran and good hay for development of bone and muscle, and be allowed plenty of exercise in a yard or roomy paddock. He has no need of exposure or starvation to keep him sound and healthy. Keep him growing from birth until he is fully developed. The handling of him should be commenced early. Teach him not to fear you, but to submit to restraint and handling. I am inclined to believe that the early driving of the colt in harness often leads to abuse and injury, perhaps not necessarily, but through the ignorance or thoughtlessness of the driver. While growing, exercise should be of a character to develop rather than overtax the energies of the youngster. The successful roadster breeder must himself have been bred to the business. If he is not an appreciative, intelligent lover of the animal he proposes to handle, he can hardly hope for a full measure of success in his enterprise; but with this added to patient, careful study, and enthusiastic, systematic push, he cannot fail to aid in producing that noblest representative of the equine family—the American roadster.

The Son of a Well-Bred Trotter.

Another writer says: A first-class roadster is the product of a thoroughbred trotter of good size and an active, compact, stylish and spirited mare weighing 1000 to 1100 pounds. The sire must be in the flush of his power, not under three or over ten years of age, and to obtain the best results he must be limited to 40 mares each season. All necessary precautions must be taken to keep him in the very best condition for service in order that his leading characteristics may be transmitted in full to his offspring. Over-service or neglect will result in the rapid diminution of his potency, and his get will partake chiefly of the characteristics of the dam and come far short of the required standard.

The mares are driven or kept at light work up to about three months of foaling, when they are given the run of a large yard or small pasture in fine weather, and stabled at night and when the weather is bad. They are fed only enough to keep them in good, lively condition and are groomed regularly. After foaling they are allowed to run on pasture until the foals are about three months old, when they are taken up and put to light work, the foals being halter broken and tied or shut in box-stalls four to six hours a day, and fed a few oats. Water is kept before them, and they soon learn to drink and to nibble at the oats. At night both mares and foals are turned out to pasture. The foals are weaned when about six months of age, and as cold weather is then coming on, they are kept in a warm stable connected with a roomy yard and given all the oats and good, bright hay they will eat. Whenever the weather is rainy or very cold, the stable doors are closed. In fine weather they are kept open and the foals have the freedom of both stable and yard. The main object is to keep them in healthy, growing condition. If neglected or exposed to inclement weather at this time, they are sure to be stunted, and, instead of making roadsters worth $250 apiece, they become simply common plugs worth about $80.

In spring they are turned out to pasture and kept there until autumn. If, owing to drought, the pasture gets short in the latter part of summer, they are fed a ration of oats twice a day. In the pasture is a good dry shed to shelter them from severe storms. In the fall they are taken up, stabled, groomed, handled and well fed by careful, experienced hands. In fine weather they run in a large yard, but are kept in the stable whenever it is rainy or very cold. As spring approaches they are bitted and harnessed and taught to drive single and double, to draw a light wagon, walk and trot and carry their heads properly. If two are well matched they are always educated together; each is taught his place, which is never changed, and they soon learn each other's gait and to start, travel in a straight line, turn, stop and back together. All others are taught to drive both single and double.

If not sold they are kept on pasture the greater part of the season, and as autumn comes on they are taken up and driven whenever the roads will admit of it, and exhibited whenever they are likely to find a buyer. They are bred and trained for market, and are generally bought by regular buyers from the large cities. The demand is always good and the prices quite remunerative. The education of roadsters cannot be begun too early. They are always spirited, and the chief object is to make them safe, reliable and stylish. They are especially taught not to be afraid of guns, trains, bands of music, running horses, etc. They are taught to pass other horses on the road and to be passed without breaking or shying. The first-class roadster is a strong, stylish and reliable animal. In color he is bay or black—not that there are no No. 1 roadsters of other colors, but bay is invariably the first choice, followed closely by black. He is spirited, carries his head well up without effort, has strong, muscular legs, good knee action, a long stride, and can take a buggy containing two persons right along without any difficulty. He is not a racer, but he is able to take a light buggy fast enough to make the air smell fresh, and to create a market for his class by riling the man who drives a four-minute charger.

The Dairy.

Gilt-Edge Butter-Making.

The possession of a pure-bred dairy herd of cows is a decided advantage, yet native or grade cows in good health, with good care, feed, and abundance of pure water, will furnish milk from which first-class butter can be made, although probably in smaller quantity per cow than from a better breed, says Ella Rockwood in *American Agriculturist*. The milk should be drawn from the cows quickly and quietly, after the udder has been well cleaned. No noise or confusion can be allowed, much less harsh words or blows. The cows must be kept quiet and contented to secure pure milk, the first requisite in the manufacture of good butter. Remove each pail from the stable as soon as it is filled, as every moment it remains exposed to odors of any kind injures the flavor of the milk. Strain as soon as possible into deep cans, either in a creamery or tank. The cans should not be more than six inches in diameter, and four is better. After the milk has stood 12 hours at a temperature of 44 degrees or thereabout, the cream will all have risen, and should be drawn off to ripen. A can made of heavy tin, provided with a close-fitting cover with a small hole in it to allow of ventilation, should be used for the cream. It should be large enough to hold the entire quantity for a churning, and it is better to keep it where the cream will remain sweet until enough is obtained for a churning. Then it is allowed to sour slightly, stirring it frequently to insure evenness of acidity. Be very careful that the cream does not become too sour, nor too warm. In my experience, if the cream rises much above 65° it does not make butter that will be firm and solid. It soon becomes soft and sticky when exposed to warm air. Do not add cream to that to be churned less than 24 hours before churning. It will not ripen perfectly and much of that added last will be lost. Use a churn with no dasher or paddles inside. They injure the grain of the butter. Have the cream at 62° in summer and 64° in winter. Don't guess at it; have a thermometer. This costs but a trifle, and is indispensable in making good butter. As soon as the butter begins to grain, test it with the thermometer. If it is too warm, which it is quite likely to be in summer, put in lumps of ice until the temperature falls to 60°. Then revolve the churn slowly until the granules of butter are the size of wheat kernels. Draw off the buttermilk, or as much of it as possible without the butter; add a pailful of cold water, revolve the churn a few times, draw off again, and repeat this process until the water comes away clear. Then add a handful of salt to a pailful of cold water, pour it over the butter, let it stand a few minutes, draw off and let the butter drain. Take out the butter either in a butter bowl or butter worker; if the former, take only a few pounds at a time, sprinkle salt evenly over it at the rate of 1½ ounces to the pound or according to taste. Press the butter with the ladle, chop the salt in well, turn and press again. Pour off the accumulated brine, and work lightly by pressing with the ladle, always bearing in mind that the granules of butter must not be broken. When the salt is sufficiently incorporated with the butter, pack it away at once. No further working is necessary. After the package is full, cover the top with a circle of parchment paper wet in cold water, press smoothly to exclude the air, and cover the whole with salt, wet to a "slush" with cold water.

The Model Cow.

Mr. Gregg, Superintendent of Farmers' Institutes of the State of Minnesota, is a man of very large and long-continued experience in the handling of dairy cows. He has also a strong propensity to penetrate as much as possible to the causes of what he sees, and for this reason his talks at Institute meetings are full of interest and practical suggestion. At the Institute held on the fair ground at Hamlin, in the second week of September, he gave a most interesting compendium of his views, that is thus reproduced by a "Nor'west Farmer." He started out by saying that, so far as he had been able to discover, it could be told pretty nearly how much milk a cow was likely to give, but not how good that milk may be. That can only be learned from actual test, and even in cows with well-ascertained points, those points may be to some extent better or worse than the actual performance, just as any animal with good pedigree or of no pedigree at all may excel or come short of the quality and performance of the parents. The milk form and quality of one parent may assert themselves in the offspring over inferior qualities that the other parent is likely from its points and pedigree to transmit, so that on every line of breeding, heredity and selection, with in the case of dairy cows actual test added, they are the final test to which alone appeal can be made. Still, there is very much in form. It may be stated at the outset that the points in form rightly approved by the beef judge are just the points that a first class dairy judge would at the outset be compelled to reject. A Guernsey cow that at one glance could be distinguished as possessed of a rare combination of dairy points was then put on the platform, to show the leading points which are conspicuous in a good cow of any breed. Her mouth was broad and clean cut, the jaw the reverse of meaty, the eyes full, intelligent, soft and expressive, head broad at the eyes. The horns were very neat at the base, no coarseness or swelling there, the ears velvety, and the head set clean on the neck, which was thin and rather long, but not weak. The shoulder was thin and fine, running softly up to the apex. The pitch of the ribs over the heart in this, as in about all cows of true butter conformation, was steep, though the width at the heart was quite good. This pitch, Mr. Gregg pointed out, was, with the formation of the vertebræ at the same point, a main criterion by which he would judge the permanence of milking power. A cow that conformed here to the beef type might give for a few months a fair amount of milk, but would never make a sustained yield such as he would expect from a cow like that before him. The space between the front and back part of the vertebræ would show more in a milker than in a beefer. The opening between the short rib and the next would be very great in a dairy cow, and the muscle sustaining the paunch strong and easily felt. This was explained on the principle that the cow is a machine that makes milk out of bulky food and on the Darwinian principle of adaptation; the ample stretch of the latter ribs, the strong muscle and draw of the ribs forward and downward, causing the space he referred to between them and the short rib, could all be explained. They are the natural conformation of an animal that to make plenty of milk out of bulky food and at the same time reproduce her species must be built exactly on this pattern. The loins, the pelvis and the organs of maternity generally would be spacious, for the milk-giving quality presupposes an object, and the first object was the nourishment of the offspring. The yield outside of that was largely artificial and a secondary thing. The flank would be lean, and the quarter rather thin but not weak, the tail fine, and the run from the loin to the hips more hollow than was at all allowable in the beef form. Fleshiness and coarseness here are fatal to dairy success. The milk-vessel is of course a main feature of the cow. The veins in the cow before him were large, soft but fairly defined, and ran well forward, entering the chest there by well-defined holes that any tyro could feel. Ample circulation to and from the udder explained this conformation, and no scrub cow would have it as far forward as it was regularly found in the true dairy breeds. The udder must have an ample network of circulation and nerve-power; in fact, nervous power in all its manifestations was the characteristic quality of the true dairy type. Going behind, the spacious, flexible and velvety quality of the udder was conspicuous even in a dry cow, and the same form and quality would be found in young females. The same class of points all over would be found in the male as in the female, depth from front of loin, open twist, the nervous as distinguished from the lymphatic or meaty temperament would prevail, and no matter what his pedigree, a bull that filled the eye of a beef judge was more or less an abomination to a true dairy critic. In short, he would put form first, pedigree second, performance next. It took all three to make a first-rate dairy type, and though there were frequent deviations in practice from the lines laid down, these lines were still reliable and would continue to assert themselves in every-day experience.

The Field.

Drawback on Bags.

The order of the Treasury Department of September which repealed the law allowing exporters of bags a drawback, has been vacated. The re-established law reads as follows:

Article 970. Whenever a manufacturer of grain bags, made from imported materials, shall reserve to himself the benefit of drawback under Section 3019 of the Revised Statutes by an appropriate and permanent inscription upon each bag, he shall be permitted to make the export entry and receive the drawback, upon compliance with the regulations relating to exportations for drawback under said law, and he shall be deemed the exporter of such bags, whoever may be the owner of the bags and grain therein shipped to foreign ports.

Drawbacks shall only be allowed upon such bags, so described, as can be officially identified, inspected and counted in the manner required by the general regulations.

The manufacturer concerned shall bear all extra expenses which may be incurred in the administration of these additional regulations.

The re establishment of the article will only apply to such raw material as was in or on the way to the United States prior to the adoption of the McKinley Act. Previous to the passage of the Act a 20-per cent duty was placed on the article, but the present tariff admits it free. Collector Phelps has forwarded a letter to the Custom-house officials which reads:

Exporters under the new law can give six hours' preliminary notice to the Surveyor of the Port before landing, and that official will detail an officer to supervise the placing of the same on a vessel.

The return of a lading officer and the clearance of the vessel may be accepted as proof of the exportation of the bags when exported filled with grain in lieu of the bills of lading presented for other merchandise.

Should the entry or preliminary notice embrace more bags than are actually found on inspection and shipped, drawbacks will only be allowed on the quantity actually shipped, as shown by the certificate of the lading officer, and should drawback be required on the quantity or number returned as short shipped, they must be embraced in a subsequent entry.

District officers and inspectors in charge of vessels loading grain for stiffening, etc., may note the character of the bags being taken on board, so that when an entry or notice of intent to ship subsequently reaches them they will be prepared to certify to the facts concerning the shipment.

A Harvester Combine.

CHICAGO, Nov. 19.—There was organized in this city during the past few days one of the largest corporations in its line in the world. The charter was filed in Springfield to-day and the new company will be known as the America Harvester Co. for the manufacture of harvesting machinery, with a capital of $35,000,000. Among the directors will be Cyrus A. McCormick, William Deering, Walter A. Wood, Lewis Miller, A. L. Conger and A. S Bushnell.

Colonel Conger, when questioned by an Associated Press reporter this evening, said the present demoralized condition of the harvester business necessitated the formation of the new company. Many failures have occurred in the past few years, entailing immense losses. The cost of materials has been advancing, so it became necessary to raise the price of the machines to farmers, or, through economy, to produce and distribute them more cheaply, as it is the purpose of this new organization to do. It is no less to the interest of the binder manufacturers than of the farmers themselves that the latter should obtain binding twine at reasonable prices, and the hope of effecting this object is one of the important reasons for the formation of this company. We do not expect to check competition, but shall possibly carry on the manufacture of the present machines at several different works.

MIXING NATIONALITIES.—The present Russian Chancellor is a Swede; the late Persian Embassador in London was a Scotchman; an Irishman was three times Prime Minister of Spain, and a Celt, MacMahon, was President of France. The Russian Embassador at Paris is a German, the French Embassador in London is an Englishman, and the Italian Embassador in Berlin is a Frenchman. The chief consulting Admiral of the Turkish fleet is an Englishman, as was also the late Admiral of the fleet.

SHEEP AND WOOL.

An Address to the North Pacific Coast Wool-Growers.

EDITORS PRESS:—In your issue of October 25th you mention a prospective address to the wool-growers of the North Pacific Coast. As requested, I send you herewith a copy, which I hope you may consider worth a place in your columns.—JOHN MINTO, *Salem, Oregon.*

The Address.

Members of the North Pacific Sheep-Breeders' and Wool-Growers' Association: It gives me great pleasure to be able to say to you that you meet under more promising auspices than have heretofore surrounded your interests since you formed yourselves into a business association three years ago. You at that time were suffering a decline of market values in the chief product of your labors from a diversity of causes, the chief of which may be mentioned as:

First, the steady and rapid increase of the general wool crop of the world.

Second, a slight change in your laws regulating the duties upon imported wools—the product of countries where the conditions of climate, cheap lands and cheaper labor were more favorable than your own to cheap production.

Third, a false and injurious construction placed upon your laws regulating duties upon imported wools and goods made of wools but commercially named worsteds.

Of these three main causes of injury to American sheep and wool growing interests, it is safe to say the construction of the laws by officers of the Government which permitted large quantities of clothing wool to enter your market under the low duties on carpet wools, and millions of dollars' worth of the finest, most thoroughly cleansed worsted wools to be imported under the names of "ring waste," "garnetted waste," and other terms, have been most potent for harm against your interests and against the interests of honest importers and manufacturers also. The causes thus briefly alluded to reduced the number of sheep kept in the United States from 50,626,626 in 1884 (when the effect of the change in the tariff laws made in 1883 made itself manifest) to the present number of 42,599,079, a decrease of over 8,000,000 sheep, instead of a ratio of increase like that of the five years preceding 1884, which would have given us at this date nearly or quite 65,000,000. The world's supply of wool in the meantime has been steadily increasing, having increased since 1860 from 955,000,000 pounds to 1,955,000,000 pounds in 1889. For this reason we cannot expect any sudden or extraordinary rise in the price of wool as a result of the protection given our interests in the McKinley law, although an upward movement has already begun. The measure will do wool-growers good service if its effects revive hope and confidence in sheep industry by giving home labor the first chance in the home market.

A Field for American Wool and Mutton.

A close inspection of the world's markets for other staples of human consumption will show us that there is no more inviting field of production than that open for wool and mutton, to secure and enlarge which for the American husbandman is one of the main purposes of the McKinley law. Two years ago the National Grange of Patrons of Husbandry asked the question of the Department of Agriculture, "If there was a reasonable prospect of an increasing foreign market for breadstuffs produced in the United States?" The answer was, in substance, that there was not—the wheat from India, Russia, Australia, and South America is already in such close competition with the wheat and corn of the United States that to market another million bushels more than we do market would be to rapidly reduce prices.

That already the grain farmer of the Northwestern States was in the position of a "mere missionary furnishing cheap bread to the manufacturing laborers of Great Britain and so enabling British capitalists to keep down the wages of labor." That the best prospective market for the American farmer is to so vary his products as to supply his own home market with products now imported which can be produced here, but which are now imported to a value nearly equal to products of agriculture exported. Among imports of nearly $400,000,000 agricultural products is wool and woolen goods equivalent to about 370,000,000 pounds of unwashed wool, or the product of 70,000,000 of foreign sheep. Over $52,000,000 at importers' valuation ($100,000,000 at buyers' prices) were imported as woolen goods. This item of imports alone represents $9,000,000 more in value than the export of wheat in 1888. To induce the planting of that additional value of woolen manufactures west of the Rocky mountains might be reasonably estimated as worth more to the general welfare of this nation than the value of her wheat exports in adding to our consuming population by subtracting from those now engaged in overproduction of unprofitable exports. The policy, then, underlying the McKinley Act is to secure to American laborers all possible benefits of a diversified industry so that one class of workers may become the best customers to other lines of labor.

The cause of change in the tariff of 1883, which may now be classed as a national disaster, is briefly indicated in a letter of Secretary Rusk of the Department of Agriculture, written in answer to the question whether or not this nation can produce the different qualities of wool necessary to meet the wants of all branches of its woolen manufacturers. The secretary replied in part as follows:

This inquiry is suggested by the following quotation from the Providence *Journal* of a recent date; "We have tried all sorts of wool tariffs in years past, and never yet have they caused the production here of certain kinds of wool that are absolutely necessary to give the required finish to woolen and worsted fabrics and to make carpets. We never can accomplish the feat. It is physically impossible. Certain wools require for their production conditions of climate and soil which we do not possess, and that settles it."

This country possesses a marvelous range of climatic conditions, having 24 degrees of latitude between 25 and 49 degrees, with altitudes compassing levels from the semi-tropical to those of perpetual snow, and ocean currents modifying the climate of both coasts. Soils range from those of geological formations of the early geologic ages to the alluvium of the present day. A continent so broad, so varied in soil and climate, is properly designated as the Western World, and the United States compasses all its possibilities, except those of strictly tropical and absolutely polar areas.

It can therefore produce, with no limitations of practical importance, all the races and breeds of sheep in the world.

Secretary Rusk's Statements Indorsed.

Every intelligent breeder and wool-grower knows the secretary is correct and that he is ably supported in his statement. The distinguished president of the National Association of Wool Manufacturers, William Whitman, Esq., in his letter of Nov. 22, 1889, to another eminent manufacturer, Jesse Metcalf, Esq., of Providence, said:

The American staple wools are better adapted for the fabrication of satisfactory clothing for the American people than any other wool grown. We may invoke the teachings of Darwin in support of the same view. The environments which determine the character of wools are chiefly breeds of sheep, soil, climate, food, and husbandry. Within our borders we have substantially every variety of these to be found on the globe. * * * The carpet-wool product of the United States is almost exclusively the fleece of sheep of Mexican origin, which are raised chiefly in Texas, New Mexico, Arizona, and certain of the Territories of the mountain region of the country situated between the Mississippi valley and the Pacific Slope.

I take both these extracts from page 33 of the speech of Hon. J. H. Mitchell to the U. S. Senate Aug. 14, 1890. I can as a practical shepherd familar with sheep of the Mexican type introduced to Oregon from California in 1842, bear witness to the fact that, were it necessary, we could produce the inferior kinds of sheep and wool here (or anywhere else in the United States for that matter) because both sheep and wool are only degenerate representatives of the long-wooled European sheep, left for hundreds of years in the care of ignorance and sloth.

The breech and belly wools from the British mutton breeds cultivated as extensively as the highest agricultural interests of the Middle West and Southern States call for would produce all the lowest grade of carpet wools required, and I know of no law (natural or artificial) against the very best long and middle wools making the very best carpets.

Adaptations of this Coast for Wool Production.

The sheep-breeders of the North Pacific Slope have the stock and all the climatic conditions necessary to produce all the varieties of sheep and wool necessary to mutton consumers and wool manufacturers in the United States. This was proven at the Centennial Fair held at Philadelphia in 1876, when Oregon received awards for excellent coarse combing wools, strong and sound middle wools and "fine clothing wools closely resembling the Australian wools," and for fancy cassimeres and blankets, and through the exhibit of the Mission mills of California (then using Oregon wools), blankets, carriage blankets, lap-robes unsurpassed in excellence of fabrication, softness of finish and tastefulness of "borders." What Oregon did in 1876 in her exhibits of wool and wooler goods she can far excel (if her people so will) at the great fair to be held in Chicago in 1893. Meantime the citizenship of the North Pacific should lose no opportunity of impressing upon their fellow-citizens of the Atlantic seaboard that tariff laws are made to subserve the general welfare, including the wool-grower on the arid lands of the Pacific Slope, as well as the carpet manufacturer of the Atlantic side.

While there is no gleam of encouragement for the resident of the range country to place his dependence upon wheat cultivation in competition with the wheat-growers nearer the seaboard on both sides of the American continent and with the cheap lands and labor of the South American Republics, the Australian Colonies, India and Russia, the McKinley law should give him much to keep on in the production of wool and mutton.

The following letter to Hon. Justin Morrill, for use in the U. S. Senate, will emphasize this statement:

U. S. DEP'T OF AGRICULTURE,
DIVISION OF STATISTICS,
WASHINGTON, D. C., Feb. 13, 1890.

Sir: Your contention that the low price of agricultural products is due to increase in production throughout the world is measurably correct. It is certainly a primary and prominent cause.

Every nation is seeking to produce its own food supplies, and as far as possible its so-called raw industrial material, and is compelled to do so by the instinct of self-preservation. This furnishes the motive for the corn laws of Germany and other continental countries and the laws of European countries prohibiting the introduction of our pork products.

Ten years ago this country seeded 14,000,000 acres for foreign demand, and the breadth of last year was 10,000,000 more than is required for home consumption, though the average demand for nine years has been less than that of 1879-80 by 65,000,000 bushels.

The production of meat has also been increased more rapidly than population. In 1880 the number of cattle of all kinds on farms and ranches was reported as 39,675,533, and the numbers as now estimated are 52,801,907, or 33 per cent more. Beeves are brought to maturity more rapidly than formerly, and more meat is made in proportion to numbers, so that the beef supply is greater than in 1880 in proportion to population.

It is proper to say that all farm products are lower to producers and higher to consumers than they should be by reason of the army of middlemen, who take for a day's handling as much as the producer gets on his capital and his season's labor. The evil has become so serious that a necessity has become a scourge.

Prices are also lower elsewhere, and the agricultural depression in England, France, Germany and other countries is the subject of rural complaints, of economic discussion and governmental inquiry. This is the case in both protective and free-trade countries, and in those with both monometallic and bimetallic currencies. Yours respectfully,

J. R. DODGE, Statistician.

HON. JUSTIN S. MORRILL,
United States Senate.

Recognizing as true the facts set forth in this letter, the policy of occupying our own market and of increasing it by a more diversified industrial system will serve the double objects of making us less dependent upon foreign grain markets and reducing the number and cost of middlemen.

We as a people have been going in that direction with results which draw the admiration of the leading statesmen of the Old World and inducing all people with independence enough to shape their own commercial policies to follow our example. All the English-speaking colonies of Great Britain except Victoria adopt the policy of the United States as a means of "self preservation." Ireland does not, because she is held in subjection. India does not, because its population is an aggregation of diverse peoples and tribes kept apart by national and religious prejudices; affording the world the spectacle of tens of millions being held in trade bondage to units of millions.

Encouragement to Stand by the Sheep.

In view of the foregoing facts there seems to me no encouragement for any citizen who is favorably situated for the pursuit of sheep husbandry to seek to change his occupation at this time. One of the most immediate effects of the anticipated passage of the McKinley bill was the starting up of many idle woolen-mills. I quote from the *American Economist*, Oct. 31:

A noteworthy improvement in New England woolen manufacturing has come about during the past month. This is sufficiently indicated by the activity of the wool market as it appears in large sales and an advance in price. Various mills which have been shut down for longer or shorter periods are resuming operations. This is also said to be the case in Philadelphia. The dress-goods manufacturers in particular report their business to be in a very healthy condition. They say that its orders which they are now trying to fill are for larger quantities and in greater numbers than at any other time during the year, and will keep them busy for the next three months. Some of the large woolen-mills are running on extra time. A number of new factories are now in course of construction in New England and several of the old mills are being enlarged.

A communication to the same conservative and reliable trade paper announces the movement of several of the leading firms in worsted and plush manufactures of Bradford, England, as making arrangements for establishing departments of their works in the United States. This is the way to bring consumer and producer close together and lessen the expense paid by one or both to middlemen. By this process the manufacturer contributes to support American institutions and the labor employed subsists upon the diversified products of the American farmer, among others, mutton.

As a second item of income to the flock-owner, meat production has in the past three years saved many North Pacific flock-owners from utter failure.

As "feeders" there are no better sheep than the grade merino wethers, bred and reared on the ranges east of the Cascade range and purchased for driving or shipment by rail to the vicinity of markets east of the Rockies immediately after the second shearing. These wethers are mainly taken with the least possible expense to some good corn-raising district in the Western States, and from thence put into market the next spring.

Oregon Sheep in Dakota.

I am sorry to say that since President Cleveland forced his partisan friends to vote for free wool the deportation of sheep from Eastern Oregon has not all been wethers for mutton. One firm of brothers published the purchase in 1888 of 20,000 head of stock sheep from Eastern Oregon and the driving by them to Northern Dakota, where they gave fleeces the next season of over ten pounds average.

Dakota buyers were successful bidders for a lot of 800 head of stock sheep 10 miles south of Salem, in Western Oregon, this last summer. With wheat under 70 cents per bushel, with no reason to expect higher prices but by some unforeseen calamity in some other country, it behooves the Willamette valley farmer even, "where spring-time and harvest never fail," to calculate a little and see if he cannot do better with his land and labor by keeping more sheep than raising wheat for export. The testimony of farmers themselves is uniform to the fact that there is barely wages and interest on working capital, allowing nothing for the use of the land under present prices for wheat. The testimony is nearly as uniform that where a small flock of sheep are kept on a farm as aids to clean cultivation, the income derived from them comes the easiest of any the farm yields. Last year I was compelled by the drouth to bring a small flock of ewes out of Crook county into Marion and let them to a firm of inexperienced young men who had determined to try meat and wool production instead of wheat. The terms were an equal division of the income from wool and the increase of the flock. My share from 160 ewes was $114 for wool and 50 lambs. The parties are willing to keep them another year, believing they can do still better, as I have no doubt they will.

Successful Wool Producers.

At the hazard of making this address too long and going into particulars, I give a few experiences of others.

The Hon. John B. Waldo, when he retired from the bench of the Supreme Court of the State to his farm a few years ago, found himself the owner of a flock of 150 head of long or coarse wooled sheep, so much neglected that they were almost eaten up by parasites. He sought advice of friends and cleaned them—reduced their number and gave them good keep. This last season he sheared from 52 head more wool than he got the season before from 150 head. His little flock cast 40 lambs, and he raised them, every one. Before shearing he refused $6 per head for 11 two-year-old wethers. After shearing them he sold them to a dealer for $7 per head. They averaged 166 pounds live weight. The feed given was pasturage and green cut oats hay. They are grade Cotswold sheep.

William Stuart, a neighbor of Judge Waldo, is not learned in the law as a jurist, but is a good judge of sheep thrift. Two years ago he gave me the account of 18 strong graded, coarse-wooled ewes, as rearing 32 lambs and giving fleeces nearly averaging eight pounds. This season he sold four four-year-old wethers at $7.50 per head. The heaviest fleece weighed 16½ pounds.

As commonly estimated, the money received for these sheep as mutton was clean profit to the producer. It is a difficult question to settle exactly, but I have no doubt of the correctness of Judge Waldo's estimate:

"That sheep so kept pay three times as much profit as any other stock kept on the farm."

Judging by the sales effected by sheep-breeders at the late State Fair held at Salem, those keeping sheep in Western Oregon are giving most attention to the earliest maturing mutton breeds. That I believe is a wise course to take, provided, always, that care is taken to provide the pasturage and feed such sheep require. The time seems close at hand when the mutton market on the Pacific side west of the Cascade range will have to depend on the country west of that range for its mutton supply. The increasing demand for feeders in the corn-growing States seems to point in that direction. I had inquiries for such sheep from farmers in Indiana last spring. On the other hand, the increase of woolen manufactures on the North Pacific points to an increased local consumption of wool, the finest of which is purchased in Eastern Oregon.

If the great expectations at present impelling the extensive investments in city and railroad building in the State of Washington are well founded, the near future will call for greatly increased supplies of mutton as well as woolen clothing. Altogether I believe sheep husbandry in all its branches is on the eve of a period of renewed prosperity, not only on the North Pacific Slope but all over this broad land where the increasing density of population does not preclude the use of the land for pasturage.

In conclusion I desire to compliment this association for its advocacy of a policy of protection to its special line of industry—not from a narrow and selfish point of view, as I well knew, but from a belief that it is one of the most important agencies of general prosperity and national industrial independence. Of first importance, not merely for its great money value, but because its preservation is an essential part of successful agriculture on the one hand and the woolen manufactures on the other, in addition to contributing to the food supply of the people at large in a very important degree (15,694 sheep were received at the Chicago stockyards on Sept. 30, 1890). JOHN MINTO.

WATER WASTE.—It is estimated that water leaking through a hole just large enough to pass a needle through, during 24 hours, at a 14-pound pressure, would be sufficient to supply a house for a day. The waste through a one-inch pipe under the same conditions would be 1140 gallons.

AMONG the industries of New York there are women who can make tins, tools, trunks, trusses, harness, saddles, traveling bags, pocket-books, jewelry, coffins, wooden boxes for cigars and grocery supplies.

PATRONS OF HUSBANDRY.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

The Postal Telegraph.

EDITORS PRESS:—A special dispatch from Washington to the New York *World*, under date of the 19th inst., says: "Postmaster-General Wanamaker has about finished his annual report, which the President will submit to Congress, together with his own annual message, on Dec. 1st."

The dispatch further states that "Many pages of the report are taken up with the discussion of the postal-telegraph system, which Mr. Wanamaker has lost no opportunity of urging upon the attention of Congress. The scheme is completely outlined, and in support of its practicability Mr. Wanamaker quotes liberally from the last annual report of the Postmaster-General of Great Britain. It is evident that Mr. Wanamaker has given much thought to the details of the plan he favors.

"His scheme, as finally digested, consists in the establishment of 'a limited post and telegraph service' as a bureau or part of the Post-office Department, and postal-telegrams are to be received at the postoffice, transmitted by telegraph, and delivered through the medium of the postoffice service. All postoffices in places where the free-delivery service now exists, or may hereafter be established, shall be postal-telegraph stations, and the Postmaster-General shall from time to time designate as postal stations postoffices in other places where, in his judgment, the wants of the public may be thus supplied. * * * Nothing in Mr. Wanamaker's scheme shall prohibit any telegraph company from performing general business for the public the same as is now done. * * * The charges in any one State shall not exceed 10 cents for messages of 20 words or less, counting address and signature, nor over 25 cents for any distance under 1500 miles, nor over 50 cents for any greater distance."

Here is a proposition, coming from a Cabinet officer, of great concern to every citizen; a proposition much discussed within the last few years; a proposition indorsed by the late annual session of California State Grange, and one that the Farmers' Alliance and many labor unions are committed to.

Here is an opportunity—one such as seldom occurs. The nerve of a Cabinet officer to strike a death-blow at a great and ruinous monopoly is without precedent, and should be backed up by a wall of public opinion deep and high. To strike at the enormities of the present management of the telegraph system is to strike at Jay Gould, and to strike at Jay Gould is to strike at the combined railroad and telegraph interests of the United States. Any one who knows the power of money in Washington, where men fall under its influence as fall the autumn leaves, can appreciate the nerve of Mr. Wanamaker in this slap in the very teeth of the dragon that appears to be pulling the nation down to perdition. Many jestingly call Mr. Wanamaker a Sunday-school crank, a literary fanatic and a Kreutzer Sonata strangler. It may be so, but he is manifestly in earnest all the time. Wherever he strikes it hurts.

With an iron nerve and fearing nothing, he strikes to kill, and whenever his sledge-hammer strokes come down upon a subject we have been hitting at for years, why not join hands with him? If our declarations and resoluting on this subject mean anything, let us all strike together! Here is the entering wedge to the heart of an adamantine monster! How will Congress stand on this question? "The gods help those who help themselves." We have the leader. Where is the following?

Congress is the creature of circumstances. Monopolies, trusts and combines have the whip hand over it at the present time; but let it be known in Washington the coming winter that the next Presidential election shall turn on this single question, and the hold of Jay Gould, Vanderbilt and Huntington will loose its grasp. Why should not this postal telegraph system, outlined by Mr. Wanamaker, be made the chief issue until adopted by Congress? Let the Grange, the *Farmers' Alliance* and trades unions take this matter in hand. Let Mr. Wanamaker feel that he has these elements to back up his proposition, and it will go through in spite of money-bags and boodle. If neither Republican nor Democratic statesmen will take hold of this matter in earnest, let the fiat go forth that the next President of the United States shall be either a farmer or a trades unionist, and a controlling element in Congress of the same order!

The chief trouble with the farmers and other labor organizations is that they attempt too much, commit themselves to impractical and inexpedient propositions and thereby excite derision and contempt—in fact spread themselves out so thin that they never get in tangible shape for direct and positive action.

If sufficient influence can be brought to bear on Congress to adopt this postal-telegraph system, it will certainly regulate and control the whole service in rates and methods. This is all that is needed to secure equitable administration.

After this will inevitably come the building or condemnation by the Government of a few trunk lines of railroad for like regulation and control of the carrying trade.

This consummation is inevitable; it must come sooner or later, otherwise these combinations will certainly *regulate* and *control* the *Government*. There is no escaping this conclusion.

A civil revolution in the methods and control of the Government is yet possible, and Mr. Wanamaker has sounded the bugle-note for a general rally. If we fail him in this emergency, we need not hope for a like opportunity for years. He has got the monstrosity by the throat, and we should at least take tail-hold while he skins.

One trouble is the farmer "hasn't time" to attend to getting up petitions and memorials to Congress. It is more congenial to "resolute," then go home and go to bed, as did the people of Foxopolis, after resoluting against the frogs in the millpond for disturbing their slumbers.

Who has got anything to say about Mr. Wanamaker's proposition? Let the matter be thoroughly ventilated, and if we are agreed, let us go to work for the measure. One thing at a time, and that well done, should be our shibboleth. There is power and danger in *concentrated forces*. They have won all the battles of the world, physical, civil and religious. Then if we propose to win any paramount issue, first let us be fully agreed, then move in solid phalanx up to the ramparts of the enemy.

Creston, Nov. 25, 1890. J. V. WEBSTER.

Still It Moves.

The following interesting article, from the pen of National Lecturer Mortimer Whitehead, is clipped from one of our Eastern exchanges:

Land money is growing in favor, and the finance questions are becoming better understood. By discussion we will one of these days get the best plan. Here are some good thoughts for thinkers: Government loans direct to the people are no experiment; like State railroads, they have been tried and have proven a success. Under the leadership of Benjamin Franklin, and at his suggestion, the people of the then colony of Pennsylvania gave the plan a thorough trial a hundred and fifty years ago. Money was tight, interest was high. The bankers had their grip on everything. Business was dull. Farmers were discouraged; mortgages were eating them out of house and home, when the State stepped in and loaned them its credit at rates which enabled them to pay both principal and interest for less than the money-loaners were getting for interest alone. Money was no longer "tight," because any solvent man knew that he could get it if he needed it and at reasonable terms. People saw that they were getting out of debt and became energetic and pushing because they were hopeful again. Taxes were light, for the interest on these public loans went into the public coffers—the interest they paid, paid their taxes. The people were prosperous as never before—nor since, for that matter, though the bankers mourned and fought it bitterly. With the war of the revolution, and the more pressing questions of confederation and union, the people lost sight of Benjamin Franklin's system of finance, and the bankers of other States combining with the bankers of Pennsylvania, took good care that it didn't come to the front again.

What the colony of Pennsylvania did successfully for upward of forty years for its citizens, the United States can do even more successfully and profitably for its people. The conditions are alike. Money is tight now—cornered by the banking trust. Taxes and interest absorb the whole net surplus of the country and more too—they are eating the farmers out of house and home. Ben Franklin's remedy is the remedy now as it was then. The people must become their own bank. Money is a creation of the people for the convenience of the people in the matter of exchange. Whatever profit comes from the handling of money should accrue to the whole people and not to a special class only. Those who handle money for profit regulate the value of money now, but the Constitution says that Congress shall "regulate the value thereof." Let Congress, then, do the duty it has left undone for a hundred years. Let it provide for the establishment of a United States postal bank, and tax every private bank out of existence as it taxed the State banks out of existence to make room for the National banks. Let it enact general laws by which any citizen who can give proper security can obtain money, and this 65,000,000 people need no longer be burdened with taxes and interest, for the interest will pay the taxes, and we need pay no higher interest than just enough to pay the taxes. Let that be done and the same results will follow as did in Ben Franklin's time—an enormous increase in general prosperity. The Constitution gives the power, nay, more, it lays the duty upon Congress. There is lacking only the act of Congress. But there can be no act of Congress till the farmers of the United States send men who will act.

Talk about it, think about it, and then act upon it, and brighter and better days will come. Fraternally,

MORTIMER WHITEHEAD.

GOING to press one day early, on account of Thanksgiving, cuts off some of our Grange items and correspondence this week.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

National Grange.

[Our readers will be glad to hear from our Worthy Master E. W. Davis, and hope, although he left the State in bad health, that he will return freshened and decidedly better from his trip to attend the National Grange.—EDS.]

Dear Brother:—From San Francisco to Atlanta in eight days is a short-long trip—short in time but long in distance. I arrived here about two hours before the time fixed for opening the National Grange, having been delayed 12 hours *en route*. Found Bro. H. E. Hayes of Oregon here, and he kindly promised to write to the RURAL and allow me time to wash and rest. No doubt you have had and published his letter, and therefore I shall only state that Bro. Brigham opened the National Grange in ample form in the sixth degree, "on time." All but four States were present at roll-call. The usual committees were appointed and have been busily at work. Having sent you a copy of a daily paper each day, which gives a partial summary of our doings, I shall not attempt to send an epitome of the same in this correspondence.

The reports from the various representatives show the Order to be in a flourishing and growing condition. Gains everywhere are reported.

Many amendments to the Constitution have been proposed, but very few of them will be adopted. The Committee on Constitution and By-laws, after hearing your representative, have agreed to report favorably on the amendment proposed by the California State Grange.

The report of the Executive Committee is a magnificent paper. The address of Worthy Master Brigham also deserves special mention; and the report of the Committee on "Woman's Work" is a jewel of the greatest value.

It would do your heart good to be here with this sturdy band and hear the many kind words and the increasing compliments they have for California and Californians. Truly it is an honor to be a member of the National Grange and to come from California.

New York is one of the States whose representative is unknown to many of you. The late Bro. Armstrong's State is well and ably represented by Bro. Gifford. We have no *Hale* with us at this session, but I know you are catching *Hale* in California. His "Nutmeg State" is cleverly and very intelligently represented in this session by Bro. Bowen. Indiana's representative was not able to get to California last year, but Bro. Trusler, with his gray hairs and years of experience, is a valuable member at this session. Bro. Thompson of South Carolina and Bro. Chowen of Minnesota are both prevented by sickness from attending. Each sent a splendid letter and each reports the grand old Grange as doing well. Tennessee is ably represented by Bro. Nelson and wife.

Memorial exercises were held Sunday afternoon (Nov. 16th) in respect for our departed brothers, W. A. Armstrong, P. M. of New York State Grange, and Victor E. Piolette, P. M. of Pennsylvania State Grange. The services were most impressive and affecting.

Bro. J. W. A. Wright, P. M. of the California State Grange and author of that immortal document, "the Declaration of Purposes," spent one day with us. He made a beautiful and telling speech, and was cheered to the echo. By the way, he has promised to write often for the RURAL. Brother Wright is now president of the Ladies' Normal school of Southern Alabama.

Brother W. A. Saunders, one of the founders of the Order and the *first* Master of the National Grange, has also been in attendance. He is here representing the Department of Agriculture for the U. S. Government.

Brother Mortimer Whitehead, the Worthy Lecturer, is as bright and pleasant as he was when in California. The same for Brothers Woodman, Rhone and Chartters of the Executive Committee.

Brother Brigham is not feeling at all well, but he has always time, the way and the inclination to be "awfully nice."

Bro. Hawkins is as zealous as ever, and sends "regards to all."

Brother John Trimble and his able assistant, Brother Moore, please everybody and make us wish the National Grange might sit more frequently than once a year.

Brother McDowell holds the *cash* as guardedly as ever, yet all say he is the right man for the place.

Brother Hall of Nebraska makes the Hall ring when he speaks, and we all wish he would talk more frequently.

The Worthy Chaplain, Brother Rose of Texas, has more friends than he knows of; he is truly the "Rose of Sharon" in the National Grange, and the Gatekeeper, Brother Page, is as full of fun and obliging as though he had nothing else to do. But he turns the Page often in the discharge of duty.

Worthy Ceres, Worthy Pomona, Worthy Flora and the efficient Worthy Lady Assistant are each as dutiful and charming as it is possible for the female form to be.

Bro. C. J. Cressey, our Worthy Treasurer, was here but a short time. His health is poor, and this sultry climate did not suit him. So after making one of his best speeches, he bade us good-by and started for away-off Maine. Everybody likes Bro. C., and the young ladies especially *dote* on him.

How I should like to tell you about Hayes, Russell, Booth, Kimbrough, Knott, Marrs, Carr, Thompson of Ill., Stateair, Peckham, Messer, Bancroft, Williams of N. C., Bailey, Ellis, Blackford, Simms, McDaniel, and their good wives. Unfortunately, there are a few here whose wives are not present, and a *limited few* who have no wife to bring along. In fact, it is said some are looking for a better-half.

Among the new faces are Bro. and Sister Nelson of Tenn., Bro. and Sister Gifford of N. Y., Bro. and Sister Murray of Md., Bro. and Sister Prince of Maine.

Among those who are very much missed are Bro. and Sister Robie of Maine, Bro. and Sister Luce of Mich., Sister Wasson, and Bro. and Sister Clardy of Kentucky. More soon.

Atlanta, Ga., Nov. 15, '90. E. W. D.

Farmers Want to Effect Many Reforms.

SPRINGFIELD (Ill.), Nov. 20.—The Farmers' Mutual Benefit National Association to-day agreed to resolutions demanding the revision of the patent laws; the abolition of the national banking system; that the circulating medium be confined to gold, silver and copper coins and United States Treasury notes; favoring loaning money by the National Government to citizens in sums not exceeding $1000 to any person and properly secured at interest not exceeding 4 per cent per annum; favoring the issue and sale at par of United States bonds of $10, $20, $50 and $100, bearing two per cent interest and redeemable at the option of the holder and the Government.

The resolutions further demand the regulation of corporations by law; favor the election of the President, Vice-President and United States Senators by a popular vote; oppose the civil-service laws and fix the tenure in office of United States Judges not to exceed nine years. The election of Postmasters and Railroad and Warehouse Commissioners by a popular vote is also urged. Pensions to soldiers and sailors are approved and a revision of Government officials' salaries is recommended, as is also a reduction of taxation on necessities and conveniences, and the regulation of immigration and the manufacture of adulterated foods. The resolutions concluded by making provision for the establishment of a national organization to attend the coming sessions of the Legislatures throughout the country in the interest of farmers' organizations and calling upon representatives of the association to keep aloof from both old parties.

Santa Rosa.

At the meeting of Santa Rosa Grange held on Nov. 22d, it was decided to hold a special meeting on Dec. 4th (at 10 o'clock) and celebrate the birthday of the Order.

There will be a Harvest Feast and an open meeting in the afternoon at which there will be a musical and literary program given.

All Patrons are cordially invited.

The election of officers for the year 1891 will take place on Dec. 13th, at half-past one P. M.

F. L. GAMBLE, Sec'y.

Anniversary Day at Lodi.

To the Officers and Members of Lodi Grange, and Patrons in general: There will be no meeting of Lodi Grange on Wednesday, December 3d, it being postponed until the 4th—that being the anniversary day of the Order—commencing at 10 o'clock A. M. sharp.

All Patrons in good standing are cordially invited to be present. Yours fraternally,

MISS FLORENCE HUFFMAN,

Lodi, Nov. 22, 1890. Sec'y Lodi Grange.

WOMAN'S work in the Grange! Through her silent influences and helpings, the Order of the Patrons of Husbandry is *an educator* and encourages *each one* to improve himself or herself to their best ability, and by improving ourselves individually we help to influence the community in which we live. This means more power and a higher influence in the State. The better the State the better the nation composed of States; hence by developing *all the best everywhere*, we not only improve but we send an influence abroad which uplifts the world.—*Ex.*

SUCCESS cannot be obtained without many discouragements, says the *Southern Cultivator*. Some of the best Granges in the land, subordinate and State, are those that have encountered severe trials, during which their lives have almost gone out, but the pluck and energy of the faithful few kept them in existence and infused such new life and vigor as enabled them to become strong and abundantly prepared for future activity and usefulness.

NORTH BUTTE GRANGE will no doubt have a splendid time Saturday, Nov. 29th. Past Master S. T. Coulter—*sterling* by name and sterling by nature—will no doubt give the Patrons one of his best speeches. Bro. George Ohleyer and wife expect to be present. Brother O. is the General Grant of the anti-debris movement and one of our most solid Patrons—with tongue and pen.

FARMERS' ALLIANCE.

State Organization Perfected at San Jose.

THURSDAY—First Day.

A nearly full delegation from the several county Alliances of the State met in the Grand Army hall this morning in answer to a call issued by Col. J. S. Barbee of Santa Barbara, who is acting under instruction from President Polk of the National Farmers' Alliance.

Col. Barbee explained the object of the call, which was for the purpose of forming a State Alliance for the State of California. The following temporary officers were appointed until the permanent organization:

President, M. Cannon of Ventura; Vice-President, S. K. Schilling of Santa Barbara; Secretary, J. M. Sharp of Ventura; Chaplain, J. M. Moore of Tulare; Steward, C. W. Martin of Santa Barbara; Doorkeeper, H. N. Rhyne of San Luis Obispo; Assistant Doorkeeper, J. B. Rigdon of San Luis Obispo (now residing at San Jose).

The State Organizer examined the credentials of the delegates present and admitted the following delegates:

Monterey—David Reed, S. O. Pugh, D. G. Wright.

San Luis Obispo—H. W. Wright, James H. Allen, J. G. Stevenson, H. O. Rhyne.

Tulare—John Roth, J. N. Wright, J. M. Moore.

Merced—Mrs. J. B. Pemberton, D. M. Wood, Mrs. S. H. Wood.

Santa Clara—J. W. Hines, J. W. Lovell, Joseph Rice.

Santa Barbara—Ira Winget, Charles M. Martin, James Morgan; S. K. Shilling, Alternate.

Ventura—M. Cannon, J. M. Sharp, F. M. Senteney.

San Benito—Henry Chase, E. C. Fuller, J. F. Prewett.

Fresno—John S. Dore and J. L Gilbert.

Yolo—J. B. Nixon, Peter Roth, C. Hatcher.

Los Angeles—P. K Wood, E. M. Wardall and P. S. Durfy.

Stanislaus—Mrs. James Kinnear, Mrs. J. S. Witherell, J. S. Witherell.

Colusa—Jesse Poundstone, J. S. Taylor and T. A. Gallup.

The following were then appointed a Committee on Constitution and By-laws: I. N. Wright, F. M. Senteney, John S. Dore, John Roth, F. P. Cook and E. C. Tully; after which the convention took a recess for dinner.

Afternoon Session.

The Committee on Constitution and By-laws submitted the following as a preamble:

"Declaration of Purposes—Profoundly impressed that we, the Farmers' Alliance, united by strong and faithful ties of financial and home interests, should set forth our declaration of intentions; we therefore resolve:

"First—To labor for the education of the agricultural classes in the science of economic government in a strictly non-partisan spirit.

"Second—To indorse the motto, 'In things essential, unity, and in all things, charity.'

"Third—To develop a better state, mentally, morally, socially and financially.

"Fourth—To create a better understanding for sustaining civil officers in maintaining law and order.

"Fifth—To constantly strive to secure entire harmony and good-will among all mankind and brotherly love among ourselves.

"Sixth—To suppress personal, local, sectional and national prejudices, all unhealthful rivalry and selfish ambition.

"Seventh—The brightest jewels which it garners are the tears of the widows and orphans, and its imperative commands are to visit the homes where lacerated hearts are bleeding, to assuage the sufferings of a brother or sister, bury the dead, care for the widows and educate the orphans; to exercise charity toward offenders, to construe words and deeds in their most favorable light, granting honesty of purpose and good intentions to others, and to protect the principles of the Alliance unto death. Its laws are reason and equity. Its cardinal doctrines inspire purity of thought and life. Its intentions are 'on earth peace and good-will toward men.'"

The remainder of the afternoon was passed in considering each article of the constitution, and at 5 o'clock the convention adjourned.

The Banquet.

At St. James hotel, Thursday evening, by the kindness of the San Jose Alliance, a splendid banquet was given to the delegates, visiting members and invited guests. It was a spirited affair ably presided over by J. W. Hines. Toasts, brief, pertinent and inspiring speeches were made by many of the leading members.

FRIDAY—Second Day.

The forenoon session was called to order promptly at 8:30 A. M. by Marion Cannon, President pro tem. The minutes of Wednesday were read and approved of, and the credentials of A. A. Weber of Fresno; J. C. Drew, D. M. Rice and E. R. Childers of Santa Cruz were presented and they were given seats in the convention.

Peter Roth of Yolo county was appointed Sergeant-at-Arms.

G. B. Johnson of San Jose was appointed doorkeeper instead of H. W. Rhyne, excused. The Committee on Resolutions was appointed, consisting of J. W. Hines of San Jose, John Roth of Tulare county, J. B. Nixon of Yolo county, H. W. Rhyne of San Luis Obispo county and P. S. Durfy of Los Angeles county.

Afternoon Session

The following officers were elected:

President	MARION CANNON, Ventura
Vice-President	PETER ROTH, Wheatland
Secretary	C. W. PEDLAR, Gilroy
Treasurer	J. W. HINES, San Jose
Chaplain	MRS. J. KENNEAR, Modesto
Lecturer	J. L. GILBERT, Fresno
As't Lecturer	P. K. WOOD, Los Angeles
Door-Keeper	J. B. JOHNSON, San Jose
As't Door-Keeper	MRS. M. A. TALCOTT, San Jose
Serg't-at-Arms	C. W. MARTIN, Santa Barbara

tate Bus. Man'g'r, J. M. MOORE, 297 Linden Ave., S F. Executive Com., JNO. S. DOVE, Fresno; JESSE POUNDSTONE, Grand Island (Colusa Co.); JAS. MORGAN, Santa Barbara; E. M. WARDALL, Monrovia (Los Angeles Co.); DAVID REED, Santa Cruz

NATIONAL DELEGATES—J. S. BARBEE, Santa Barbara, and D. C. VESTAL, San Jose. [Session of 1890 opens at Osceola, Fla., Dec. 2d.]

Organizing Deputies.

J. B. RIGDON for Alameda county.

Each officer as elected appropriately responded. The newly elected officers were installed by J. S. Barbee, who in a brief speech expressed satisfaction with the work accomplished and his belief in a grand future for the Order. This finished his labor of organization in California.

Mrs. J. S. Witherell moved a vote of thanks to Mr. Barbee. Unanimously carried.

Short speeches were made by J. B. Rigdon, Mrs. K. L. Squire and other members.

Evening Session.—The Committee on Constitution and By-laws made its report, which was discussed.

The next session will be held in Los Angeles on the third Wednesday of October, 1891. Out of the 40 votes, Los Angeles received 21 and San Francisco 13.

SATURDAY—3d DAY.

Forenoon Session.

Duly called to order by President Cannon in Grand Army hall. The Executive Committee reported by its selection of officers: J. S. Dore, chairman; E. M. Wardall of Los Angeles as Vice-President, J. M. Moore of Tulare Treasurer, Jesse Poundstone of Colusa Secretary. That they had placed the bonds of the State Secretary and Treasurer at $5000 each, and the bonds of the State Business Manager at $25,000.

Voted that the headquarters of the State Business Manager be at San Francisco, and the committee hold its next meeting in San Francisco in January, 1891.

The Committee on Constitution and By-laws finished their report and it was adopted.

The President appointed the following committees:

Judiciary—J. S. Withrell, Stanislaus; J. G. Stevenson, San Luis Obispo; J. C. Drew, Santa Cruz; T. A. Gallup, Colusa; J. M. Sharp, Ventura.

Legislative Committee—E. C. Tully, San Benito; E. M. Piercy, Santa Clara; John Roth, Tulare.

The Platform Adopted.

Edmund Burke, the great English orator and statesman, never uttered a wiser and more truthful sentence than when, in the midst of one of his grand and noble speeches, he exclaimed: "When bad men combine, the good must associate, else they will fall one by one an unpitied sacrifice in a contemptible struggle."

By vast combinations of capital and its unprincipled and oppressive manipulation, this dread alternative has been squarely placed before the laboring people of this country. While our wealth has been increasing with the most wonderful rapidity, the astonishing spectacle is presented of the producer of that wealth as certainly and as rapidly growing poorer. The cause of this unnatural condition of things we are most honestly and earnestly endeavoring to ascertain. To do this more easily and effectually we are striving to bring the people together and encourage them in the interchange of thought. No conclusions are desired or sought but those that are founded in truth. No remedy is expected or wished for that is not dictated by perfect justice. The associates, whose aid we are hoping to secure, are all those in whose hearts there continues to burn the pure fire of patriotism and love of humanity. The man or woman who will coldly turn away from our appeal must have lost from their remembrance the deeds and virtues of the patriot dead.

Already we have learned a few facts that are of deep and vital interest to all our people. We have found that in 1889 5,200,000 men and women in the United States of America worked for an average of less than $200 per year, while the farmer of this country did not receive on an average over $300 per year for the labor of himself and family. We have learned also that Wall street and the National banks are the most powerful factors in shaping our national legislation, and that those highest in authority bend in the most abject subserviency to the narrow and selfish demands of a purse-proud oligarchy; that at the dictation of a foreign money power our currency has been destroyed and a bonded indebtedness made to take its place, whereby untold millions of interest has been forced from the hands of honest toil, while commerce has been made to languish, manufactures cease, and all classes of industry and improvement move with an uncertain and unsteady tread; that the farms and public lands of the nation are passing with frightful rapidity into the possession of syndicates and alien landlords, thus breaking down the strongest bulwarks of liberty—the independent home and the common school; that the elective franchise is fast being debauched by intimidation and bribery; that the liquor saloon—that foul octopus whose hydra head, upreared in every peaceful hamlet, brings sorrow, discord and destruction, and whose slimy arms would drag down every virtue and strangle every industry—has become a dangerous factor in politics as well as morals; that one-half of our citizens, and they the very best, purest and most law-abiding—our own true wives and mothers—are deprived of the rights guaranteed them by our great charter that says: "All just governments derive their powers from the consent of the governed."

And further still have we seen that our State Legislatures are, as a rule, composed of idlers and non-producers, and the Congress of the nation is filled with lawyers and bankers, numerically the smallest class of our community, giving them the absolute veto power of all legislation, which power they have used for the enrichment of the favored few and the impoverishment of the masses.

But, brothers, the light is now breaking, the morning beams come streaming over the eastern hills, presaging the speedy coming of a brighter and a better day. Like a great, grand, mighty, irresistible tidal wave, the Farmers' Alliance and Industrial Union is sweeping over the nation, until to-day from threescore thousand schoolhouses, those cradles of patriotism and intelligence, there comes one firm and determined protest against a longer continuance of these crying wrongs, and a united demand for the immediate introduction of better conditions. And to this end, as prominent features of the new Order, we demand:

First—The entire abolition of National banks and the substitution of legal-tender Treasury notes, issued in sufficient quantity to enable the business of the country to be transacted on a cash system; that such notes be made to rest upon any good security and be a full legal tender for all debts, both public and private, and bear a rate of interest not to exceed 2 per cent per annum.

Second—Government ownership of all the agencies of public transportation and communication, and that they be operated in the interest of the people at actual cost.

Third—The restoration of all unearned land grants to the public domain, and legal provisions made to prevent the securing or holding of large tracts of land by either corporations or aliens for speculative purposes.

Fourth—The adoption by our next Legislature of what is generally known as the "Australian ballot system of voting," to the end that intimidation may cease and the purity and secrecy of a freeman's ballot may be secured.

Fifth—We hereby approve of the declaration of the Farmers' Alliance and Industrial Union held in the city of St. Louis, December 6, 1889, when it said, "We are opposed to the saloons and liquor business in all its forms."

Sixth—The election of President, Vice-President and United States Senators by a direct vote of the people.

Seventh—That while we continue the coinage of gold and silver as money, they shall sustain a perfect equality as to coinage and tender.

Eighth—That a proper and safe educational qualification for the exercise of the elective franchise should be adopted, but no discrimination on account of sex.

Ninth—That our present public-school system shall be maintained, and its efficiency increased more and more as the exigencies of the country may demand, that they shall forever remain non-sectarian, and that text-books used in the public schools be furnished by the State at cost.

Tenth—That we would recommend such changes in the State law that in the event of the death of the husband the wife has the same right to conduct and carry on the business as the partner has, without the long and tedious course of law usual in such cases.

Eleventh—That we favor a change in the State law making taxes payable semi-annually.

The following resolution was unanimously passed:

Resolved, That the question of State organization be referred to the State Executive Board and that they be requested to give it as early attention as possible.

A vote of thanks was then tendered to F. B Cook for his efficient work on the Committee on Constitution and By-laws.

An Impressive Scene.

Mr. Peter Roth of Yolo county having hastily collected from the members of the Alliance a sum sufficient for the purpose, a handsome gold-headed cane, appropriately engraved, was purchased and presented to J. S. Barbee, the State Organizer. Mr. Dore of Fresno made a speech appropriate to the occasion which was received with cheers. Mr. Barbee responded in a manner that evoked cheers and drew tears to many eyes, thanking the brothers and sisters for their kindly recognition of his services. He said that with two or three exceptions he had been everywhere kindly received and considerately treated by people of all political shades. Those exceptions were where, on account of his having been in the Confederate service, he received cold treatment and overheard unkind remarks. He had traveled and labored incessantly, day and night, and often traveled in the dark to fulfill his engagements until he felt that he must now have rest. He called Mr. J. G. Stevenson, a member of the G. A. R. of San Luis Obispo, to the central pedestal in the hall, and standing on the opposite side, obliterated the imaginary sectional line that once divided them, shaking hands and declaring that they were now soldiers marching together in the same great cause for the liberation of all men and women from mental and industrial thralldom. Mr. Vestal of San Jose, the other State delegate to the National Convention, indorsed all the brothers had said in a very neat speech, having himself served on the Federal side. The whole proceeding was received with rounds of prolonged applause.

Resolved, That we view with disfavor any attempt to advance the interests of candidates for offices before this Alliance; especially for candidates for the high position of President of this republic, and we can assure the people that the farmers of this nation are not looking for a Cæsar or Cromwell or millionaires, but for a Cincinnatus, and when he is found we shall know him by the character he bears and the work he has performed. Adopted.

Further items will be given hereafter and our report continued in our Grange Edition of this week.

Farmers' Alliance in Maricopa County, Arizona.

President Broomell is required to bring before the society's notice then, the sub-treasury grain bill now pending in the 51st Congress. It provides Government warehouses for wheat, rye, corn, cotton and tobacco. Upon storing these products, treasury receipts are to be issued for 80 per cent of their local value. The notes draw one per cent interest.

Thus a currency will be supplied when most needed, with which to move or handle the crops. All goods stored must be sold within a year and the treasury notes issued against them must then be redeemed.

The farmers hope in this way to protect themselves against a money stringency which now usually pinches them at the hardest times.

Districts that have raised $500,000 of above crops for two years can invoke the aid of this bill when finally made a law.

Our local Alliance will be called on to secure an amendment extending the bill's operation to barley and reducing the minimum yearly production to about $200,000.

The organization of such clubs is doing great good in familiarizing farmers with economic, industrial and fiscal laws and in enabling them to make their united action felt upon National and State Legislatures.

Mrs. Annie M. Livingston.

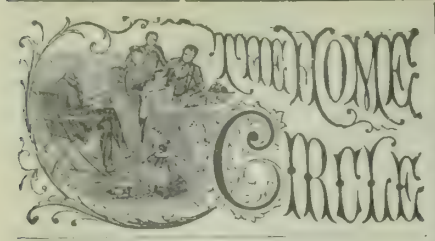
EDITORS PRESS:—Four Sabbaths ago there was buried from Trinity Church in this city, one of our most useful and gifted workers in the cause of charity. Her illness was not of long duration and her death is deeply mourned by all who knew her. Many will miss her from the "Woman's Educational and Industrial Union," where she was an active and patient attendant. She was a true type of that large class of Christian women who by their good works help to give a notable name to San Francisco as a city, where humane and Christian societies abound, and like a large majority of that class she valued most practical and merciful deeds more than denominational creeds.

Mrs. Livingston was of German and American parentage. She was born in the little village of Hope, New Jersey, in the year 1837, but most of her girlhood and young womanhood years were spent in Philadelphia, where her advantages of education were signally favorable to culture and to the development of true character. In both her father and mother she found an ideal for a sacrificing and unselfish life; they both lived void of offense, devoted to religion and to good works. The family moved to Illinois, where she married at Bloomington Mr. I. H. Livingston, and during the war she acted as nurse in the field and in hospital. She heroically followed as closely as possible the fortunes of her husband, who was an officer in the army. She afterward entered the lecture arena and for some years successfully and mostly in the Middle States, appeared upon the rostrum. Finally she studied for the stage and made her debut at Wallack's theater in New York City, where she was a member of the Woman's Sorosis. She met with good success in the profession, attaching to herself a large circle of friends; among those devotedly her friend was Laura Keene.

In the year 1880 she came to California, followed shortly after by her only son, Wm. B. Livingston. She loved to live on this coast, the climate was "so favorable to habits of industry"—habits which her own life exemplified in a remarkable degree.

This brief notice is not intended to utter undue praise, but to render a deserved expression of regard for a worthy character, a noble woman, one whose nature grew deeper and more perfect even amid disheartening struggles, illustrating as she did the beautiful words of Grimke, who wrote: "Happy indeed are they whose intercourse with the world has not changed the tone of their holier feelings, nor broken the musical chords of the heart, whose vibrations are so sweet and melodious in the nightfall of age."

B.



A Parable of the Gates.

BY JOAQUIN MILLER.

"How shall man surely save his soul?"
'Twas sunset by the Jordan. Gates
Of light were closing, and the whole
Vast heaven hung darkened as the fates.
"How shall man surely save his soul?" he said,
As fell the kingly day, discrowned and dead.

Then Christ said, Hear this Parable:
Two men set forth to journey fast
And reach a place ere darkness fell
And closed the gates ere they had passed.
Two worthy men, each free alike of sin,
But one did seek most sure to enter in.

And so when in their path did lay
A cripple with a broken staff,
This one did pass straight on his way,
While one did stoop and give the half
His strength, and all his bread did nobly share
Till they at sunset saw their city fair.

Then he who would make sure ran fast
To reach the golden sunset gate,
Where captains and proud chariots passed,
But lo! this proud man came too late!
The gate was closed, and all night long he cried;
He cried and cried, but never watch replied.

Meanwhile the man who cared to save
Another, as he would be saved,
Came slowly on; gave bread, and gave
Cool waters; and he stopped and laved
The wounds. At last, bent double with his weight
He passed, unchid, the Porter's private gate.

Hear then this lesson; hear and learn:
He who would save his soul, I say,
Must lose his soul; must dare to turn
And lift the fallen by the way;
Must make his soul worth saving by some deed
That grows and grows, as grows a fruitful seed.

—*N. Y. Independent.*

What Shall Women Do?

[Written for the RURAL PRESS by MARGARET B. HARVEY.]

Since my last article in the RURAL appeared, the question has been asked me, "If you don't want women to cook, what would you have them do?"

I must confess that the question struck me with a sort of a shock. Like an Irishman, I must answer with another question, "Where are people's eyes?" Why, the world is perishing because women are not doing the very things that they ought to do, and cookery is the one great hindrance in the way of women fulfilling their true mission!

"But women were intended to be wives and mothers," say my critics. Precisely; did I not admit as much? Did I not say that women were intended to be something else besides cooks—that cooks could be hired, but wives, mothers, counselors and friends, never? Just because the majority of women were intended to be wives and mothers, they ought to be in better business than cookery!

The fact that any rational being, at this late day, could ask me such a question as that quoted above—this very fact, say I—is sufficient proof that there is abundant need for such an article as my last, and a hundred more. Like thunder-storms, articles of this kind are going to make a noise and clear the social atmosphere.

We have nothing in nature or revelation to show us that men were ever intended to be mothers, nor have we anything in nature or revelation to prove that women were intended to be cooks. That women *can* cook or *have* cooked argues nothing but accident. It is *not* an accident that men can cook as well or even better, while they cannot be mothers at all. The mission of a mother is providential—the business of a cook merely conventional. At any rate, whatever it means to be a cook, the word "cook" is not synonymous with the words "wife" and "mother," nor is cookery a necessary consequence of the office of either. To say that it is, degrades both.

The calling of a wife and mother is nothing less than a holy priesthood. Now, those of you who have imbibed "high-church" ideas ought to understand what is meant by that. You reverence the office of a priest and recognize the validity of the sacraments as administered by him, but it would never occur to you to say that he could not properly baptize an infant unless he first dug a well and pumped the water with his own hands; nor would you think of asserting that he must actually bake bread and make wine for the purpose before he could intelligently administer the holy communion. Rightly enough, the priest leaves wine-making and bread-baking, pumping and digging, to persons who earn their living in those ways, while he does what they cannot do and which only he is authorized to do.

Now, what does the unregenerate, Philistine world expect of its royal priesthood of women? I maintain that a true woman's office is nothing less than sacramental, and those not consecrated to humanity as she is should bring her bread and water. Nor am I the only one to maintain such a thing. Women all over the land are feeling the great truth in the air, even though they may be somewhat vague in expressing themselves. This unrest in the household, this soul-hunger for better things, is found everywhere from the Atlantic to the Pacific. The "servant-girl question," with its concomitants, is becoming so serious that it must soon require the combined wisdom of sages and legislators to grapple with it.

Since my last article for the RURAL was written, the author of "In the Redwoods" hit the nail on the head when she said that she was waiting for the "co-operative cook-wagon." Well, sister, say I, thousands of your country-women are also singing "Wait for the wagon," and I can tell you that the wagon has already appeared in Boston, and that wagon is going to be the very wagon that Emerson advised us to hitch to a star—it is going to be the common wagon transformed into a chariot of the gods! For it is going to be the earthly salvation of womankind.

This last paragraph is somewhat of a digression. Just as sure as fate, co-operation is going to take cookery out of private hands—we cannot avoid the inevitable if we would. Understanding this much, let us proceed.

What would I have women do if I could have things my way? To begin with, I would have them study just as long and as hard as if they expected to teach. Those who *do* expect to teach in the public schools are required to pass a rigid examination before they are permitted to take charge of other people's children. Why should not any woman be just as well prepared to take charge of her own children? Unfortunately as things are today, she can take upon herself the responsibility of children of her own without examination.

I consider it a perversion of the natural order of things when a mother does the cooking for her family and sends her children to a teacher, so early as is the present custom. Why does not the mother do the teaching and hire the cooking done? True, the mother may not be competent; but if women were properly trained for their true vocation, the mother would be competent. If I had children, they should never leave my side until the age of fifteen. I should consider it my duty to be able to instruct them at least this long. I would rather confess that I was incompetent to cook, particularly when I could hire a negro man who was more proficient than I. Let mothers learn kindergarten methods, let mothers keep track of the latest educational progress. Teachers should only be called upon in special cases, until the "higher education" period is reached. We have had enough of torturing little ones in primary schools, which are scarce more than day nurseries to relieve lazy mothers.

I do not see how any mother could want to deprive herself of the pleasure of watching the development of her child's intellect and intrusting it to an indifferent person or a stranger. You may be very sure that she cannot lightly shift the responsibility.

(Going back a little, how successful do you suppose a mother is going to be, in her proper work of instructing her children, if she has to run, every whip-stitch, to look after a pot or a kettle? You wouldn't expect that of a paid governess.)

A teacher must pass an examination, so must a physician. A doctor must know the location of every bone in your baby's body before the State will allow him to put his hands upon it. Yet he may not touch it five minutes—you can touch it any time and all the time. Do *you* know where its bones are? Why will the State allow *you* to put your hands upon it? How came you by the responsibility of its care at all?

I tell you no woman is fit to be a mother until she has studied anatomy and physiology. A true mother is a physician as well as a priestess—more than this, she is an artist and a scientist. Instead of bothering with cookery, every girl who expects to live to be a woman should spend at least two years in studying anatomy and physiology. Yes, she should attend regular lectures and dissect the human body, if possible. After that she should spend two years more in drawing the human figure, painting from plaster casts and life and modeling in clay. Let her do all this as part of her education, even if she never expects to marry. Something will be gained when the majority of our women know what the human form really is. We shall then live in an artistic atmosphere.

You have but to look around you to see that the majority of women do *not* know what the human form really is. Whence came the exaggerated busts and hips and the pinched waists? They were never copied from any Greek statue or any living model. No woman ever naturally grew into the shape of a fashionable corset. Once give a girl a certain amount of anatomical and artistic knowledge, and she reverences the human body as what it is—a temple of the Holy Ghost. She would no more tamper with it than she would actually violate a temple. To adopt a hygienic form of dress, she would consider nothing short of a solemn, religious duty.

Just here I would like to call the reader's attention to an article by Dr. Sargent of Harvard, which appeared in *Scribner's Magazine* last year. He says, among many other valuable things, that from observations made in Harvard gymnasium, he concludes that the majority of the men of to-day have not attained their due amount of strength because they have inherited the weakness of their mothers. He then makes an eloquent plea for athletic training for girls and a rational mode of dress for all women, not only for their own sakes but also that the children of the future may not be prematurely weakened. Dr. Sargent also says that for fifty years women have been deceiving the physicians as to the feminine mode of breathing. Women do not naturally breathe higher than men—this is an acquired habit, produced as the result of generations of corset-wearing. Now I, as a woman, dare go a little farther than Dr. Sargent. I believe that the so-called feminine habit of breathing is not the only thing concerning which women have long been deceiving physicians. If my simple testimony is worth anything, I unhesitatingly declare that woman's "natural ills" are not natural at all. If women banished corsets and tight belts and knew *why* these should be discarded, the name and the memory of old-time evils would pass away—and with them a great deal of degrading superstition.

Can you begin to realize what it would mean if all women knew what the human body was? Why, they could not endure the proximity of anything ugly or hateful—they would surround themselves with forms of beauty. No hideous deformities should be permitted to shock their senses or influence their children. The women of our day and land would dwell in an atmosphere of loveliness as the early Greek women did. According to Ruskin, painting the human figure is the perfection of art. In the glad, new day, we shall indeed have art in the household—houses then shall be true homes and temples, not mere lodging and eating places.

We shall have an end of the convenient, lazy, ignorant fashion of blaming a deformity upon "the mysterious dispensation of Providence." We shall never be called upon to shrink in horror at the mention of nameless crimes against the unborn, for such heathenish iniquities could never be. No rational human creature could then conceive of motherhood as a dreaded martyrdom or wifehood as legalized slavery. And in that day men as well as women shall understand what the mysterious sin against the Holy Ghost is—it is maltreating, oppressing or hurting a child. You know what our Lord said concerning him who incurred this guilt—it were better for him that he had a millstone about his neck and were sunk in the depths of the sea. Against what other sin did our Savior ever so loose the vials of His righteous wrath?

As a high means to a holy end, you begin to see why women ought to study painting and anatomy, even if they never become what the world calls great in these lines. Now I am ready to add that for a similar reason every woman ought to study botany. As every woman naturally loves flowers, this ought not to be a very difficult task. I believe that the study of botany suggests the easiest way by which a true mother can perform a high moral duty.

It is a mother's place to enlighten her children, boys as well as girls, concerning the hidden, solemn mysteries of their own natures. Any mother who would dare delegate this sacred responsibility to any other is not fit to be a mother at all. I know it is the custom to leave such instruction to the chance innuendoes of ignorant, low-minded hired girls, but such mock modesty is nothing short of murderous. No wonder our society is tainted—no wonder the community is so often startled by unspeakable horrors. Say what you will against wicked men and women; these wicked men and women were once innocent children, probably with timid mothers who shirked their sacramental, priestly duty and spent their golden hours in coaxing the pot to boil.

Now in many respects the vegetable kingdom resembles the animal. Indeed a plant may be described as an animal, refined, etherealized, spiritualized. What in a lower animal might strike us as coarse, in a flower becomes purely idealized, akin to the heavenly operations of the human soul. It is impossible for any one to study botany without reasoning from analogy. More than this, his reasoning results in his exaltation. Any one who knows anything of real science will bear me out in the assertion that knowledge purifies, while ignorance taints.

Any mother who is alive to her full duty and who truly values the divine gift of modesty; who wishes to have her children enlightened and keep them pure, should just as early as possible place in their hands a copy of Gray's "How Plants Grow." And she should look upon flowers as angels, messengers of healing and mercy from the heavenly kingdom, miraculous object-lessons, spiritualized models for human imitation. The true "language of flowers" is purity.

Do you not begin to believe that if women lived as they should, they would have quite enough to do without wasting their God-given powers over the pot and the frying-pan?

"All roads lead to Rome." All the agitation about "woman's rights," all the talk about "higher education," all we have lately heard about "social purity" and "dress reform," "the art revival," "heredity" and "co-operation"—all are tending in the same direction. The evolution of the ideal woman, for whom the world has long waited, and then the uplifting of all humanity.

Instead of "every woman her own cook," we shall ere long have "every woman her own artist." No, I do *not* ignore the idea of economy in the household, nor do I expect that everybody must be rich before an era of better, higher living shall be inaugurated. If cookery can be done by co-operation or professional aid very much more cheaply than it is generally done now—if time and strength and nerves and youth, even life, may be saved in consequence—may we not call the result the best economy? And if the generality of women can furnish their own pictures and embroideries, their own flowers and music, is not that making the ideal life, or something akin, possible for all? No, my dear, this will not antagonize the work of artists and scientists; it will only create an audience and an atmosphere for them and make their efforts more fully appreciated.

The world is just beginning to discover the real significance of the story of Mary and Martha. It was *Mary*, apparently doing nothing, who received divine commendation—*not* Martha, who was troubled overmuch with household cares. In direct defiance of the record, the world has long been upholding Martha as an example. The twentieth century will give Mary her chance. And this is not the only particular in which we shall go back to apostolic times.

In those days originated the story of Beffana. Did you ever hear it? The Lord was expected to pass by her door, but she was so absorbed in her household cares that she could not look out in time to see Him. When at last she did look, her Lord had gone by. Stricken with remorse, she started to follow Him, crying: "Lord, come back!" But He has never turned His head, and Beffana still wanders through the world crying and hurrying to overtake Him. But she never can.

How many Beffanas have we in our midst to-day? They will leave their household cares when it is too late—their Lord has passed by!

Cupid on a Wood-box.

[Written for the RURAL PRESS by LUPA.]

"Ellen!"

"Yes, Annie."

"This is a lovely spot!"

Ellen turned her dissatisfied face toward the window. To the right and the left were hills, large and small, low and waving in outline or high and steep, bare on one side, bare on two sides perhaps, except for the black, sharp-edged bottle rock strewn so thickly over the surface that it glistened in the sun as if the old wine-drinking gods had indulged in a long debauch, and as the bottles were emptied, dashed them to pieces on the earth. (Had the ground been cursed since in consequence?)

No, not quite bare. Foraging parties of red-skinned, green-uniformed manzanita bushes and scattered scouts of greasewood waving tiny purple plumes, or thorny oak bush, ventured cautiously out from the shelter of the redwoods in the depths of the canyon where the creek turned somersaults in the dark all day and all night; away from the slender arms of the willow; past the stately, fragrant bay laurel and the orange and green brightness of the madrona; around the base of the hill and up the zigzag crack in its side. What had they found—what would they ever find should they reach the top? On other hills, every member of the chaparral family seemed to cluster, lock arms, and twined around themselves and each other the wild hop, grape and brilliant love vine—that dainty thing without root or leaf, any expression except slender, yellow, tangling stem and tiny, pale blossoms. By sweeps and angles and sudden stops, the hills made way for the ridge on the north, which never seemed to return the politeness but attended strictly to its own business of raising cedar for fence-posts, pines to be fed to the great, hungry saws of the mills, black oaks for wood and rails, and the great, branching live oaks for beauty—a beauty that slowly matured and waited for some tidal wave to make a seaport of an inland town and waft its stateliness across the sea.

The symmetrical, cone-like form of the red-bud bush on the slope in front, being so near, seemed to make two of the one little valley that lay to the south and was now as attractive as fresh young grass and many-hued wild flowers could make it. You have found many such hiding-places in the Golden State, and they are pleasant to see.

Ellen looked it all over lingeringly, for she loved beautiful things, then glanced at the stacks of newly ironed clothes airing on chair-backs by the kitchen stove, then out through the open back door; and the dissatisfied look came again.

"Yes, it is pretty enough; but you know there was a serpent even in Eden."

In the pause that followed, a strong young voice came up from the garden, singing or almost shouting, "Dear! dear! what can the matter be?"

"So I ask," said Annie, half laughing, "what has gone wrong this morning more than usual?"

"Nothing unusual. That is what makes it so tormentingly aggravating. Those two long words don't begin 'to 'p'ess my feelin's,' as little Katie said. It is because the annoyance is on the spot all the time and is likely to stay that is so hard to bear. It always makes me angry to have people or circumstances say, 'You cannot help yourself; so what is the use in fretting?' If I could get out of a swamp I wouldn't stop to fret about being in it."

"But where is the swamp?"

"Exactly in the middle of that green patch

that you call a lovely valley. It is a nasty, muddy, treacherous place, and the frogs croak there all summer long."

Then, seeing the puzzled look on her friend's face, brought the old merry expression into her eyes and curved the corners of her lips up instead of down, making them much more attractive.

"You don't see it? Well, then, we'll keep to plain facts. 'Facts is what we want,' as Schoolmaster Squeers said. What do you see on those chairs?"

"Clean clothes just ironed."

"Exactly. Do you see what time it is?"

"Fifteen minutes to eleven."

"Right again. Now what do you see beyond that door?"

"Nothing in particular."

"Just so. Nothing but two great logs, for I scraped up every stick and chip for the ironing fire. Father and the boys will expect dinner just at twelve, and how am I to get it?"

"They seem to be very busy about their planting."

"Yes, the spring is late and sudden and the seeds must be in very soon or nothing will be raised. I know it all better than you can tell me, and I wouldn't complain if it hadn't always been so ever since I can remember. Everything else is more important than the wood, so only an armful or two, or possibly a day's supply, is cut at a time. I have known mother to go a quarter of a mile into the woods to pick up chips around a stump where a tree had been chopped down, and have done it myself, too. I would never marry the best man in the world unless I was sure he would keep a shed full of wood. I don't like to continually ask for it, as if I was an every-day beggar. They are good, good as they can be;" and her tone softened as the big, musical brother called out "Catch!" and tossed a great bunch of white lilac through the window, and her father asked, while he straightened his bent back and rested his hands on the hoe-handle:

"Ellen, girlie, will you bring out a pitcher of ginger drink?"

She stepped to the door, held the pitcher under the pipe from the spring till the flowing of the cool water over her hands reminded her that it was more than brimming full, dreamily added sweetening and ginger with a spoonful of home-made vinegar, then stirred and stirred, while over and over in her mind ran the words, "These things ought ye to have done and not to have left the other undone."

"Are you stirring yourself to sleep, mesmerizing yourself or something?" asked Annie, when the minutes went by and there were no signs of a stop.

"Yes—no—I don't know." Then she carried pitcher in one hand and a goblet in another, out to where her father still waited.

"You needn't have brought that glass thing, child. The tin dipper is good enough for me."

"'These things ought ye to have done and not to have left the other undone,'" she repeated, this time aloud without knowing it.

"What things, girlie?" asked her father, surprised at the words.

"Wood-pile, chip-pile, shavings," she answered, merrily, coming to herself again.

"Is the wood all gone? Well, I'll come and cut some. It seems to me we never *shall* get this planting finished so we can do anything else."

Evening came. The two girls still loitered at the table after the rest had left the room and all was quiet. Ellen had turned her cup and was twirling it round and round in its saucer as she had before twirled the spoon, then she lifted it and suddenly reaching across, startled her friend with:

"Tell my fortune, Annie."

Annie took the cup, held it up, down, sidewise, close to, and at arm's length, then said:

"I see a road. Half-way between the beginning and end of the road is a little boat, and in that, one person. You are going somewhere alone. You seem to be rowing straight ahead as if you knew just where you wanted to land, so you pay no attention to what you are passing. On that side is a big basket or box, full of something that looks like sticks, and on the top an odd-looking, chubby little figure. Oh, I see. It is Cupid on a wood-box, and he is aiming a long, straight arrow directly at you. You are not noticing him, but you will certainly be hit."

"What a tragedy! Thank you, my dear! Before it happens these dishes must be washed and then comes the milk to be strained."

A year afterward, a letter from Ellen to Annie ran like this:

* * * * * *

"Haven't you again grown tired of the city, you poor, overworked school-ma'am? Come spend the vacation with me—*us*, I mean. Bring your strongest dresses, or make one of drilling, bed-ticking—anything tough, so you can climb the pines, crawl under the bushes, chase squirrels and hunt wild berries. 'Snakes?' No, I didn't mention such a thing, but we can kill them if they get too familiar. Now I have gained your attention, I am going to ''fess.'

"You know I went over to Blue Lakes last summer after mother came home from the East; you know I went to help Mary Lawrence out of her summer troubles because she had such a houseful of boarders and company; but you don't know about one of them—a great, shy, silent fellow who seemed somehow to be always there when he was needed, but never in the way, so I didn't give much attention to him one way or another; besides, Mary had oceans of work to do and there was no time to fool away on young men except in the line of regular business, which seemed to be nothing but satisfying their appetites.

"After the summer was about half over and some of them had left, I had time to notice that Mary's wood-box was never empty. When I had wondered long enough, I asked her what it meant. She smiled and said:

"'Jim Carlton takes care of that. He is a perfect treasure.'

"'He must be,' said I, and thought no more about him; but the evening before I left he seemed to have changed places with some one else, for then he was 'always there' when he wasn't wanted and continually in the way when I was gathering up my belongings to pack. He wouldn't keep still and he wouldn't go off, and he looked as Dick does when he wants to say something and is afraid I will box his ears, till finally I asked:

"'What *is* the matter with you? What *do* you *want?*' Then the secret came out, tumbling over itself in *such* a funny way. I made out of it all that he wanted me and no one else to make life wretched for him, and I thought a minute and then laughed. The more he looked astonished and hurt the more I laughed, but when I could catch my breath I said:

"'Cupid on a wood-box! Yes.'

"So here I am, not a day's ride from the old home and in as pretty and wild a spot as that. 'Come and see.' ELLEN.

"P. S.—My wood-box has never yet been empty and the woodshed is almost as big as the house, *full*, too. E."

YOUNG FOLKS' COLUMN.

Jerry.

[Written for the RURAL PRESS by CLARA S. BROWN.]

Jerry was the best loved of all my cats. I first saw him sitting on the porch looking through the screen-door into the dining-room, and sniffing the nice dinner that was just ready to put upon the table.

Such a scraggly, wretched, half-grown cat he was! "You poor thing!" I exclaimed, "where did you come from?"

"Meow," he answered faintly, and I knew it meant, "I'm so hungry! Please give me some of that good dinner."

I had a nice kitten, but I could not refuse this appeal. I went right out and took him up in my arms, and it scared me to feel how very light he was. He must have been starved for a long time, and he was ill besides, with a kind of influenza. It was several months before we felt sure that he would live, though he was nursed very carefully. I never heard any creature sneeze as he used to; it would have made you laugh. Really, I was almost afraid his head would jerk off in some of the spells he had.

When he discovered that he could lie in my lap, he was very happy. He had seen Tom, my other cat, lie there, and one day he very timidly jumped up. From that time until the end of his life, he showed me the utmost gratitude and affection, in his quiet way.

Tom soon died of fits, and then I was glad that I had Jerry to pet, especially as he became a very handsome cat, dark gray and black, striped like a tiger, and very large.

When we moved to a new home, every one said Jerry would run away, for cats cared more for the places that they knew than for people, but he never thought of leaving us. For a few days he would not eat unless he was in my lap because he was much frightened at the new place.

Jerry had some odd tricks. When he was in the house and wanted to go out, he never went to the door and mewed, as most cats do. If he could find a window shade down in any room (and in the night he always could), he went to it and tapped on it with his paw.

When he wanted to come in, he never asked, but always jumped up on a window and sat there patiently until I went to the door and called him.

He never cried for anything; no matter how hungry he was, he would not mew, but he would get into the chair nearest the pantry and look at me as I passed back and forth with eyes that said as plainly as meows, "do give me something." If he heard me rattle a paper or take a knife out of the tray, he would run to me as fast as he could, thinking I was unwrapping meat from the butcher or was going to cut it. Even when he appeared to be sleeping soundly these sounds would always arouse him.

Sometimes we caught a mouse alive in a trap, and then we opened the trap in the bath-tub, so the mouse could not get away, and called Jerry. At first he was afraid to get into the tub and struggled violently when we put him in. After he found out what it meant, he would run for the tub and jump into it as soon as he saw me coming with the trap. Often a little noise in the bath-room would bring him flying to see if it wasn't the trap.

He was very fond of lying in bed with me. When let into the house, early in the morning, he always came right to the bed, and was not satisfied to lie on it, but must get in it, as close to me as he could snuggle. If I did not let him in, he picked at the clothes with his claws, trying to pull them down.

I forgot to tell you that, although he did not say a word, he fairly *danced* when he knew I was cutting meat for him. He had lost nearly all his teeth except the tusks on account of being sick so long, and I had to cut his meat fine. While I was doing it, he stood on his hind paws and with his fore paws reaching nearly to my waist, stuck his claws into my dress as fast as he could work them, first one paw and then the other. It seemed as if he couldn't hardly wait for the nice lunch that was coming.

He spent a great deal of time sitting in a chair looking out of the window; he never sat on the floor.

Jerry did not like at all the first kittens he ever saw, and spit at them. If they tried to play with him, he growled and walked off.

I took one of the kittens for my own, and after awhile Jerry began to let it play with him. Soon he became as nearly a mother to it as a dignified Tom-cat could be. He let it snuggle up against him and sleep with its head on him, and he washed it all over every day, even after it became nearly full grown. I think that was a remarkable thing for a father cat to do.

He often tried to follow me when I went away, and came quite a distance to meet me.

Alas! one night when roaming around he ate something that had been poisoned, and after a sickness of four days, he died. He never complained once, but sang every time I touched him, right up to his last conscious breath, though he could scarcely hold his head up.

I had him nearly four years, the longest I ever kept a cat, and he was so gentle and affectionate, and had suffered so much when he ought to have been a happy kitten, that I loved him dearly.

I think a great deal of Tommy, the cat he helped to bring up, but he is not so peculiarly lovable as Jerry was.

Now let me beg you to be kind always to kitty. She will be nice, and sleek, and pleasant to have around, if she is treated well and fed plentifully. A cat is a beautiful creature when it is used right, and knows much more than many people think it does.

Kicks, cross words and starvation make cats wild and vicious, and their fur so rough that there is no beauty in it; but if the people who drive them away and say they do not see how any one can pet the hateful things would be less cruel and think what a dreadful thing it is never to have half enough to eat, they would see a great change for the better in them. Be good to kitty, and see how good she will be to you.

DOMESTIC ECONOMY

RICE WAFFLES.—Beat three eggs separately. Add to the yolks a teacupful of boiled rice, a lump of butter. Sift in 1½ pints of flour, add a pint of sweet milk, a little salt, and lastly whites of eggs. Bake in waffle irons.

MOLASSES DROPS.—One cup of molasses, one-half cup of butter, one-half cup of warm water, three cups of flour, one teaspoonful of soda and two teaspoonfuls of ginger. Drop from a spoon into well-buttered tins and bake in a quick oven.

DRESSING FOR TURKEY.—Take stale bread-crumbs, moisten with hot water, season with pepper, salt and butter and a chopped onion, if liked, or a few raw oysters. Some like sage and summer savory for seasoning, and add one-half mashed potato to the crumbs.

IRONING NOTES.—Embroidery should be ironed on flannel, placing the flatiron on the reverse side. This brings out the figure and makes the embroidery look like new. Lace should be pulled into shape repeatedly while drying. It does not need ironing. Iron very dark calicoes (especially indigo) on the reverse side. If the blue calicoes require stiffness, *blue* the starch.

CREAM CORN SOUP.—One can corn, three cups boiling water, two cups milk, one tablespoonful butter, two tablespoonfuls of flour, one egg, pepper and salt to taste. Drain the liquor from the corn and chop the latter fine; cook it in the boiling water for an hour, rub it through the colander and return it to the fire. Have the milk hot in a farina kettle. Thicken it with the flour and butter; season; and pour a little at a time upon the beaten egg. Stir this in with the hot corn *puree*, and serve at once.

TAPIOCA CREAM.—Soak three heaping tablespoonfuls of tapioca over night in just milk enough to cover. In the morning add it to one scant quart of new milk and boil about ten minutes, being careful not to burn. Beat the yolks of three eggs and one-half cup of sugar well together and add to the boiling milk, let it boil up, then take from the fire; flavor as desired. (I use one teaspoonful of vanilla.) Pour in a pudding dish, spread over it the beaten whites, and set away to cool. Serve as cold as possible.

TOMATO CHUTNEY.—Bake the tomatoes in a pan till tender, pour away the liquor, add to one pound of pulp one pint of vinegar, one ounce of salt, three-quarters of an ounce of garlic, one-quarter ounce ground white pepper, one teaspoonful of cayenne. Boil all together till the garlic is tender, then press it through a sieve; add to every pound one pound of sliced apples, one-half pound stoned raisins, one-quarter pound moist sugar and the juice of three lemons. Boil all over a slow fire till the raisins are tender, turn out of the saucepan, and when cold, put it into jars closely covered with bladders.

GOOD HEALTH

The Consumption Cure.

Nothing in the progress of medical science has excited such a sudden and world-wide interest as the recent discovery of Dr. Koch of a cure for consumption.

Dr. Koch has been seeking a cure for consumption for several years. He has conducted his inquiries from the first on the theory that consumption was caused by micro-organisms, although his medical confreres were at first disbelievers in the germ theory; but the doctor kept right on in that line. He began by pure cultivation of the bacillus, and found ethereal oils, tar pigments, mercurial vapors, salts of gold and silver, and especially cyanide of gold, efficacious in destroying the germ, *but this could not be done* in the *body* of animals without also destroying the animal.

"I continued my search," he said in a recent address, "and at last *found what I sought!* Susceptible as the guinea-pig is to the tubercle bacillus, it proved *non-inoculable* when treated with the substance in question. Even when the disease was *far advanced*, it could be brought to a standstill by this means."

This fact may give occasion to search for similar effective remedies in other infectious diseases also, and here lies the field for an international contest of the highest and noblest kind.

His preparation for this cure is a transparent liquid, which is injected subcutaneously, at first in infinitesimal, but gradually increased quantities. When taken into the stomach, it has no effect. The effect of the injection is to produce necrosis, or mortification of the tubercular tissue, in other words, to kill the bacilli in the lungs or in whatever organ attacked. Once killed, nature tries to expel the corpses, as it does with all dead tissues; and here the aid of the physician or surgeon may be required to complete its purpose. When the necrotic matter is expelled from the system the patient is cured, though the treatment should be continued for awhile in order to prevent fresh settlements of bacilli. Dr. Koch is careful to say that his system is only likely to succeed in the early stages of tuberculosis; where there are large cavities in the lungs, in which bacilli are lodged in great numbers, he doubts the power of the fluid to expel them; but in the earlier stages of the disease he is inclined to be confident of the efficacy of his remedy.

The doctor keeps to himself the secret of his discovery. He has not revealed the material employed in its manufacture, or the method of its preparation.

It is said that patients who have been treated in the early stages of consumption have been freed from the morbid symptoms within from four to six weeks, when they may be regarded as healed. Consumptives with large cavities in their lungs will probably experience a benefit from the new remedy only in exceptional cases. In all cases, Prof. Koch emphasizes the necessity of early treatment. Only in the incipient stages of the disease, he declares, can the remedy fully develop its efficacy. He deprecates the mechanical and indiscriminate application of the remedy, holding it preferable that the treatment should be applied in suitable institutions where careful observation is possible.

This cure received its first great impetus during the World's Medical Congress which recently met at Berlin, and was attended by physicians from all parts of Europe and America. Since that time hundreds of medical men, not attendant upon the Congress, have visited Berlin to acquaint themselves with the treatment. Hospitals are also being established in many of the large cities in Europe and this country for this special treatment. It is said that there were some 1500 foreign physicians in Berlin on the 16th instant.

This treatment has been tried for lupus of the face—a variety of cancer—but has not proved altogether successful. In one case, treated by the doctor himself, it has again reappeared, as it generally does after treatment with the knife.

Can Cancer Be Cured?

Prof. Billroth holds that Koch's method places beyond a doubt that a remedy will be found before long for cancer. If the medical faculty of this State would only do its duty, it would be able to prove to the world in less than a month that there is already a "cure for cancer" in this city—that scores of cases which have been pronounced as unmistakably cancer by the leading physicians of this city and State and by many such in New York, Washington, and other Eastern cities, have been cured without the use of the knife or plasters.

Objection is made to investigation here for the reason that the practitioner, although a regularly licensed physician, refuses to divulge her secret. The medical faculty of Europe does not place such a hindrance in the way of investigation; for Dr. Koch, like our San Francisco physician, also refuses to reveal his secret.

Dr. Koch is not without his doubters, although about the only criticisms thus far have come from French medical men, some of whom advise incredulity until the *nature of the remedy is fully known* and scientific proof given of its effectiveness—thus following the footsteps of our San Francisco physicians. The cancer cure discovery which now in a great measure lies dormant in this city, will soon be brought more prominently before the public.

PACIFIC RURAL PRESS

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SAN FRANCISCO:
Saturday, November 29, 1890.

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Plows—P. P. Mast & Co.
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Windmills—Lima Manufacturing Co., Lima, Indiana.
Incubators, Etc.—Petaluma Incubator Co., Petaluma.
Percheron Mare for Sale—W. B. Ellenwood, Atlanta, Cal.
Kitchen Utensil—Chas. A. H. Smith, Alameda.
Poultry—J. E. Sylvester, Santa Ana.

See Advertising Columns.

The Week.

The RURAL goes to press one day earlier than usual this week to allow the employes of the office an opportunity to give thanks on the National holiday. The markets as well as the homes and the churches show the signs of Thanksgiving week. The country has contributed liberally of thanksgiving cheer this year, and the result is poultry prices more pleasant to consumers than to producers.

Signs of a turn in the weather are hailed with satisfaction, though they are so far exceedingly faint. Slight showers have fallen in the upper coast region, but generally the dust holds undisputed sway and nothing but dry work can be done in field or garden. A good storm is needed to awaken activity and banish foreboding. The sooner it comes now the better.

The Fruit-Growers' Convention at Santa Cruz was a great success in every way. The hosts were untiring and cordial, and the guests were happy. Good, solid and interesting work was done at the meetings, as our reports from week to week will show.

MUST DIE BY ELECTRICITY.—The Supreme Court of the United States has affirmed the judgment of the Supreme Court of the State of New York in the case of Shibuya Jugiro, the Japanese murderer who is condemned to be executed by electricity.

Greatness of the Dairy Interest.

We are becoming so accustomed to statistics of the fruit industries that we are perhaps apt to lose sight of the greatness of the leading branches of agricultural production. The large figures of cereal crops are received as a matter of course and excite little interest except as the statistics play an important part in fixing market values, and one seldom thinks of exclaiming about them. The statistics of the poultry interest are magnificent and do excite wonder at their vast aggregate, made up as it is of so many small and little noted items. The greatness of the dairy interest of the United States is very seldom thought of.

The forthcoming results of the census of 1890 will ere long give us new and, we trust, more trustworthy data than are now current concerning all our agricultural specialties and will fix California's place among other producing States. Of course in cereals and fruit we shall expect a high place, as in some other specialties which we export largely. Our dairy interest has not yet been built up in this way, although there are directions in which such extension would seem practicable. However, all engaged in dairy production will be interested in the following general review of the interest of the nation, which is given in the *American Analyst*, the source of the data for the estimates not appearing:

There are $2,000,500,000 invested in the dairy business in this country. That amount is almost double the money invested in banking and commercial industries. It is estimated that it requires 15,000,000 cows to supply the demand for milk and its products in the United States. To feed these cows 60,000,000 acres of land are under cultivation. The agricultural and dairy machinery and implements are worth $200,000,000. The men employed in the business number 750,000, and the horses over 1,000,000. There are over 12,000,000 horses all told. The cows and horses consume annally 30,000,000 tons of hay and nearly 90,000,000 bushels of cornmeal, about the same amount of oatmeal, 275,000,000 bushels of oats, 2,000,000 bushels of bran and 30,000,000 bushels of corn, to say nothing of the brewery grains, sprouts and other questionable feed of various kinds that are used to a great extent. It costs $45,000,000 to feed these cows and horses. The average price paid to the laborer necessary in the dairy business is probably $20 a month, amounting to $180,000,000 a year. The average cow yields about 450 gallons of milk a year, which gives a total product of 6,750,000,000. Twelve cents a gallon is a fair price to estimate the value of the milk, at a total return to the dairy farmers of $810,000,000, if they sold all their milk as milk. But 50 per cent of the milk is made into cheese and butter. It takes 27 pounds of milk to make one pound of butter, and about ten pounds to make one pound of cheese. There is the same amount of nutrition albuminoids in 8½ pounds of milk that there is in one pound of beef. A fat steer furnishes 50 per cent of boneless beef, but it would require 24,000,000 steers, weighing 1500 pounds each, to produce the same amount of nutrition as the annual milk product does.

These are certainly great figures and can be examined with interest by one who knows something of the dairy interest of the United States a quarter of a century ago, when exports of dairy products were but beginning and when, except in a few localities in the extreme East, dairy work was done in the rudest manner and the commercial product was a by-word. In all our agricultural progress probably nothing has been greater than the advance in dairying. Everything from the pasture to the package has been improved and advanced almost out of sight of its original type and form.

THE EASTERN BARLEY SUPPLY.—The Albany, New York, *Journal* announces that the reported visible supply of barley is a myth. There was no doubt at the commencement of the barley season that over 1,000,000 bushels was brought forward on the books without verifying the amount. Then again two-thirds of the barley on the lakes and canals counted in the visible supply has been sold to arrive. And again more or less reported in the visible is now in malt. And again thousands of bushels in the elevators counted in the visible have been sold to maltsters and brewers and never will come on the market except in the way of malt or beer.

MENDOCINO STATE ASYLUM.—The cornerstone of the Mendocino State Asylum for insane will be laid by Governor Waterman, assisted by the Masonic Lodge of Ukiah, on December 9th next. The site of the institution is about three miles southeast of Ukiah, near the Russian river, and in a grove of live oak trees. There will be eight buildings, which will accommodate 500 patients, and these will cost about $290,000.

A Jersey Peach Story.

Evidently the Eastern newspaper writers grow weary of the greatness of California fruit stories and have started in upon yarns located nearer home. The following was telegraphed from Flemington, New Jersey, on Monday of this week:

Hunterdon county has one farmer, Edward Warden, to whom the peach crop this year was not a failure. He has a little 30 acre farm that is not worth over $2000, but next Thursday he will give thanks for $15,000 in cold cash that his little stretch of land has just brought him. Most of the farm is devoted to peach culture, and for several years he has been somewhat unfortunate in its limited productions, but this summer it surpassed the history of any farm in the country. It was the only farm in the State that gave an abundant crop. While other orchards were entirely devoid of fruit, its trees were loaded down. The good farmer read newspapers and occasionally visited neighboring farmers, and when some New York speculators found him out and told him that peaches were a drug on the market, he listened attentively and said nothing, but bought some double-barreled shotguns for himself and his three sons. Night and day these four men divided up the watch and kept vigilant eye over that precious ripening fruit, till at last the peaches were safely harvested, and the wily speculators, convinced that the farmer was no moss-back, laid down $15,000 in crisp American gold certificates and the entire crop became theirs. In this way the Hunterdon county farmer reaped a profit of 750 per cent on the actual value of his land, which is doing well for a Jersey farmer this year.

This is a touching tale. It is, of course, possible that there may be a backbone of truth supporting the structure, but it must exist in the face of all signs to the contrary. That one farm should be loaded while "all other orchards were entirely devoid of fruit," is of course possible, but unlikely. The picture which the writer gives of the harvesting and transfer of the crop will strike the fruit-grower as not quite true to nature. It would appear that all the peaches from 30 acres were picked, packed and stacked up under cover of four shotguns until the speculator brought out his $15,000 in greenbacks—"and the entire crop became theirs." We could believe that the speculators might have bought the crop on the trees and then handled the shotguns themselves while the fruit was being picked, packed and shipped in ordinary course, but the way the thing was done as described by the reporter, though possibly correct from a dramatic point of view, hardly seems probable from any other. We hope the Jerseyman got the peaches and the money, and if so we advise him to come out and invest it in good California, where he can sleep and enjoy himself while the peaches ripen and not be marching around amid the malaria and mosquitoes for fear of losing his crop.

A Country Worth Looking After.

A bill providing for the exploration of Alaska and appropriating $100,000 for that purpose has been placed on the calendar of the House of Representatives. By the provisions of this bill a detail from the army is to be stationed in the interior of the Territory and there retained for such length of time as will enable the same to be thoroughly explored and its mineral and other natural resources ascertained, as far as may be. This bill ought to be enacted into a law as soon as possible.

While the exploration of most other portions of the public domain may be left to be effected by private enterprise, this will not do with Alaska. With its rigorous climate, long winters and short summers, with its mountains, morasses and rivers, its extent and remoteness, neither individuals nor small parties, nor yet large companies, are equal to the task of exploring this vast and gloomy region. This is a business that will even severely task the resources of the General Government, if it is to be soon accomplished and with much thoroughness.

The work is one of great difficulty and appalling magnitude. The climate and conditions throughout are about as bad as they well can be. The weather is more or less stormy most of the year, frequent and heavy rains in the summer and deep snow falls during a good part of the other months. The cold is intense, ice forming on the lakes and all but the larger streams to a great thickness. The distances to be traversed are frightful to contemplate. The Pribyloff Islands, the center of the seal fisheries, lie 500 miles to the westward of the Alaska Peninsula, which in turn is a thousand miles west of the long coast strip, site of the gold mines now being worked. But this strip, though nearly a thousand miles long and comprising an area larger than all the New England States, constitutes a mere outlying fragment of the main Territory.

This distant province is becoming an important portion of the republic. The exports for the past year amounted to $10,000,000, $2,000,000 of which were gold. The output of the mines will be likely to increase rapidly hereafter, coal, lead and copper coming in to supplement the product of the precious metals. After a time lumber will be exported and possibly ice, the curing and canning of fish expanding meantime into an immense industry.

In view of such probable growth, the boundary line between this country and British Columbia should be ascertained and fixed as soon as practicable. A regular form of government should also be provided for the Territory, to the end that the inhabitants be enabled to enact such local laws as may be needed and otherwise manage their home affairs. Alaska is worth looking after and should in no vital particulars be neglected by the General Government.

A Reported Squeeze on the Northern Wheat-Grower.

If reports are true, there is work for the Interstate Commerce Commission in the Palouse country of the new State of Washington. It is hard to believe that the policies charged in the account we shall print below could be held and put in practice in this enlightened age, and yet we know only too well that the only way to guard against such things is to make them impossible. We find in the Portland *Oregonian* the following:

COLFAX, Nov. 19.—Circumstances are continually coming to light in corroboration of the story that a gigantic wheat ring has been formed and is now in the act of consummating. This belief is general throughout the Palouse country, and is not confined to individuals. It is believed by the most substantial business men that it is based on known and irrefutable facts, notwithstanding the denials of railroad and elevator officials.

The facts and suspicious circumstances are as follows: Fewer cars are being furnished by far in this section than at the same time last year, notwithstanding the much greater demand this year. The elevators are not buying except to advance to the holders of warehouse receipts at 40 cents per bushel in a few instances. Nobody else is buying because transportation facilities are denied and every warehouse is full. The price has already sagged to 42 cents and some sales have been made for less. A resident of the Palouse of good standing recently returned from the East and says that he saw acres of idle cars in the yards of the Northern Pacific at St. Paul. Offers have been made by local dealers from Denver and St. Louis which would have enabled them to pay farmers at least 55 cents a bushel, notwithstanding the high tariff rates. These are only a few of the facts. The Palouse farmers don't care which way their wheat goes, so that it is transported to some available market. When the grain fleets come to Portland and Tacoma the wheat will go out from there much more rapidly, but cars will not be furnished to transport it East out of the hands of the elevator companies, and when the wheat goes to Portland and Tacoma at normal prices it will belong to the railroads and elevator companies. The Portlander who wanted to find wheat at 45 cents could have bought it to-day for 42 cents, and to-morrow will probably be able to get it for 41 cents.

It is little wonder that farmers are restless and determined, in fact almost desperate, when such robbery is practiced upon them. It may be expected, too, that they will have the support of the whole fair-minded community in their efforts to protect themselves against such highwayman-like proceedings. The only hopeful thing about the occurrence is that grasping greed may speedily overreach itself and work its own cure. The tide in our public affairs seems to be strongly turning toward the securing of producers' rights, although glaring instances of the opposite, like that described above, are still too frequent. The cure will be just regulation of public servants so that they shall not be instead public masters. This can be gained by co-operation and association of the people to secure their rights and to maintain them by legislation. The realization of such a blessing and benefit cannot be long postponed,

HORTICULTURE.

The Fruit-Growers' Convention.

The Fourteenth Convention of the California Fruit-Growers assembled Tuesday morning, Nov. 18th, at Y. M. C. A. hall, in Santa Cruz, under the auspices of the State Board of Horticulture.

President Ellwood Cooper called the convention to order, after which Rev. Mr. Perkins of Alameda offered prayer.

Col. W. H. Aiken of Highland and Dr. H. H. Clark, president of the Board of Trade of this city, were chosen vice-presidents. Mayor Bowman of Santa Cruz was introduced by Mr. Cooper and made a brief address of welcome in a very happy vein. Another address of welcome was delivered by Mrs. W. H. Aiken of Highland and very well received.

President Cooper presented his customary opening address, which we will lay before our readers at another time. These exercises, with interesting remarks by Dr. J. A. Stewart on olives and W. H. Aiken on the World's Fair, occupied the time allotted to the morning session.

California Prunes.

At the afternoon session several interesting essays were presented. One by W. H. Aiken on the prune; another by Robert Hector of Placer county on the cherry, and a third by Luther Burbank of Santa Rosa on new fruits. The following is Mr. Aiken's essay:

The prune-growers of California have reason to feel encouraged at the present and future prospects of their great industry.

They have to be congratulated especially upon the protection of two cents per pound the new administration has granted in the new Tariff law, in answer to their persistent efforts and petitions to Congress for many years.

This Government aid is proper and timely as a protection to the American prune against the foreign prune raised and prepared for our market in great and increasing quantities by cheap labor. Unaided in competition with foreign prunes for the American market, Americans would fail to make a living and pay American wages.

As to the policy of protecting by high tariff manufactories, there may be honest doubts, but there should be no reasonable doubt as to the propriety and justness of the protection of the prune, a product of our soil, requiring so much skillful and expensive labor in this country.

The soil and climate of this State is better adapted to the growth and preparation of the prune than any other State in the Union, and upon this great growing industry our country can depend for a sufficient quantity of this healthful food fruit at such reasonable prices as are consistent with a just reward for the enterprise and expense.

With a reasonable certainty of permanent protection we can safely enlarge our prune orchards, increase the care and expense of prune culture and preparation for the market of the United States without much fear of overproduction.

Increase of production and competition will no doubt result in cheapening the fruit and increasing the consumption, the demand ever in advance, as we believe, of the production, thus assuring the producer good profits.

The crop of prunes in 1890, comparatively light, will not supply much more than one-tenth of the demand for California prunes at reasonable prices, so there can be no immediate danger of overproduction.

The Prune of Commerce.

The prune of commerce in France, known under the name "Prune d'Ente," first grown in California at San Jose by Louis Pellier in 1857, has become the prune of commerce in California, and is successfully competing with its French ancestor for dominion in the prune market of the United States.

The California prune is already the favorite at an advance of about two cents in price, owing to its rich, fruity flavor and bouquet, and especially to its endurance or quality of keeping for years without much if any loss of weight and condition.

The foreign secret of preserving and packing prunes is practically unknown to us, and they may keep it if they wish, as we do not need or care to know what it is.

One thing is certain, we have built up a trade and demand for the California prune in this country, and foreigners are actually trying to get our trade away from us by an imitation of our simple methods of preparation and packing for market.

The California prune is simply a dried fruit, not a foreign cooked fruit.

Our prune is prepared and marketed usually in this manner: The fruit is gathered when ripe and placed upon drying trays in the open air after having been dipped in hot lye-water and rinsed in clear water in order to crack the skin and cleanse the fruit. A week of our usual September weather will dry the prune sufficiently for the bin, when, after sweating for about two weeks and dipping in pure hot water, it is bagged or boxed for the market. The fruit should be perfectly ripe and perfectly dried; the process is simple and can be easily and neatly accomplished. By "perfectly dried" is not meant dried to kill, but only dried to cure. Driers are used when sun-drying is not practicable. Grading the prune either before or after drying is quite generally practiced, and is advisable.

The prune grown in California is no doubt the true prune of commerce grown in France: the slight differences in color, taste and size are owing to the heat, moisture and soil where grown. The tree is hardy and prolific in annual crops and can be profitably grown in most of the fruit districts of the State. There are no doubt prune districts where soil and climate combine to produce an abundance of fine, large, rich fruit, and where sun-drying is successfully practiced. The number of such favored spots have increased year by year and are now too numerous to mention. The root on which the prune should be grown depends upon the nature of the soil and lay of the land. The prune budded upon the peach root is preferred for planting in light, warm, well-drained soil, while the plum root is usually grown in land not adapted to the peach root.

The loss of trees from excessive moisture has resulted mainly from planting the peach root in soils not adapted to such a soft, spongy root, and also from planting the root too deep in the ground.

The heat of our spring sun warms the soil about the root, the natural flow of sweet, healthy sap starts the tree into a thing of life, of beauty, of blossom and of profitable fruit. Whenever you have doubt about your land being suitable for successful prune culture, owing to death of the tree or failure to bear in the vicinity, you had better raise some other kinds of fruit that have been successfully grown.

The training of a tree, year by year, in the way it should grow, requires thought and industry. No definite rule of action can be given as to the pruning of the prune tree, grown as it is in such a variety of soils and climates.

Beauty of form, bearing space and strength of limbs are of first importance, and any system of pruning that will lead to these results and not crowd the tree with too much wood and consequent small fruit is worthy of careful study and practice.

Having read a paper before the Sacramento Convention in 1885 upon prune culture in California, in which the uses and values of the several kinds of prunes were fully discussed, it is not deemed advisable at this time to speak of any prune other than the one known to the trade in this country as a "prune."

The essays by Mr. Hector and Mr. Burbank we hope to give at another time.

Insects and Their Repression.

Wednesday morning was occupied with essays and discussions about insects. Mr. Wickson spoke on "Entomology in the Public Schools," Mr. Alexander Craw on "Insect Friends and Foes," Mr. H. K. Snow on the "Gas Treatment for Scale Insects." Some of these we hope to present hereafter. The feature of the morning, however, was the formal recognition of the services of Albert Koebele, the discoverer of the scale-destroying virtues of the Australian ladybird, and to this proceeding we will now give such space as we can command.

Honors to Albert Koebele.

President Cooper announced that he would vary the program a little. He called for Albert Koebele, who stepped forward to the platform. Mr. Cooper then read the following address:

I have been requested to make a presentation at this convention—the occasion and subject being considered of sufficient importance to have the ceremony recorded and have it appear in our horticultural literature.

In the month of August, 1888, Mr. Albert Koebele was sent to Australia for the purpose of searching for and procuring a parasitic insect to destroy the Icerya purchasi, commonly called the white scale, or in the hope at least that one might be discovered that would counteract the ravages of this terrible pest. The result of that voyage is too well known to most of our fruit-growers for me to enter into details of what has since taken place. Those who may not be acquainted with the history, I refer to the biennial report of 1885–86; pages 379, 380 to 397; the annual report of 1889, pages 207, 208 266 to 271 and 385; and the report of 1890, pages 53 to 558.

It may be well for me, however, to speak briefly of the actors that have brought about such wonderful results. The Australian beetle, "Vedalia Cardinalis," was classified and named many years ago by Mulsant. The function of this beetle was discovered by Albert Koebele. While it was known in Australia that some parasite was destroying the white scale, its disappearance was attributed to an entirely different insect. So that to Albert Koebele alone is due the honor of discovery. His name will live in this connection as long as our civilization exists.

The circumstances leading up to the mission of Albert Koebele are fully laid down in the essay of Geo. Rice to be found in our report of 1890, pages 53 to 58. A vote of thanks was tendered by the fruit-growers at the Los Angeles convention to the Hon. Frank McCoppin (see page 61 of this report). When an important commission is tendered to an individual having the confidence of Government and accepted, if the service performed renders great good to the country, we call it statesmanship; and certainly the part that the Hon. Frank McCoppin took in furthering the discovery, the fact of his earnestness to serve his country well and his foresight in consulting and advising with his friends that he might serve all, entitles him to an honorable consideration.

Let us consider that, although for more than ten years our most experienced, most intelligent and most determined citrus-growers were fighting the white scale, communities quarantining against it, it was gradually increasing and spreading so that devastation appeared certain, all our efforts baffled, our hopes on the verge of despair and ourselves ready to bow to the inevitable and admit that we were powerless in the hands of this insect, when a few of these little ladybirds placed in our orchards, with their marvelous work, silent and unseen, in a few short months completed the extermination. Do we realize it? Can we realize it? Can we comprehend the wisdom of such a provision in Nature? Has this lesson been seriously impressed upon our minds? A short period since, this pest engaged the attention of fruit-growers more than any other one thing. To-day we have forgotten it, and not a thought is given to what was the most alarming enemy of the fruit-grower. Will we profit by this experience? If so, we will have without delay competent agents searching for parasites to destroy all the insect pests that disturb our fruit and fruit trees.

I was much impressed by the article written by Burnet Landreth, president of the Pennsylvania Forestry Association, published in the *Garden and Forest* in December, 1888, pages 500 and 501. The substance of this article is pertinent to the subject I am considering. Mr. Landreth was a member of a firm owning 5000 acres in Eastern Virginia, on the Lower Chesapeake. About two-thirds of this land was covered with the original and second-growth pine, some hardwood interspersed. Among the native deciduous trees were found chestnut, walnut, ash, oak and others. These gentlemen concluded to try forest planting on this tract. In 1870 and 1871 100 acres were planted with black walnut and eight acres in chestnuts. In 1872 to 1879 they planted 150 bushels of black walnuts, 34 bushels of chestnuts, 4 bushels of black locusts, with 105,000 seedling trees, 5000 Southern cypress, 5000 European larch, with 1½ bushels of seeds, 10 bushels of hickory nuts, 3 bushels of tulip poplar, 3 bushels of pecans 10,000 ailanthus, 16,000 white ash, 1 bushel of white oak acorn, 17,000 catalpas and 10 bushels of seeds. Besides the above, some white pine, Douglass spruce and Douglass fir were planted.

They report "black locust" as follows: Some of them were 12 feet high. They gave promise of a fine locust forest. One September the locust-tree borer descended in swarms, laying millions of eggs, which produced myriads of grubs, and by next midsummer every tree was ruined. We cut them down and pulled out the roots, at an expense of $25 per acre. The European larch gave out in the trunk, the main stem breaking off at about 12 feet. The southern cypress next failed. The hickory and pecan nuts were to a large extent stolen by squirrels, woodchucks and field mice. Those that did grow were plowed out and the ground replanted with catalpas. The tulip poplar was not a success, as the rabbits and field mice during the winter ate off from the tender seedlings the sweet, juicy bark and destroyed nearly every plant. The white oak acorns were largely stolen by animals, which also ate the bark of the young seedlings. In short, with us, black locusts, deciduous cypress, European larch, hickory, pecan, tulip poplar, white oak, osage orange, wild black cherry, ailanthus, white ash, mulberry and some others have all failed. Of the catalpa we have abandoned several tracts, and, after most serious ravages by stray cows, half-wild pigs, rabbits, squirrels, mice and fire, have about 200,000 trees left. Two years ago every tree was denuded of its leaves, within a period of a month, by the ravages of the catalpa sphinx.

This certainly is a very discouraging record and is a matter for serious reflection. When Nature plants a forest she makes no mistakes. She plants the right trees in the right place. In the forest she plants flowers, animals, bulbous roots, flowering shrubs and vines. All flourish in their beauty and grandeur. No enemies, insect or animal, materially disturb it, at least until invaded by man. If we wish to succeed, we must follow nature. We have in the above an example where capital sought investment, the ultimate object being increase. On the other hand we find capital going into our mountain regions, covered with dense forests, in localities unsuited for farms or homes; and with mills and machinery, the owners cut down the forests and reduce them into merchantable lumber, devastating whole regions merely that the investment may be largely increased, and have no care for the consequences. We permit it.

Evidences prove that intelligent races, which once flourished, are now extinct, having disappeared from the face of the earth. Historians tell us that they were overrun by barbarians. I dissent from that opinion. It was wrongdoing, wrong living. They destroyed themselves. Do you believe that any portion of the earth's surface, before it was invaded by man, was ever devastated by floods or drouths? I do not. These things come by man's destroying the equilibriums. All things were created for our use, our development, but we must make proper use of them. We witness from year to year great climatic changes from the former condition of even a hundred years ago, unprecedented storms, tornadoes, floods and drouths. In society are even more formidable destructive elements, monopolies, syndicates and trusts, accumulated capital with its power tampering with the very vitals of our republic. The pests are among us, and if we do not live rightly our destruction will surely come.

Mr. Albert Koebele, you will please rise. It gives me great pleasure to present you with this token of appreciation on the part of the State Board of Horticulture and the donors of your services in the discovery of the Australian lady-bird. It is more than probable that you will be invited to make other voyages in search of parasitic insects. Your vocation, your profession and your experience fit you especially to do this work. That your life and health may be preserved and that whatever mission you are called upon to undertake may be as fruitful as your mission to Australia, is the earnest prayer of the fruit-growers.

President Cooper then extracted from his pocket an elegant gold watch which he presented to Mr. Koebele in behalf of the fruit-growers of California, and a pair of diamond earrings neatly incased for Mrs. Koebele. The balance of the fund which has been donated for the testimonial and not expended was also presented. Mr. Koebele very graciously accepted the testimonials, and on motion a recess was taken to enable the fruit-growers present to personally meet Mr. Koebele and express their appreciation of his work.

When the convention was again called to order, the session was thrown open to the discussion of insect pests and kindred topics.

FLORIST AND GARDENER.

The Eschscholtzia.

[Read before the California State Floral Society by Miss B. M. PRATT.]

In 1814 Count Romanyoff, a Russian nobleman, fitted out the ship Rurick for an exploring expedition, and the same year it left Russia in charge of Captain Otto von Kotzebue. After two years spent in exploring, mainly with a view to finding a Northeast passage, they sailed south, and in October of 1816 we hear of them in the bay of San Francisco, where our interest in their voyage and discoveries really begins. Among the party was Adelbert von Chamisso, a naturalist and writer of note, who discovered our beautiful California poppy and named it in honor of his friend, Dr. J. F. Eschscholtz, the physician of the ship, who was himself a naturalist and thought the discovery of sufficient importance to publish, upon their return to St. Petersburg, a special paper in regard to it before making their full report of the voyage, making this one of the first, and probably the very first, of our California wild flowers to be named.

Which of all our famous beauties is more worthy to represent our State than this hardy little native, which stood on the cliffs overlooking the ocean and saw the first ship come in sight, pass and enter the Golden Gate, and has since welcomed so many strangers from all parts of the world, for it is among the first to greet them at almost any time of the year, growing nearly to the water's edge at the Golden Gate up to the high Sierras and north or south, helping to give those wonderful first impressions and a reason for the name of the Golden Gate. The sight of a field in full bloom, with their reflection in their spotless beauty of our bright, cloudless sunshine and clear atmosphere, glowing with such an intense color that the field seems on fire, is as impossible to forget and as much a part of the memories of a California trip to a visitor as the Golden Gate, Cliff House, fields of wheat, the Big Trees or even the Yosemite.

Or to our old friends and neighbors who are living now in other countries, what other flower will bring so clearly a memory of their former home, of a trip to the country in the early springtime, or perhaps a camp in the mountains later in the year, than this little blossom, which, though yielding readily to cultivation and blooming now in nearly all parts of the world, is still a Californian and always has a homesick look when abroad, which a fellow-feeling in its countryman easily recognizes. Even in its budding and unfolding one can read a part of the history of the State, for the calyx does not slowly open as the flower expands, showing us gradually the opening flower, but gives us almost its first hint of the beautiful golden petals hidden within the little cap by throwing it off and appearing before us a fully developed blossom—as sudden a change as the other discovery of gold brought to the State, which has since been such a wonder to the older and more slowly developing country.

Like those early Franciscan Fathers and the pioneers, who, with their energy, patience and courage overcame difficulties that would have seemed impossible to others and who have helped so much to make our pleasant homes, our little friend takes life as it finds it, making the most of its situation, blooming bravely on in the most unpromising places until rain and prosperity come; then, with the ready generosity which its people have learned, springing into fuller bloom, deepening its color, and adding happiness and beauty to all.

In choosing a floral emblem for a State, it is desirable that the flower should be a native, and not only widely distributed but striking, so that everybody may thoroughly know it, and that it will be among the first to attract the attention of the children and so connected with their earliest memories, but that it should be beautiful, easily represented in paintings, carvings or architectural designs; and for this State it seems specially desirable that the

flower should be golden in color. All these requirements this little blossom fully satisfies. The typical flower is found only within our borders, though varieties occur as far north as Washington and southeast to Texas—about 10 in all, varying in manner of growth, color or both, one of them having been found by Prof. and Mrs. Lemmon of Oakland and named for them; but the Eschscholtzia, as we know it, is never found outside of our State. One has only to watch the children coming home from a trip to the country to see which flower they love best. It is one of their greatest delights to pick a whole armful, and the quantities the florists gather and bring to the city show that the older people fully appreciate their choice. No other California wild flower is so widely known or so highly prized as this, and surely no other has been painted so many times. In a trip through the art gallery of the last Mechanics' Fair, I counted nine paintings of Eschscholtzia and one each of several other varieties of wild flowers, and probably every artist or gallery in the city has at least one.

Both flower and foliage are well adapted for carving or decorating our buildings or banners, and who can describe its color? All the golden emblems of the State combined seem to be needed to give this wonderfully glistening, brilliant, intense coloring, which after all can never be represented, and, like so many other wonders, people must come here and see to fully appreciate.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

GRAPE SHIPMENTS.—Haywards *Journal*, Nov. 22: Thirty carloads of dried grapes—560,000 pounds—have been shipped from Livermore this season. During the past month there have been shipped from Livermore 43,750 gallons of wine and 168,330 pounds of green grapes.

Butte.

CATTLE STEALING.—Gridley *Herald*, Nov. 20: While gathering cattle together on their Butte creek range, Doc Evans discovered that 110 head of choice beef steers were gone. Since that time, now over three weeks, an active search has been made for the stock, but in vain. A stockman south of R. & E. range lost about 35 head at the same time.

ORANGE NOTES.—Oroville *Mercury*, Nov. 21: Last night Frank A. Howell, representing W. R. Strong Co. of Sacramento, arrived in this town to purchase all the oranges possible. He will purchase them on the trees and pack them himself, or purchase them laid down in Sacramento. His company desires to ship a carload of Oroville oranges to Chicago in time for Christmas if possible. If so, he promises to carefully wrap the fruit and brand them "Oroville oranges." J. R. Jackson and Frank A. Howell have been among all the bearing orange groves in and about Oroville, and they estimate the crop at 1800 boxes or six carloads. They believe that Jos. Gardella has at least 350 boxes on 85 seedling trees—about one acre. Thus we have an idea of the value of an acre of Oroville seedling oranges, and some of Jo's trees are bearing their first crop.... Oroville *Register*, Nov. 21: Major A. F. Jones has some of the finest orange trees in Oroville. This week we noted a number of large and thrifty orange trees planted in the spring of 1886. The seedling trees were fully six inches in diameter near the ground, and were loaded down with fine oranges. He has Mediterranean Sweet trees planted the same year that are marvels to behold, and a number of Washington Navels that are fairly bending to the ground with their crop.

BIG BEND CANAL.—Oroville *Mercury*, Nov. 21: A. K. Beatson, Superintendent of the Big Bend mine, informed a *Mercury* reporter that he had just completed the survey for the immense canal that is to be. "I started in three months ago at the mouth of the big tunnel, with a crew of men, and I have made a most complete survey of the proposed, and what I think the most feasible route for the irrigating canal. The canal will be four feet deep, four feet wide at the bottom and six at the top. One and one-half miles of the ditch are already dug, but this was done some time ago. The proposed route covers about 32 miles and comes down from the Big Bend country skirting to the north and east and finally south of Oroville to the vicinity of Wyandotte."

Colusa.

THE IRRIGATED PEACHES.—Willows *Journal*, Nov. 22: Wm. Clark has a few trees on his place in town. He has a few peach trees, and up to this season concluded that variety of tree and the climate and soil of Willows were not suited to each other. His fruit was very small and bitter and in fact not fit for use. This year he concluded to irrigate, and to say that the results have been satisfactory is mildly expressing it. His crop was heavy, and in place of the little, bitter peaches of former years, he had large, luscious ones, many of which were ten inches around. Mr. Clark is a firm advocate of irrigation.

El Dorado.

DRYING GRAPES A SUCCESS. — Placerville *Democrat*, Nov. 22: The demand for grapes for wine-making, and the rapid growth of the industry of drying grapes for Eastern shipment, to be there made into wine, has opened a market this year for all the grapes raised in the county, which have been sold to outside buyers at about $10 per ton for the Mission variety. Heretofore there has been no market for grapes in this county, and grape-growers have been discouraged, but this year they inform us that there has been a market for their grapes, though the price is small, and that hereafter they will begin to take care of their vines, in the hope of a steady market and increased prices.

Inyo.

THE BIG CANAL. — Independence *Inde*x: Chief Engineer Brooks and his party of surveyors, including Messrs. Carroll, Bailey, Slack and others, completed the preliminary survey of this end of the Owens River and Salt Wells Valley Canal on Saturday last. Commencing at Haiwee, Sept. 30th, they ran up the valley on the west side on a grade of six inches to the mile, striking Owens river at Wm. J. Lake's place, just above Independence Station, Nov. 1st. The length of the canal will be 51 miles, and in size it will be eight feet deep and no less than 60 feet wide. This will carry an immense volume of water, the surplus of which will be stored in great reservoirs at Little Lake and other convenient points below Haiwee for the irrigation of Salt Wells valley. It is even thought that more water will be obtained than sufficient for that purpose and that a considerable surplus can be carried to the Mohave desert. The great canal will be built on the best known plan, smooth and clean, and the banks planted with grass and useful and ornamental trees, such as fruits, nuts and timber. These will be rented by sections and are expected to yield more than enough to pay current expenses of running the canal and keeping it in repair. Another feature of this great scheme is the placing of steamboats in the canal for the carriage of passengers and freighting, it being estimated that from 15 to 20 miles an hour can be made easily and cheaply.

BLACK WALNUTS —Bishop, Nov. 13: David Olds of Round Valley raises many bushels of the regular old black walnuts every year from trees raised from nuts he planted in his dooryard some 20 years ago. These trees have grown splendidly, and even now would do for lumber, and of the most valuable kind originating from American forests. Mr. Olds will run furrows along his fence lines and elsewhere in suitable places, in which he will plant bushels of these walnuts, and there, ere many years, will doubtless stand hundreds of trees both handsome and valuable, yet costing no more trouble to raise probably than so many comparatively valueless black willows.

Kern.

ANOTHER FRUIT FARM.—Bakersfield *Echo*, Nov. 20: For several years Sol. Jewett has owned a fine section of land a few miles west of Bakersfield, which has been almost entirely seeded to alfalfa. Of the 640 acres at least 100 acres will be prepared this winter for fruit. The handsome profit realized by the peach-growers will cause him to plant the largest peach orchard so far on the delta, and about 50 acres will be planted to raisins. Besides the orchard and vineyard to be planted, some nursery stock will be propagated. In time this will be used for extending the planting on the ranch.

Lake.

LARGE YIELD OF CORN.—Lakeport *Democrat*, Nov. 21: John Marsh of Scott's Valley left some samples of white and yellow corn on our table that for size of ear are above the average. While the yield of the yellow went up to 150 bushels per acre, the white, a fine bread corn, was something less.

Los Angeles.

ORANGES SOLD.—Downey *Champion*, Nov. 22: C. A. Coffman of Rivera informs us that the firm of Porter Bros. has purchased the crop of several growers in his vicinity, his own among the rest. Among those selling, he names Frank D. English, estimated at 10,000 boxes; A. H. Doulap, 12 000 boxes, and E. H. Boyd. Mr. Coffman has two acres, 180 trees, which he estimates will yield 1200 boxes. The fruit was contracted at $1.25 per box, delivered at the station.

Mendocino.

HUCKLEBERRIES.—Mendocino *Beacon*, Nov. 22: The "Huckleberry Farm" picked in all 3600 pounds of berries. Samuel Stewart declares that if the section of the country where the berries grow was newly burned over, thousands of dollars worth of berries would grow there.

Placer.

FRUIT PROFIT. — Auburn *Republican*, Nov. 19: W. J. Wilson's ranch between Auburn and Newcastle affords a very good illustration of the profits to be derived from fruit-growing in the Placer foothills. Mr. Wilson has about 30 acres in bearing orchard and vineyard. This past season his vines yielded $2000. In his orchard are 300 cherry trees, five years old, of the Oregon and Tartarian varieties, and those trees have this year produced $2000 worth of cherries. Peaches are the principal fruit grown, and the whole 30 acres have netted Mr. Wilson $7000 for the year 1890. These figures do not include his orange crop sold last spring which brought handsome returns. The oranges on Mr. Wilson's trees are now yellow and are ripening, and he will have an immense crop this season.

Sacramento.

CITRUS FRUITS.—*Record-Union*, Nov. 23: The past summer has been unusually favorable for the growth and development of oranges and lemons. The trees are all heavily laden with fruit. Both oranges and lemons have attained an unusual size this season, and—unlike the fruit produced in some portions of the southern citrus belt—it is perfectly free from all taint of smut. There is now scarcely a garden in Sacramento that is not ornamented by from one to a dozen orange or lemon trees, most of which are loaded down with fruit. Sacramento should be well represented at the approaching Citrus Fair, wherever it may be held; and in order to do so, citizens should not pick and dispose of their choice fruit too early in the season, as is generally done. There are now oranges enough grown in this city and county to make up a display sufficiently large to constitute an exhibition in itself; and if the fair should be held in San Francisco this winter, there is no reason why Sacramento county should not have as fine an exhibit as any in Northern California.

San Diego.

BIG SHIPMENT OF HONEY.—S. D. *Union*, Nov. 20: The largest single consignment of honey ever forwarded from this banner bee region went to San Francisco on Saturday. There were three cars loaded with extra choice white sage comb and extracted honey, aggregating 60,000 pounds.

THE COSMOS FLOWER.—San Diego *Union*, Nov. 20: The cosmos flower, which grows so luxuriantly in San Diego, is now a competitor with the chrysanthemum in the East. It was brought from Mexico about four years ago by a Hoboken florist, who introduced the flowers in New York, and from there it spread.

San Joaquin.

HORSES IN TRAINING.—Lodi *Sentinel*, Nov. 22: There are now in training at Lodi Trotting Park about 50 horses, and before the winter is gone that number will be doubled. All the stalls have been spoken for and it is probable more will be erected before spring.

Siskiyou.

APPLE CROP.—Yreka *Journal*, Nov. 19: It is estimated that Siskiyou county will furnish not less than 500 carloads of apples this season, counting those purchased by dealers and forwarded by residents to friends below and elsewhere.

Solano.

THE FUTURE OF NORTHERN SOLANO.—Dixon *Tribune*, Nov. 22: J. D. Johnson has purchased a 40-acre tract of land near Silveyville, and will set it to fruit trees the coming season. This is probably the beginning of a movement which will in time revolutionize farming in Northern Solano. R. E. L. Stephens has an orchard and vineyard adjoining the tract above referred to, from which he has obtained results which should convince any one of the future of fruit-raising in that locality. Peaches, apricots, prunes, almonds and every variety of grape grow without irrigation and obtain a size and flavor unrivaled in any section of the State. West of Silveyville, where the soil contains more or less adobe, the Bartlett pear grows to perfection and invariably nets the owner large returns. The trees will stand any amount of moisture. Dr. Wells' pear trees stood for almost seven months last winter and spring in water varying from two inches to two feet in depth and yet produced their usual good crop. It is claimed that they will stand a dry season almost as well. Mr. Stephens' almond orchard is now about eight years old and has been in full bearing several years. He realized this year $400 an acre from the sale of his almonds. Nearer the creek, the almond tree matures earlier, often bearing a full crop in its third year. C. C. Agee has a four-year-old orchard which has been bearing for two years and produced a heavy crop this season.

COTTON-GROWING A POSSIBILITY. — Dixon, Nov. 22: Should all of Northern Solano's varied resources fail, our farmers could safely embark in cotton culture. G. W. Foster of Tremont has been experimenting with the cotton plant with marked success. He finds that it grows readily in this soil and climate and requires no unusual attention. The plants are hardy and the bolls are large and well-filled. The cotton is said to be of as good quality as any grown in the best sections of the Southern States.

LARGE WINE-CELLAR. — Dixon, Nov. 22: Henry Peters has a force of ten men at work excavating a wine-cellar at his vineyard in Vacaville. The walls of the cellar are to be bricked and it will have a cement floor. The work will be completed in a few weeks. The cellar will be large enough to store about 150,000 gallons of wine.

Sutter.

FINE FIGS.—Yuba City *Independent*, Nov. 21: We were shown by H. C. Clark some samples of Sutter county cured figs which are hard to beat. They were of the White Adriatic variety, and grown by A. B. Van Arsdale near Yuba City. In size, color and general appearance they were fully equal to the best imported article, while in flavor they were simply delicious.

AS TO DRAINAGE.—Yuba City, Nov 20: Last spring several meetings were held in Yuba City by land-owners and farmers interested in the subject of drainage, to confer and see if some plan could be devised by which land which had suffered from surface-water could be drained. At the last meeting of the kind a committee was appointed to investigate the whole matter, and if found expedient to formulate a law to be submitted to the Legislature. As that body will meet in less than two months, the attention of the committee is called to the matter. If anything is to be done it should be attended to at once, so that a full understanding may be had before the Legislature meets.

TREE-PLANTING.—Marysville *Appeal*, Nov. 21: Such an impetus has been given to vine and fruit-tree culture that a much larger acreage will be planted in Sutter county this season than ever. Peaches, pears and grapes seem to lead in favor. The soil and climate are all that could be desired, and these, together with the small cost of handling and the comparative certainty of good yield, make these fruits especially desired. The Sutter Orchard Company will plant 160 acres to pears and peaches, as will also B. F. Walton to peaches and almonds. B. G. Stabler will devote 40 acres to peaches and vines, and J. P. Onstott a similar number to Thompson's Seedless. Williams & Davis will set out 20 acres each to figs and vines; B. Hicock, 40 acres to vines and Bartlett pears, and Marcuse Bros. considerable to vines and mixed fruits. R. C. Kells will plant 10 acres to peaches and prunes; Leonard Schou 20 acres to peaches; C. S. Wilcoxon 12 acres to walnuts and almonds, and M. E. Sanborn 8 acres to figs. Much of the Johnson tract will be planted, but by whom and the kinds of fruit we have as yet not learned. On the Sacramento river, Ira Wood, Lon Summy, J. F. Jones and W. O. Wood have each contracted for pear trees for 10 acres, and George Beatty will plant 40 acres to mixed fruits. The section of the country here spoken of includes a very small portion of the county, and the report does not cover more than one-third of the acreage that will be planted to fruits and vines in Sutter county this year.

Tulare.

GRAPES AND IRRIGATION.—Traver *Advocate*, Nov. 20: William Ross, who owns a colony tract about a mile northeast of Traver, has reason to be well pleased with the way his vines bore this year. He has 400 three-year-old vines on his place and they averaged 40 pounds of grapes to the vine, or 16,000 pounds. Forty pounds of grapes to the vine is a large yield, and Mr. Ross states that it was the result of his keeping his vines pruned close. He has learned to irrigate his land only once a year by artificial means, and that during the spring, just after pruning. Close pruning and little irrigation will make the vines yield much heavier than where they are left to grow as they please and are frequently irrigated, as was proven by the contrast between the bearing of Mr. Ross' vineyard and that of some of his neighbors during the past summer.

PROFITABLE FARMING.—Visalia *Times*, Nov. 20: A. I. Weston raised 55 tons of hay on 30 acres of his ranch, two miles north of Visalia, this year. After the hay was harvested he planted the same ground to corn and pumpkins, from which he will harvest 1500 bushels of corn and about 250 tons of pumpkins. The hay harvested is worth $600, the corn, $840, and the pumpkins not less than $500—thus making the receipts from the 30 acres for this season $1940, or an average of $64.66 per acre.

Ventura.

LARGE FRUIT ORCHARD. — Ventura *Free Press*, Nov. 21: There are now planted and under successful cultivation about 2000 acres of fruit on the Piru ranch, consisting of about 340 acres in oranges, 375 in figs, 50 in olives, 140 in Muscat grapes, 300 in apricots, and the balance in pomegranates, peaches, pears, citrus lemons, etc.

Yolo.

RAIN WANTED.—Woodland *Democrat*, Nov. 20: The farmers are beginning to grumble a little at the continued dry weather. The storms held on so long last spring that there was a large amount of land left uncultivated. In the adobe districts it was impossible to summer-fallow all of it, and even the sandy land was left for hay in a great many instances. As a result, the crops were short and the farmers are now anxiously waiting for enough rain to allow them to get the land plowed. The summer-fallowed land is in most instances already seeded. A few sections here and there, which were plowed late, are too foul to be seeded without replowing. The most of the summer-fallowed land, however, is ready for the rains, and the sooner they come the better the farmers will be pleased.

PROFITABLE SEASON.—Woodland *Mail*, Nov. 22: A well-known vineyardist said to a *Mail* reporter yesterday that the yield of fruit, and especially grapes, this season was astounding. He said that every sweatbox in the county is in use and many more could be used if they were to be had. This has been a profitable season for fruitmen, and thousands and thousands of dollars have been brought into this county from Eastern States in payment for the fruit that has been sent out.

NEVADA.

BEET SUGAR.—*Lyon County Times:* Mr. Spreckels has had an agent in our valley looking over the situation with a view of establishing a beet-sugar factory in this section. We only hope the news is true. There would be no doubt as to the success of the undertaking, as the finest sugar beets grown in the wide world are produced in Honey Lake valley..... Along the Carson river there are thousands of acres of land that will produce from 15 to 26 tons of beets to the acre, while in Mason valley there are hundreds of thousands of acres that will produce on an average the same quantity to an acre, and it is believed that some of the land will produce 40 tons to the acre. There is at Dayton a good water-power, and a factory here could be run as cheaply as anywhere.

FRUIT PRESERVATION.

Pickling Olives.

Rev. C. F. Loop, of Pomona, writes for the Pomona *Times* of recent date on the subject of curing green olives for table use as follows:

Gather ten gallons of olives when the yellow appearance indicates the filling of the oil cells, and the first streaks of color show maturity. Cover with cold water until you are ready to give the alkaline bath. Take one pound concentrated lye (American Lye Co.); dissolve the lye in one gallon boiling water; let the solution boil until the lye is fully dissolved; add four gallons cold water; stir well until the alkali is well diffused. The keg or barrel to be used must have a faucet or plug at the bottom. Put ten gallons of olives in a barrel and pour over them the prepared solution. Five gallons of the solution will cover ten gallons of olives. This part of the process should begin in the morning and should be done in a darkened room; the barrel well covered to exclude the light. Stir with a smooth paddle every 15 minutes, until night. At the end of 24 hours, test the fruit to see if the lye has penetrated to the pit. Secure three or four olives from the top and the bottom of the mass, washing carefully, and then breaking or cutting, you can see by the bright yellow color just how far the lye has penetrated. Where the lye has not penetrated, the pulp is white like milk. If you are not satisfied with one trial, take more olives and make another examination. If the lye has penetrated the pit in some, in others three-fourths of the distance toward the pit, open the faucet, draw off the lye, immediately cover with cold water, changing every few minutes for an hour; then every hour for the rest of the day. The alkaline bath has been used to discharge the bitterness; now we must discharge the alkali. In the condition the olives are now, exposure to the sunlight will cause them to turn a dark color. After the first day the water should be changed two or three times each day until the lye is discharged from the pulp. If careful attention is given to the work, the alkali will be discharged in six days.

If you find on examination that the lye has not penetrated more than half-way to the pit, let them stay in the lye one day longer, and then begin using water.

Now we come to the third point in the process—that is, curing with salt to make them palatable. The fruit must be removed from the keg or barrel used for the alkaline bath.

When a crop of olives is to be cured, three sets of barrels are used, the first for the alkali bath, the second for washing out the lye and the third for salting. Cover with brine made by boiling of the purest salt. Keep the olives well covered with water until you are ready to apply the brine.

The European direction for the brine is one volume of salt to 14 of water.

Examine carefully berries taken from the mass after the brine has been applied one day. If traces of lye remain, it will now be easily noticed in the fruit, and if pronounced to the taste, draw off the brine and apply cold water until you are satisfied by testing that the lye is all discharged; then apply brine.

When the salt has penetrated to the pit, the olives may then be bottled with brine prepared in the same way as the ripe fruit, or put into kegs with the salicylic acid added to the brine to destroy the vegetable germs of fermentation, and sealed up for sale or safekeeping.

HOT WATER ON TAP.—In Paris in districts settled with poor families there are to be found nickel-in-the-slot stands, into which a 5-centime piece (equal to our copper cent) can be dropped, which will allow a button to be pressed that will immediately cause a stream of boiling hot water to flow until nine quarts have been delivered, when it stops. This is found to be a great opportunity for economy with poor families—the cost of hot water so obtained being much less than it would be if a fire had to be made to heat it. Water is thus obtained chiefly for washing. The water is also thus used by Paris hackmen in cans, to keep the feet of their customers warm in cold weather.

TO CLEAN LACE, fill a bottle with cold water, draw a stocking tightly over it, securing both ends firmly. Place the lace smoothly over the stocking and tack closely. Put the bottle in a kettle of cold water containing a few shavings of soap and place over the fire to boil. Rinse in several waters and then drain and dry. When dry, remove and place smoothly in a large book and press with weights. Very nice lace can be made to look like new by this process.

PROGRESS OF THE ENGLISH LANGUAGE.—Ninety years ago the seven principal languages of Europe—English, French, German, Russian, Spanish, Italian and Portuguese—were spoken by 162,000,000 people. Only 21,000,000, or 13 per cent, spoke English. Now these languages are spoken by 400,000,000 people; and 125,000,000 of them, or 31 per cent, speak English.

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A DOCTOR'S CONFESSION.

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"Very frank was the admission, especially so when it came from one of the biggest young physicians of the city—one whose practice is among the thousands—though he has been graduated but a few years," says the Buffalo *Courier*. "Very cozy was his office, too, with its cheerful grate fire, its Queen Anne furniture and its many lounges and easy-chairs, He stirred the fire lazily, lighted a fresh cigar and went on."

"Take the prescriptions laid down in the books and what do you find? Poisons mainly and nauseating stuffs that would make a healthy man an invalid. Why in the world science should go to poisons for its remedies I cannot tell, nor can I find any one who can."

"How does a doctor know the effect of his medicine?" he asked. "He calls, prescribes and goes away. The only way to judge would be to stand over the bed and watch the patient. This cannot be done, so really I don't know how he is to tell what good or hurt he does. Some time ago, you remember, the Boston *Globe* sent out a reporter with a stated set of symptoms. He went to eleven prominent physicians and brought back eleven different prescriptions. This just shows how much science there is in medicine."

There are local diseases of various characters for which nature provides positive remedies. They may not be included in the regular physician's list, perhaps, because of their simplicity, but the evidence of their curative power is beyond dispute. Kidney disease is cured by Warner's Safe Cure, a strictly herbal remedy. Thousands of persons every year write as does H. J. Gardiner of Pontiac, R. I., August 7, 1890:

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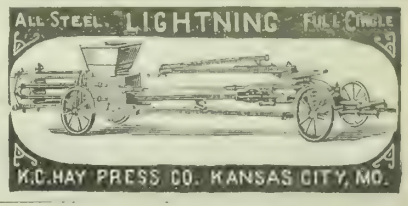
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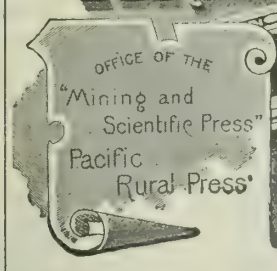
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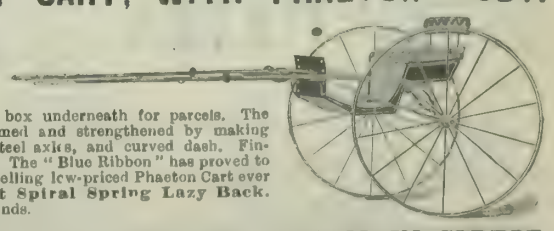
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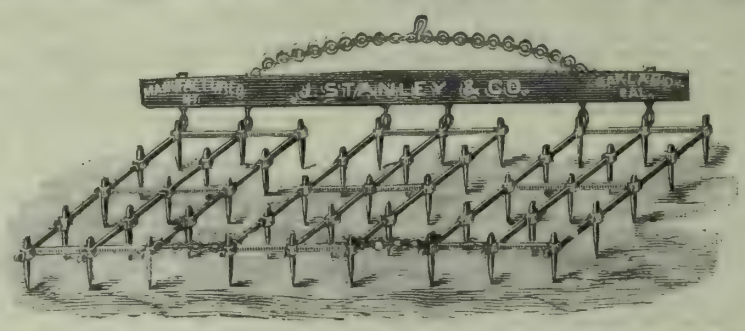
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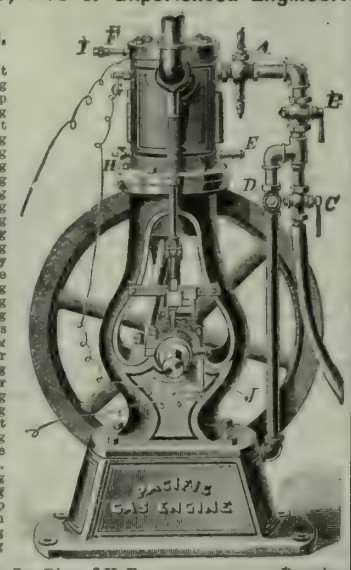
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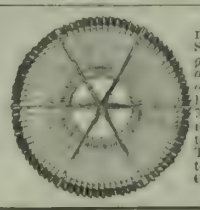
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LADIES' COSTUME.

Fashion Notes.

Ladies' Costume

The illustration herewith is of a ladies' costume represented as developed in spotted India silk, with Vandyke lace and ribbons for decoration. The skirt is in the popular four-gored style, and a small bustle may be worn, if desired. Overhanging the skirt to the lower edge is a full drapery that is arranged in forward-turning plaits at each side of the center of the front, back of which a shallow, back-turning plait is laid; the back is drawn by gathers, and a belt finishes the top. The drapery is lifted stylishly at each side by upward-turning plaits, and the skirt is disclosed for a short distance at the bottom far back at the sides.

The stylish basque has a fancy front that is adjusted over the right fitted front of lining and lapped over the left front, which is similarly fitted, the closing being made invisibly. The fulness of the fancy front is collected in gathers at each shoulder edge, and also at the lower edge for a short distance back of the closing, producing soft, pretty folds. A full back, which is drawn closely by shirrings at the waist-line, is arranged over a fitted back of lining, and under-arm gores complete the adjustment. The lower outline is pointed at the front and back and well arched over the hips. An upward-turning row of Vandyke lace decorates the lower part of the basque at the right side, and at the lowest point of the closing is secured a bow of ribbon, the ends of which reach nearly to the bottom of the skirt. At the neck is a standing collar, which is decorated with Vandyke lace, the points of which rest upon the basque; and the leg-o'-mutton sleeves are gathered at the top and arranged over coat-shaped linings, the wrists being trimmed with Vandyke lace.

The costume will develop handsomely in a great variety of dress goods, such as Surah, India or China silk, Bengaline, figured or plain cashmere, imperial serge, brilliantine and camel's-hair. Vandyke-point lace or passementerie, moire, grosgrain or velvet ribbon or any preferred garniture may be added. When ribbon is selected, several rows of it may be arranged at the lower part of the drapery, and rosettes of ribbon may be very effectively placed at the top and bottom of the closing and over the plaits at each side. The basque may also be trimmed effectively with ribbon, which may be arranged in diagonal rows at the fronts and encircle the sleeves all the way to the elbow.

The stylish straw hat is prettily wreathed with flowers.

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440,736.—SEED PLANTER—R. E. Brakey, Ventura, Cal.

440,838.—HOSE REEL—R. S. Chapman, S. F.

440,839.—TICKET PUNCH—A. W. Coffin, S. F.

440,769. — NUT LOCK—A. A. Dickie, Suisun, Cal.

440,948.—KNIFE CLEANER AND POLISHER—T. A. Evans, S. F.

441,061.—LEVER FOR MOVING CARS, ETC.—W. H. Garlock, Seattle, Wash.

440,843. — THRASHER AND CLEANER—G. W. Haines, Stockton, Cal.

440,846.—LOCK—H. O. Hooper, S. F.

440,864.—STEAM JOINT—H. T. Knight, South Riverside, Cal.

440,829.—GUARD FOR GANG EDGERS — Jos. Korbel, S. F.

440,867. — VEHICLE RUNNING GEAR—J. W. Leete, Carson, Nev.

440,831.—SECURING EXTRA LEAVES IN BOOKS—J. T. McKean, Santa Cruz, Cal.

440,921.—EXPLOSIVE—D. Mindeleff, S. F.

440,830.—TREATING COAL TAR—A. L. Munson, Oakland, Cal.

440,749.—GUARD FOR CARS—G. Rischmuller, S. F.

440,832.—COMPOSITION FOR PROTECTING PILES—James Rowe, S. F.

441,040.—CABLE RAILWAY CROSSING—P. Somerville, S. F.

440,932. — MAIL-BAG—C. P. Tatro, Spokane Falls, Wash.

440,853.—GATE—C. W. Thompson, Tomales, Cal.

440,675.—STAMP-CANCELING MACHINE—S. B. Whiteside, Los Angeles, Cal.

440,835.—STENCIL-CUTTER—J. F. Wickman, S. F.

20,340.—DESIGN — N. A. Wheeler, Alpowa, Wash.

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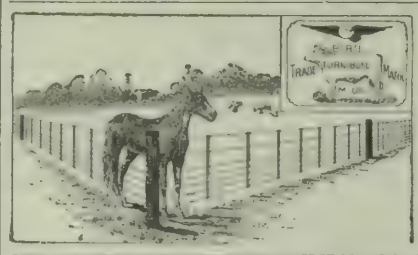
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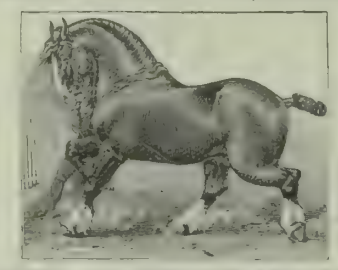
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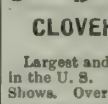
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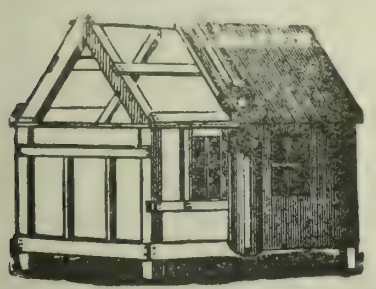
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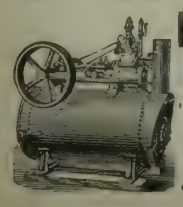
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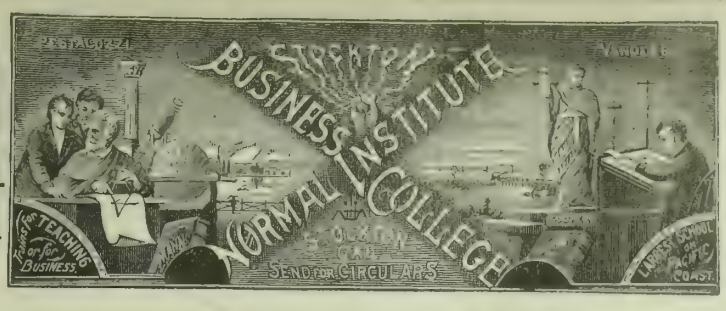
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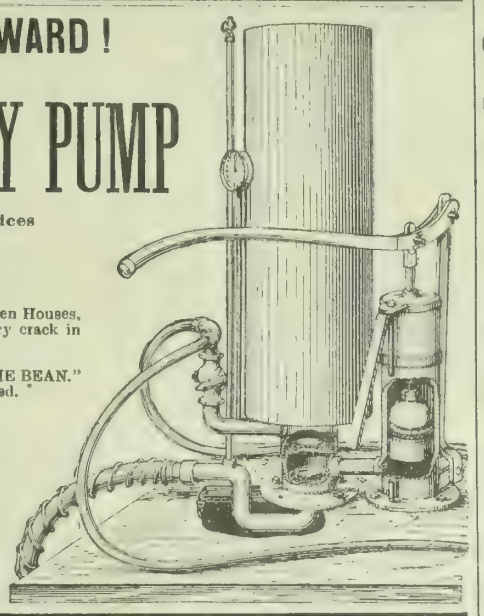
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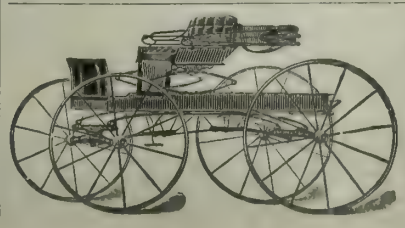
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MATTHIAS GRAY CO., 206 & 208 Post St.

S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Nov. 25, 1890.

General trade the past week in farm products was quiet in all branches excepting those having a holiday call. The close panicky money market at the East caused heavy shipments of coin from this city to New York, which has temporarily produced a stringency here. The transfer of coin aggregated over $5,000,000. At the close, money is setting this way. Wheat, after going down with silver, is stronger in sympathy with an advance in that metal. The following is to-day's cablegram:

LIVERPOOL, Nov. 25.—Wheat—Firmly held. California spot lots, 7s 6d@7s 6¼d; cargoes off coast, 38@38 6d; just shipped, 37s; nearly due, 37s; cargoes off coast and on passage, quiet but firm; quantity on passage to Continent, 648,000 qrs; wheat and flour on passage to Cork, U. K., 2,375,000 qrs; English country markets, quiet; weather in England, frosty.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Nov.	Dec.	Jan.	Feb.	Mar.	April.
Thursday	7s6½d	7s6d	7 6d	7s6d	7s6½d	7s6½d
Friday	7s6d	7s6½d	7s6½d	7s6½d	7s6½d	7s6½d
Saturday	7s6d	7s6d	7s6½d	7s6d	7s6½d	7s6d
Monday	7s6½d	7s6d	7s6½d	7s6d	7s6½d	7s6½d
Tuesday	.....	.....	.....	.....	.....	.....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	38s0d	37s0d	37s6d	Firmer.
Friday	38s0d	37s0d	37s6d	Firm.
Saturday	38s0d	37s0d	37s6d	Quiet.
Monday	38s0d	37s0d	37s6d	Steady.
Tuesday	.....	.....	.....	

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per bushel:

Day.	Nov.	Dec.	Jan.	Mar.	May.	July.
Thursday	97½	98½	99½	102½	103½	...
Friday	99½	100⅝	102½	104½	105½	...
Saturday	102	102½	103½	105⅝	106½	...
Monday	104½	104½	105⅝	107⅝	107½	...
Tuesday	...	...	...	...	...	...

The closing prices for wheat have been as follows at Chicago for the past week, per bushel:

Day.	Dec.	May.	June.	July.
Thursday	90	97⅛	....	....
Friday	92⅜	99⅜	....	....
Saturday	94½	101	....	....
Monday	94½	102⅜	....	....
Tuesday	...	...	....	....

NEW YORK, Nov. 25.—Wheat—$1.05¾ for cash, $1.04⅛ for December, $1.05¼ for January, $1.07⅜ for March, and $1.07⅜ for May.

CHICAGO, Nov. 25.—Wheat—96c for December and $1.01½ for May.

Dried Fruits.

NEW YORK, Nov. 21.—California Lima beans on the spot are reported weaker at $2.90 ₩ bushel. Two carloads of Forsyth's Imperial California raisins, due in a few days, have been placed at $2.57½ @2.60 delivered. A fancy quality of California evaporated peaches is quoted, spot, at 17@17½c. Clover Leaf California prunes, in boxes, are quoted at 12½@13½c. This brand commands the best trade.

NEW YORK, Nov. 22.—The *Commercial Bulletin* says: Upward of 50 carloads of loose California raisins in bags have been sold in the Eastern market thus far this season. The total is greater than during any previous entire season, and the movement may be classed as one of the prominent features of the market at the present time. The persistent efforts of some local commission firms to encourage the handling of goods in this form by Eastern jobbers has doubtless contributed in no mean degree to the favorable results, but the successful introduction of the carton 1-pound and 2-pound packages has played a conspicuous part. These packages have been gotten out in a neat form and attractive appearance. The best fruit has been secured, and particular care has been taken by the most prominent packers that there shall not be the slightest shortage in weight. Already unmistakable evidence is given that the carton is becoming popular with retailers, in avoiding waste incidental to weighing ordinary boxed fruit, and effecting a saving of time in handling.

NEW YORK, Nov. 23.—Good to prime raisins are steady. The supply is evidently sufficient for November wants, including the trade for Thanksgiving. London layers, $2.50@2.60; best loose, $2. Many rejections have arrived, some lots approaching fermentation.

Prunes were quiet. The French get a good deal of the early trade this season.

White nectarines were quiet at 22c.

Unpeeled peaches, bags, 16@18c; boxes not above 21c.

Apricots were steady at 18@19½c, the latter for boxes.

Canned fruits are sought for. There are none here in first hands.

The best grocers are sorely put about for a substitute for California packed peaches.

Hops.

NEW YORK, Nov. 20.—Cablegrams confirm the advance of 15@20 marks in hops in the German market. The situation there is reported as strong. London is unchanged and trade seems to be holding its own under the trying money stringency. Trade here is still restrained by the financial condition. The brewers continue buying cautiously, but local dealers are not specially alarmed, except those whose stocks are small.

NEW YORK, Nov. 22.—There was a weakish feeling in hops. A few holders, however, were willing to meet the buyers' cheapened views. New State, common to choice, 38@45c; Pacific, 39@43c. The week's exports were 1624 lbs.

Wool.

NEW YORK, Nov. 22.—The movement in wool at the seaboard is comparatively light, but the week has been interrupted by the spirited election and previous purchases will carry many mills for some time. Trade is said to be checked somewhat by disproportionate prices asked for low-grade wools. General quotations remain strong. The holdings of Western and Interior are regarded as light. Sales—14,000 lbs. Spring California, and 3000 lbs. scoured, private terms; 210,000 lbs. Spring Texas, 19@24c; 22,000 lbs. Fall, 18@20c; XX and above, 34½@35c; fine delaine, 36½c, and 127,000 lbs. domestic, 65c. Sales—56,000 lbs. foreign, private terms; Boston sold 120,000 lbs. of foreign and 3,187,000 lbs. domestic. There was a light offering from California and late prices were ruling. The Philadelphia market is quiet and strong.

Complaints of the Wheat Blockade.

TACOMA (Wash.), Nov. 24.—The Chamber of Commerce, at a special meeting to-night, adopted a resolution calling on the railroads to furnish more cars to transport the wheat from Eastern Washington and Oregon to the seaboard. There is a very large wheat blockade in Eastern Washington where the crop was enormous this year. Every depot and warehouse is full and much is piled in sacks about the stations but slightly protected from the weather. The residents of the Northern and Union Pacific lines were telegraphed to, asking that measures be taken at once to afford relief and save the farmers from loss.

Local Markets.

BARLEY

	Buyer Season. H.	Buyer Season. L.	Seller 1891. H.	Seller 1891. L.	Buyer 1890. H.	Buyer 1890. L.
Thursday	155¢	155½	...	...	150⅞	149⅞
Friday	154½	154	...	...	149⅝	149½
Saturday	154½	153⅜	...	...	149	148½
Monday	151⅞	151	110	109⅜	....	....
Tuesday	....	....	....	....	....	....

WHEAT

	Seller Season.	Buyer 1891.	Buyer 1890.	Buyer Season.	Seller 1890
Thursday h.	....	....	131⅛	141⅛	....
Thursday l.	....	....	131	140½	....
Friday h.	....	....	131½	141½	....
Friday l.	....	....	131½	141½	....
Saturday h.	....	....	132½	142½	....
Saturday l.	....	....	132½	142⅝	....
Monday h.	....	....	131⅞	142½	....
Monday l.	....	....	131⅞	141⅞	....
Tuesday h.	....	....	....	....	....
Tuesday l.	....	....	....	....	....

BAGS—The market is dull at about 6¾c for standard size, for May-June delivery.

BARLEY—Very heavy receipts, with Oregon and Washington sending us large quantities, have caused a weaker tone. On Call, futures have ruled dull, with more sellers than buyers. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—200 tons $1.46¼; 100, $1.47. Buyer season—100 tons, $1.49¾; 400, $1.51; 200, $1 50¾; 600, $1.50⅞. Seller 1890—100 tons, $1.44. Seller 1891—100 tons, $1.10 ₩ ctl. Afternoon Session: Buyer 1890—100 tons, $1.47. Buyer season—100 tons, $1.51⅞; 100, $1.51¾; 100, $1.51½; 100, $1.51⅝. Seller 1891—200 tons, $1.10; 300, $1,09⅞. Buyer 1891, after Aug. 1st—100 tons, $1.14; 100, $1.14¼; 200, $1.15¼; 200, $1.15 ₩ ctl.

BUTTER—The market is easy at lower quotations. Free receipts of Eastern creamery in tubs are against our market. Many retail dealers are said to be taking the latter in preference to Californian.

CHEESE—The market holds strong under light receipts and a good demand.

EGGS—Stocks are large, with receipts heavy. Considerable Eastern has gone into cold storage. The market shows an easier tone at shading prices.

FLOUR—The market is weak at a slight reduction.

WHEAT—The market for sample parcels fell off quite sharp, but at the close it is stronger. On Call, trading in futures has been light. The absence of attractive fluctuations is against free operations. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—200 tons, $1.31¼; 300, $1.31½. Buyer season—1300 tons, $1.41½ ₩ ctl. Afternoon Session: Buyer 1890—300 tons, $1.31¼; 200, $1.31¼. Buyer season—800 tons, $1.41¾; 200, $1.41⅝ ₩ ctl.

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Nov. 25th, were as follows:

Flour, qr. sks	144,151	Middlings, sks	2,707
Wheat, ctls	250,834	Alfalfa, "	....
Barley, "	65,557	Chicory, bbls	185
Rye, "	3,226	Broomcorn, bdls	....
Oats, "	4,584	Hops, bls	92
Corn, "	13,663	Wool, "	575
*Butter, "	439	Hay, tons	2,101
do bxs	128	Straw, "	70
do bbls	9	Wine, gals	213,790
do kegs	4	Brandy, "	5,452
do ½ do	66	Raisins, bxs	14,056
†Cheese, ctls	463	Honey, cs	819
do bxs	....	Walnuts, sks	1,184
Eggs, doz	90,580	Flaxseed, sks	3,634
do " Eastern.	87,580	Mustard, sks	858
Beans, ctls	16,144	Almonds, sks	841
Potatoes, sks	30,984	Peanuts, sks	334
Onions, "	2382	Popcorn, sks	130
Bran, sks	8,586	Beet sugar, bbls	438
Buckwheat, sks	....	do do sks	910

*Overland 639 ctls. †Overland 513 ctls.

Cereals.

Wheat has held to weak prices throughout the week. Buyers do not appear disposed to anticipate their wants. Oregon and Washington are sending considerable to this market, which meets shippers' current wants for stiffening and topping off. The extraordinary large crops in Eastern Oregon and Eastern Washington are an important factor in keeping prices with us lower than they should. Late advices from Australia report coal vessels receiving quick dispatch, which assures large wheat tonnage after the turn of the year. There is a disposition on the part of exporters not to buy any more wheat than to meet current requirements. This they do in expectation that considerable will be thrown on the market so as to get money to pay taxes.

Barley has sagged off under heavy receipts from up north and threatening weather, although at the close it looks as if we will have more clear weather. The consumption in the State is falling off, owing to about all the fruit being marketed, and no increase in farm work until rain sets in. With general outdoor work the demand for barley will be quite active. An engagement of freight room has been made for 600 tons of barley to New York.

Oats are not quite so strong. The higher prices and weaker tone for barley are against the market. Oregon is sending us only fair supplies.

Corn is coming in quite freely. The quality this year is good. The tendency of the market at this writing appears to be lower prices.

Rye is firm at current quotations.

Buckwheat is barely steady.

Sonoma's Hop Crop.

John McMinn, Jr., reports to the Santa Rosa *Democrat* that the hop crop of 1890 was as follows:

SANTA ROSA TOWNSHIP.

	Acres.	Bales.
Harry Hall	10	67
P. Rafferty	26	92
Miss Annie Stewart	36	70
S. J. Clark	19	133
Ah Sam	27	228
Chas. R. Farmer	28	234
A. H. Frasier	16	58
A. Goodman	17	59
Guy E. Grosse	20	70
Geo. Hall	15	101
J. E. Hall	14	91
S. R. Jewell	25	206
W. H. Leggett	6	45
Leggett Bros.	13	103
T. B. Miller	53	199
John McMinn	8	32
August Peterson	4	9
Raford Peterson	80	500
A. J. Peterson	30	50
S. B. Wright	10	66
J. W. Hall	18	157
James Peterson	20	138
Jos. Purrington	65	300
Samuel Talmadge	31	320
W. H. J. Aitkin	4	4
Rodd & Coville	18	146
Mrs. Peterson	30	149
HEALDSBURG.		
J. N. Bailhache	10	41
John Born	20	107
Wm. Brannan	5	40
John Foreman	10	19
Mrs. John Grant	20	120
George V. Davis	5	46
Henry Hebron	4	31
M. Redding	27	115
Peter Schmidt	5	39
Wm. McCarty	12	62
J. T. Sheehan	4	48
Thomas Toomey	6	51
E. Tauffer	7	56
SEBASTOPOL.		
Otis Allen	25	84
E. Hathaway	16	70
Charles Solomon	30	71
Wilson & Co.	28	69
FORESTVILLE.		
W. H. Brain	16	52
Losson Ross	40	219
FULTON.		
Hinckley & Hanzel	32	255
Miller & Purrington	31	149
GUERNEVILLE.		
R. S. Drake	12	40
W. McPeak	7½	73
Total number bales		5491

The amount realized from the hop crop of the county this season will aggregate $250,000, and the bales are several hundred short of the yield for 1889. Of the 5491 bales, only 700 remain unsold, and the holders of these are expecting an advance in prices.

Feedstuff.

Heavy receipts of hay and the lateness of the season are against the hay market, although the dry weather causes considerable apprehension and necessitates freer feeding.

In ground feed, bran and middlings are easy at a slight reduction in prices. Oregon continues to send us fair supplies of the former. Ground or rolled barley is lower. Feedmeal is barely steady. The demand for feeding is fairly active.

Fruits.

There is a good holiday demand for apples. The better and more attractive kinds clean up well. Some mountain apples in barrels are on the market. They are of good size and flavor.

Pears move off freely. Winter Nelis fetch top prices.

Grapes are meeting with better prices under lessening receipts. The highest quotations are only reached by the more choice Tokays and Cornichons.

The first receipts (35 boxes) of Navel oranges from the southern part of the State came to hand to-day (Tuesday)—Messrs. Lusk & Hughes being the consignees. They were shipped from Villa Park, Orange county, by J. S. Bond, J. Lyons and J. M. Smith. They are being sold at $3.50 a box. Messrs. Evelett & Nash will have a carload in to-morrow from Riverside.

Dried fruits are essentially unchanged. The only kinds in fair offering are peaches. At the lower prices it looks as if they will soon go into distribution. Latest Eastern advices report an improving market for peaches.

Free shipments of raisins overland are still in order. There appear to be fewer complaints regarding the fruit this season than ever before, which speaks well for packers and the reputation of their pack. Receipts at this port are about double what they were during the like time in 1889.

Vegetables.

Garden truck is scarce. Cabbages and root vegetables are in liberal supply.

Onions have come in quite freely. The higher prices appear to be attracting supplies from nearly all sections. Oregon is a liberal contributor.

Notwithstanding receipts of potatoes continue free, the market holds remarkably strong. The demand is said to be both speculative and consumptive. The speculative demand is due to a belief that with rains receipts will fall off, when still higher prices will obtain. Choice Salinas and Oregon potatoes command top prices.

Live-stock.

Bullocks are in free offering, which keeps prices down, notwithstanding an increase in the consumption. Mutton sheep are steady. Lambs and calves are firm. Hogs show an easier tone. Fresh milch cows are in better inquiry, but buyers are slow to pay much of an advance over $30 to $40 for fair to good dairy cows. In horses there is nothing new to report.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4½@4¾c ₩ lb; dressed, 7@8c ₩ lb.; heavy, 4@4¼c ₩ lb.; dressed, 6½@7½c ₩ lb. Stock hogs, 3@3½c ₩ lb.

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¼@5¾c ₩ lb.; second quality 4¾@5c ₩ lb.; third quality, 4c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 6½@8½c ₩ lb.; large, 6@7c.

MUTTON—Wethers, 7c ₩ lb.; ewes, 6½c ₩ lb.; lamb, spring, 8@9c.

Miscellaneous.

From the *Commercial News* of Nov. 25th the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	280.954	204,418
On the way to neighboring ports	17,269	9,447
In port, disengaged	13,561	25,015
In port, engaged for wheat	53.893	80,540
Totals	365,677	318,420

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Nov. 18, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	4,414.188	4,508,119
Flour, bbls	447,544	439,785
Barley	160,940	784,686

The poultry market is in a demoralized condition, due to heavy receipts of both Californian and Eastern. It looks as if shipments had been kept back for Thanksgiving, and the business overdone. Hens and roosters broke in prices and then followed dressed turkeys. Damp and otherwise unfavorable weather is against dressed turkeys and many consignments of good stock had to be sold at 16c. If, after Thursday, receipts continue free, prices for dressed may go off still more.

Beans are moving off fairly well at very few changes in quotations.

Honey is coming in quite freely, but prices hold strong. The New York market is reported firm at a slight advance.

Wool is reported unchanged. Close money market at the East and the near approach of annual settlements are against the market.

Hops continue firm under limited supplies and a fair demand.

Seeds are dull. Quotations are unchanged.

Exports by sea the past week aggregate as follows: Wheat, ctls, Liverpool, 96.952; Cork, 188,610; Dublin, 5521; Havre, 66,932. Flour, bbls, Dublin, 17,700; Central America, 6715; Panama, 200. Beans, lbs, Victoria, 3807; Central America, 51,876. Dried fruits, lbs, Victoria, 2325; Central America, 975. Barley ctls, Honolulu, 1040; New York, 3769. Bran, sks, Honolulu, 750. Hay, bls, Honolulu, 667. Wine gals, Honolulu, 20,447; New York, 18,080; Central America, 3555. Raisins, bxs, Central America, 379

Dried Fruits, Etc.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations.

Prices named, unless otherwise specified, are for fruit in sacks. Add for 50-lb. boxes ½c per lb., and for 25-lb boxes ½c to 1c per lb.

Apples, sun-dried, quarters, common	6½	@ —
" " " prime	7	@ —
" " " choice	8	@ —
" " sliced, common	7½	@ —
" " " prime	8	@ —
" " " choice	8½	@ —
" Evap. bleached, ring 50-lb. boxes	10½	@ 11½
Apricots, sun-dried, unbleached, common	11	@ —
" " " prime	12½	@ —
" " " choice	13½	@ —
" " bleached, prime	16	@ —
" " " choice	17	@ —
" " " fancy	18	@ —
" Evap. choice, in boxes	18	@ —
" " fancy, "	19	@ —
Figs, sun-dried, black	2½	@ 3½
" " white	—	@ —
" " " washed		@
" " " fancy	8	@ 10
" " " pressed	4	@ 6
" " " unpressed	2½	@ 3½
" Smyrna boxes	12	@ 14
" do sacks	10	@ 12
Grapes, sun-dried, stemless	3½	@ 4
" " unstemmed	2	@ 3½
Nectarines, Red, sun-dried	10	@ 13
" evaporated, in boxes	13½	@ 14½
" white, sun-dried	12	@ 15
" evaporated	17	@ 19
Peaches, sun-dried, unpeeled, common, bleached	8	@ 9
" " " prime, "	10	@ —
" " " choice, "	13	@ —
" " " fancy, "	14	@ —
" evaporated " choice	15	@ —
" " " fancy	16	@ —
" sun-dried, peeled, prime, bleached	19	@ —
" " " choice	22	@ —
" " " fancy	23	@ —
" evaporated, " in boxes, choice	24½	@ —
" " " fancy	26½	@ —
Pears, sun-dried, quarters	7	@ 9
" " sliced	9	@ 10
" evaporated, " in boxes	10	@ 11½
" " ring " "	12	@ 13
Plums, pitted, sun-dried	9½	@ 11
" " evap. in boxes, choice	11	@ 12
" " " fancy	13	@ 14
" unpitted	5	@ 8
Prunes, Cal. French, ungraded sizes	9	@ 9½
" " " graded " 90 to 100	8½	@ —
" " " " " 80 to 90	9	@ —
" " " " " 70 to 80	9½	@ —
" " " " " 60 to 70	9½	@ —
" " " " " 50 to 60	10½	@ —
" " " " " 40 to 50	11½	@ —

Fancy sell for more money.

RAISINS.

Halves, quarters and eighths, 25, 50 and 75 cents higher respectively than whole box prices.

London Layers, choice ₩ bx	$1 80	@ 2 10
" fancy, "	2 25	@ 2 50
Layers, ₩ bx	1 50	@ 2 00
Loose Muscatels, common, ₩ bx	1 15	@ 1 35
" choice, "	1 50	@ 1 75
" fancy, "	1 80	@ 1 90
Unstemmed " in sacks, ₩ lb	4	@ 6
Stemmed " " "	4	@ 7
Seedless " " "	6	@ 7
" ₩ 20-lb bx	1 15	@ 1 25
" Sultanas, unbleached, in bxs	1 15	@ 1 25
" " bleached "	1 25	@ 1 30

CALIFORNIA HONEY.

Comb, dark, 2-lb. frames, 60-lb. cases, ₩ lb	4½	@ 5½
" amber, " " cs. new "	5	@ 6
" white " " " "	9	@ 12½
Extracted, dark, 5-gal. cans, 2 cans to case, ₩ lb	4½	@ 4½
" amber, " " " "	5	@ 6
" white, " " "	6	@ 6½
Comb, 2-tins, 2 doz. to case, ₩ doz	—	@ —
Extracted, " " "	—	@ —
" 4-lb. tins, 1 doz. "	—	@ —
Beeswax, per pound	22½	@ 25

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, Nov. 25, 1890.

BEANS AND PEAS.			
Bayo, ctl	3 90	@	4 05
Butter	2 75	@	3 05
Pea	2 50	@	3 00
Red	2 75	@	3 00
Pink	2 00	@	2 25
Small White	2 50	@	2 70
Lima	3 50	@	3 80
Fld Peas, blkeye	1 60	@	1 70
do green	2 50	@	2 75
do NLes	1 35	@	1 55
Split	6	@	—
BROOM CORN.			
Choice to Extra	60 00	@	75 00
Fair to Good	45 00	@	55 00
Poor	40 00	@	—
CHICORY.			
California	5½	@	6
German	6	@	6½
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair, lb	15	@	27½
do good to choice	30	@	35
do Giltedged	40	@	—
do pickled	27½	@	35
do in kegs	22½	@	27½
do Creamery in rolls	—	@	42½
Eastern do	—	@	—
do do, in tubs	30	@	32½
CHEESE.			
Cal. choice mild	12	@	13
do fair to good	10	@	11½
do gilt edged	13	@	14
Young America	13	@	15
N. York Cream	13	@	15
Western	11	@	13
EGGS.			
Cal. ranch, doz	42½	@	45
do do sel'cted	45	@	47½
do. store	35	@	40
Est'rn, cld st'rage		@	—
do fresh	25	@	30
do selected	32½	@	—
FEED.			
Bran, ton	20 00	@	21 50
Feedmeal	28 00	@	30 00
Gr'd Barley	31 50	@	32 50
Middlings	24 00	@	26 00
Oil Cake Meal	25 00	@	27 00
Manhattan Food Per 100 lbs	7 50	@	—
HAY.			
Compressed	13 00	@	18 00
Wheat, per ton	12 00	@	17 00
do choice	18 00	@	—
Wheat and Oats	12 00	@	15 50
Wild Oats	12 00	@	15 00
Tame do	12 00	@	15 00
Barley	9 00	@	13 00
Barley and Oats	10 00	@	14 00
Alfalfa	12 00	@	13 00
Straw bale	70	@	80
FLOUR.			
Extra, City Mills	4 10	@	4 25
do Co'try Mills	4 00	@	4 25
Superfine	3 00	@	3 50
GRAIN, ETC.			
Barley, feed, ctl	1 40	@	1 45
do Choice	1 47½	@	1 51½
do Brewing	1 52½	@	—
do do Choice	1 55	@	—
do do giltedg'd	1 60	@	—
Chevalier once	1 55	@	1 60
do com to good	1 40	@	1 50
Buckwheat	2 00	@	—
Corn, White	1 35	@	1 40
Yellow, large	1 35	@	1 40
do, small	1 35	@	1 40
Oats, milling	2 01	@	2 05
Surprise	1 95	@	2 10
Choice feed, ch'c	2 00	@	—
do good	1 80	@	1 90
do fair	1 70	@	1 77½
do Gray	1 75	@	1 80
do Black	1 70	@	1 90
do do for seed	2 00	@	2 05
Rye	1 32½	@	1 38½
Wheat, milling. Gilt edged	1 41½	@	—
do Choice	1 38½	@	—
do fair to good	1 33½	@	—
Shipping, cho'ce	1 33½	@	—
do good	1 31½	@	—
do fair	1 28½	@	—
Sonora	1 27½	@	1 31½
HIDES.			
Dry Ight to h'vy	10	@	11
Salted	5	@	8½
HOPS.			
Oregon, 1890	32½	@	40
Cal 1890 Choice	37½	@	40
do Fair to G'd	32½	@	35
NUTS—JOBBING.			
Walnuts, Cal. lb	8	@	9
do Ch'ce	9	@	11
Almonds, hd shl.	6	@	7
Softshell	14	@	15
Paper shell	15	@	16½
Brazil	19	@	20
Pecaus mall	11	@	14
do large	17	@	18
Peanuts	4½	@	5½
Filberts	11	@	13
Hickory	6	@	8
Chestnuts	12	@	15
Pine nuts	7	@	8
ONIONS.			
Silver Skin	2 50	@	3 25
POTATOES.			
Early Rose, sks	70	@	80
Chile	95	@	1 10
Peerless	70	@	90
do Salinas	1 00	@	1 10
River Reds	90	@	1 15
Humboldt	—	@	—
Burbanks	80	@	90
do Salinas	1 00	@	1 35
Sweet sks	1 50	@	2 50
POULTRY AND GAME.			
Hens, doz	4 00	@	5 50
Roosters, old	4 00	@	5 00
do young	4 00	@	5 00
Broilers, small	2 50	@	3 50
do large	4 00	@	—
Fryers	4 00	@	—
Ducks, tame	4 00	@	5 50
do large	6 00	@	7 00
Geese, pair	1 50	@	2 00
Turkeys, Gob'r	13	@	15
Turkeys, Hens	14	@	16
do dressed	15	@	18
Pigeons	1 75	@	2 50
Rabbits, doz	1 00	@	1 25
Venison	6	@	8
Dove	50	@	75
Quail	75	@	1 00
Snipe, English	1 25	@	1 50
do Jack	50	@	60
Ducks, Mallard	3 00	@	4 50
do Canv'sback	4 00	@	5 00
do Sprigs	2 00	@	2 50
do Teal	1 00	@	1 25
do Widgeon	1 25	@	1 50
do Small	1 00	@	1 25
Geese, Gray	2 25	@	2 75
do white	1 00	@	1 50
Brant	1 25	@	1 75
Honkers	4 00	@	5 00
EGG FOOD.			
Manhattan, ⅜ lb	12	@	—
PROVISIONS.			
Cal. Bacon. Heavy, lb	10½	@	11
Medium	12	@	—
Light	13	@	13½
Lard	9	@	11
Cal. Sm'k'd Beef	11	@	12
Hams, Cal	13	@	14
do Eastern	14	@	15
SEEDS.			
Alfalfa	8	@	8½
Canary	3½	@	4
Clover, Red	11½	@	11½
White	17½	@	20
Cotton	20	@	—
Flaxseed	2	@	3
Hemp	4	@	5
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German	5	@	6½
do Common	5	@	6
Mustard, yellow	1 90	@	2 25
do Brown	2½	@	3
Rape	1½	@	2½
Ky. Blue Grass	14	@	16
2d quality	13	@	14
Sweet V. Grass	75	@	—
Orchard	12	@	14
Hungarian	7½	@	8
Lawn	27½	@	40
Mesquit	6	@	7
Timothy	6	@	7
TALLOW.			
Crude, lb	3	@	5
Refined	6	@	
WOOL, ETC. SPRING—1890.			
Humboldt and Mendocino	19	@	24
Sac'to valley	15	@	22
Free Mountain	18	@	24
S Joaquin valley	12½	@	17
do mountain	17	@	22
Cala'v & F'th'll	15	@	24
Oregon Eastern	13	@	22
do valley	20	@	25
So'n Coast, def	10	@	14
So'n Coast, free	12½	@	19
FALL—1890.			
North'n, choice	16	@	18½
do defective	14	@	16
Mountain Free	13	@	15½
San Joaquin defective	9	@	11½
Southern do	9	@	11½

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, Nov. 25, 1890.

Bananas, bunch	2 50	@	3 50
Cranberries	9 00	@	12 00
Limes, Mex	4 00	@	5 50
Lemons, Cal., bx	2 00	@	5 00
do Sicily, bx	7 00	@	8 50
do Malaga	7 00	@	8 50
Oranges. do Navels	3 00	@	3 50
Pineapples, doz	3 00	@	5 00
Strawberries. chest	10 00	@	15 00
Pears, bx	75	@	1 50
Apples com box	25	@	60
do good	90	@	1 15
do choice	1 25	@	1 50
do Mount'n bbl	5 00	@	7 00
do do Red	1 50	@	2 00
Grapes, box	40	@	75
Crabapples, box	75	@	100
Quinces, box	75	@	1 00
VEGETABLES.			
Okra, dry, lb	6	@	10
do green bx	1 00	@	1 25
Parsnips, ctl	1 25	@	—
Peppers, dry, lb	12	@	—
do green, bx	35	@	55
Turnips, ctl	75	@	—
Beets, sk	—	@	1 00
Cabbage, 100 lbs	50	@	60
Carrots, sk	30	@	45
Marrowfat, ton	10 00	@	12 00
Hubbard	5 00	@	20 00
Garlic, lb	8	@	10
Egg Plant, bx	50	@	65
Cauliflower doz	50	@	75

Rope.

Baling, Duplex, lb	11
" Manilla, lb	14
Twine, for hops, balls, tarred, lb, Manilla	15
" " grape vine, balls, lb "	15½
" " " coils, lb "	15½
" spring, lb	1
" binder (650 ft. to lb), lb	15

Duplex twine 3c per lb less.

MIX STOVE BLACKING with spirits of turpentine. It will take off the rust, polish easier, and will stay glossy longer than when water is used.

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PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by P. T. JENKINS, Sergeant Signal Service Corps U. S. A.]

DATE. Nov. 19-24.	Olympia. Rain	Temp.	Wind	Weather.	Portland. Rain	Temp	Wind	Weather	Eureka. Rain	Temp	Wind	Weather.	Red Bluff. Rain	Temp.	Wind	Weather	Sacramento. Rain	Temp	Wind	Weather	S. Francisco. Rain	Temp	Wind	Weather.	Fresno. Rain	Temp	Wind	Weather	Keeler. Rain	Temp	Wind	Weather	Los Angeles. Rain	Temp	Wind	Weather	San Diego. Rain	Temp	Wind	Weather
W.	.00	50	S	Cl	.00	50	0	Cy.	....	....	....	....	.00	66	S E	Cl.	.00	64	N	Cl	.00	66	Nw	Cl	.00	70	N	Cl.	.00	54	E	P C	60	64	N w	Cl.	.00	64	N w	Cl.
T.	.00	38	W	Cy.	.00	48	S	Cl.	.00	60	0	Cl.	.00	70	N	Cl.	.00	66	S E	Cl.	.00	66	0	Cl	.00	68	N	Cl.	.00	56	E	Cl.	00	70	W	Cl.	.00	70	N w	Cl.
F.	.00	46	W	P C	.00	56	E	Cy.	.00	58	E	Cy.	.00	62	N w	P C	.00	60	N w	Cl.	.00	64	N	Cy.	.00	70	N	Cl.	.00	52	E	Cl	.00	72	W	Cl.	00	72	N	Cl.
S.	.00	52	0	Cy.	.T	56	0	Cy.	.T	60	N E	Cl.	00	70	N w	Cl.	.00	66	N	Cl.	.00	68	W	P C	.00	72	W	Cl	.00	72	W	Cl.	.00	74	W	Cl.	00	74	N w	Cl
S.	.T	52	S	Rn.	.T	54	N E	Cy.	.T	56	N	Cy.	.00	68	0	P C	.00	64	N w	Cl.	.00	68	S W	P C	.00	70	N w	Cl.	.00	54	0	Cl	.00	70	N E	Cl	.00	74	N	Cl.
M.	.00	52	N E	Cy.	.00	50	N	Fy.	.02	58	S E	Cy.	.00	58	S E	P C	.00	58	N w	Cl.	.00	58	S W	Fy.	.00	68	S W	P C	.00	54	N E	Cl.	.00	70	W	Cl.	00	68	N w	Cl.
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EXPLANATION. Cl. for clear; Cy, cloudy; Fr., fair; Cm., calm; indicates too small to measure. Temperature wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall P C, partly cloudy. Rn., rain.

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THE PROPOSED TUNNEL BETWEEN IRELAND AND SCOTLAND.—A public meeting, convened by the Mayor of Belfast, has been held to consider a scheme for constructing a tunnel between Ireland and Scotland. Mr. Barton, civil engineer, submitted his scheme, which is to construct a tunnel from the junction of the Belfast & Northern Counties Railway, four miles inland from Whitehaven, on the Antrim coast, to the center of Wierston Hill, in Wigtonshire, also about four miles inland, the whole length to be about 34 miles. The scheme has the support of Sir Douglas Fox, engineer of the Severn tunnel, Sir Benjamin Baker, the Forth bridge engineer, and Sir John Hawkshaw of London. He estimated the total cost at £8,000,000, and the tunnel could be completed in 10 or 12 years. The meeting passed resolutions recognizing the importance of the scheme, urging the Government to render financial assistance, and appointing a committee to consider and report upon the whole question.

PLANTING IN COLUSA.—The Fruto Land and Improvement Co. of Elk Creek, Colusa Co., proposes to largely extend its fruit area by this winter's planting. We learn from a letter from Robt. Watts, manager, that holes have already been dug on 40 acres for French prunes, and in all 50 acres of this fruit will be planted; also 100 acres of raisin grapes, 10 of Bartlett pears and 5 of peaches.

HORSE-COLLAR TRUST—A BIG HOLE MADE IN IT No Collar Trust! No Leather Trust! No Labor Trust! Competition is the life of trade, and Trusts kill competition. A business house which becomes fossilized to the point of requiring a Pool or Trust to hold it up, should be left severely alone, and those not leaning on Pools or Trusts be preferred. What chance has the rising generation for a fair share of this world's goods if they are hampered and shut out from many undertakings by Trusts? To all persons interested in Harness Goods: Please take notice that the firm of W. Davis & Son withdrew from the Collar Trust on Sep'ember 13, 1890, and can, therefore, furnish Horse Collars at a Big Reduction on the Trust Prices, as we are the only Wholesale Saddlery House in San Francisco not tied up with High Prices. W. DAVIS & SON, 410 Market St., S. F.

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Lecturer on Horticulture, University of California; Horticultural Editor PACIFIC RURAL PRESS, San Francisco; Secretary California State Horticultural Society; President California State Floral Society; President S. F. Microscopical Society.

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THE SMOKEBALL IN WAR.—In the sham fight at Portsmouth in honor of the Emperor William, an advancing column was so affected by the fumes of the smokeball, which was used to raise a cloud of impenetrable obscurity under which they could advance, that the men had to keep their hands to their noses to avoid suffocation. It is now proposed that the smokeball shall receive a further development. It has occurred to some military men that instead of half suffocating their own troops, it would be better to follow the example of the Chinese pirates with their stinkpots, and asphyxiate the enemy. A Vienna scientist has accordingly invented a bomb of such power and virulence that every one who is within a certain radius of it when it explodes is rendered unconscious. Devices such as these would soon modify the art of war, and probably the next development will be an anti-asphyxiating bomb, whose fumes will neutralize that of the other. It is said that many years ago a scheme based on the throwing of poisonous gases over a tract of country was put before the War Office in England, for the purpose of devastating the country in the face of an invading army, but the agency employed was so terrible in its effects that it was not made public, and was consigned to the secret records of the War Office.—*Ex.*

STATISTICS OF STEAMBOAT TRAVEL. — Inspector-General Dumont of the Steamboat Inspection Service has made a report to the Secretary of the Treasury of the operation of that service during the fiscal year ended June 30th last, of which the following is a recapitulation: Total number of vessels inspected, 7065; net tonnage, 1,390,389 55; number of officers licensed, 33,237; increase in number of vessels inspected over preceding year, 338; increase in tonnage, 74,953 48; increase in number of officers licensed, 1615. During the year there were 1882 applicants for pilots' licenses, of which number 1738 passed a successful examination for color-blindness and 44 were rejected. There were 34 accidents, resulting in the loss of 245 lives—a decrease of 56 as compared with the preceding year. Of the accidents, 17 resulted from collisions, and 102 of the lives lost were by drowning. Of the number of lives lost, 65 were passengers and 180 were officers or persons employed on the steamers.

A RAILROAD TO ALASKA is one of the sure things of the near future. The latest information in this direction is that arrangements have been concluded and capital raised by a syndicate of St. Petersburg, Russia, capitalists and some prominent New York railway magnates, among whom are Henry Villard, to build a railroad from Puget Sound to Alaska. There have been many wild transpacific and transatlantic schemes, such as bridging Behring straits and establishing a steamship line to Europe from Hudson's bay; yet none a few years ago appeared more chimerical than the proposition to build a paying railway through the frozen wastes of Alaska. But now considerable interest is manifested in schemes of this kind. Alaska has many enthusiastic admirers who look on it as the coming land of wealth and promise. What Jay Cooke did in booming the Lake Superior country, Villard and his friends propose to do for Alaska. Engineering parties have been in the field all summer, and it is expected that the line will be located next spring. The company has a capital of $1,500,000.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

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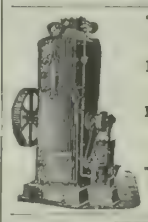
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The Whole Country Needs Fertilization

ADMONITION TO FARMERS!

GUAYMAS, MEXICO, September 9, 1890.

R. B. CUNNINGHAM, ESQ., Agent Mexican Phosphate and Sulphur Company—DEAR SIR: In answer to your inquiries as to the value of phosphates for worn-out lands, I will state that it is my opinion the lands of the older settled portions of California afford a good field for the use of phosphates. These lands have been cropped for years without any restoration of the chemical constituents necessary for an abundant crop. They therefore show plainly that they need assistance artificially to produce crops good in quantity and quality, let the crop be whatever it may.

Take, for instance, San Joaquin and Santa Clara valleys, and what do you see? Many crops that are so imperfect in quantity and quality that the eye at once detects the defect. The only relief that can be resorted to must be infused into the soil to replace the chemical properties that have been extracted by previous crops, and the writer is of the opinion that a liberal supply of phosphates will accomplish this.

The attention of the cultivators of the soil is sharply turned to rotation of crops, hoping thereby to get wealth out of their lands without fertilization. Some have turned their attention to beet cultivation in soil worn out by other crops. Beet or other seeds will not grow successfully unless the soil will nourish them.

This summer I saw several crops of beets on excessively cropped lands, the majority of which showed that there was something wanting to complete the plants to ample size and in quantity that should be expected of sugar beets under favorable circumstances. If a good crop is not obtained, there is deficiency in profit. It costs as much to cultivate soil deficient in chemical properties as it does if ample nutrition was in the soil. Under the former condition a deficient crop is certain, while under the latter condition he may reasonably expect an ample crop with profit.

Fields often are allowed to go to weeds, supposing thereby to enrich the soil. This is an uncertain method and not profitable. Your weeds have grown up and seeded; the dead stems can only add a limited addition to fertilize the soil, while the seeds of the same will cause much expense to exterminate them from the future crops. Besides, while thus only weeds as a crop, no profit was realized, while if a supply of phosphates had been applied to the soil, a profitable crop of beets or corn would be had. Besides, the weeds would have been exterminated during the cultivation of the said crop. I am, Sir, your obedient servant,

EDWARD PALMER, M. D.

THE MEXICAN PHOSPHATE AND SULPHUR CO.

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Phosphoric Acid	10 to 11 per cent.	15 per cent.	12 per cent.
Potash	9 to 10 "	2 "	5 to 6 "
Ammonia	3 to 4 "	2 "	3 to 4 "

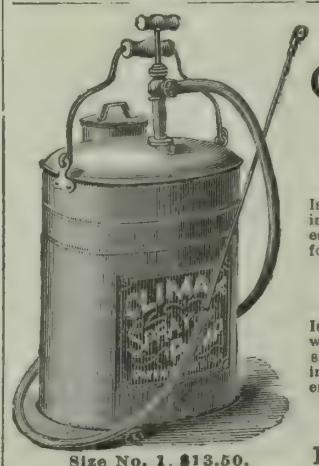
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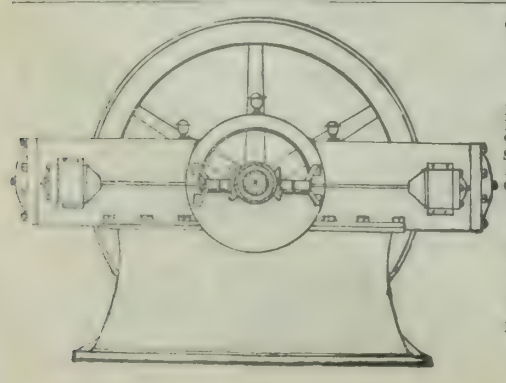
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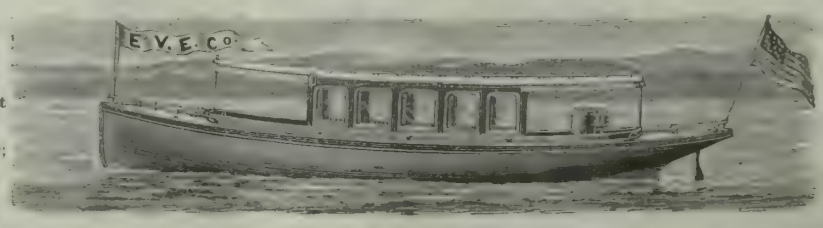
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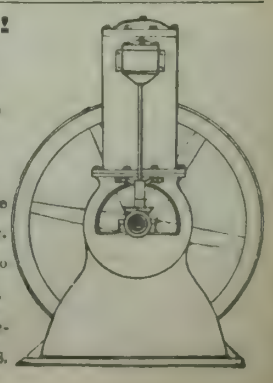
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Orange and Lemon Trees,
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Write for prices.

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BY PLANTING QUITE A NUMBER OF THE LEADing varieties of Strawberry together for five years, I have produced a variety unlike any of the former. I have picked the fruit daily since April 20th to the present time, October 18th, and the vines are still full of bloom and berries. Roots are long and stand the drouth well. The berries are large, fine flavor and high color, and resemble the Jessie in shape somewhat. I am prepared to furnish them in small lots at $1.50 per doz., post paid. R. E. FARRINGTON, General Nurseryman, Phœnix, Arizona.

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SPECIALTIES:

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A Superb Lot of Bartlett's and Apples
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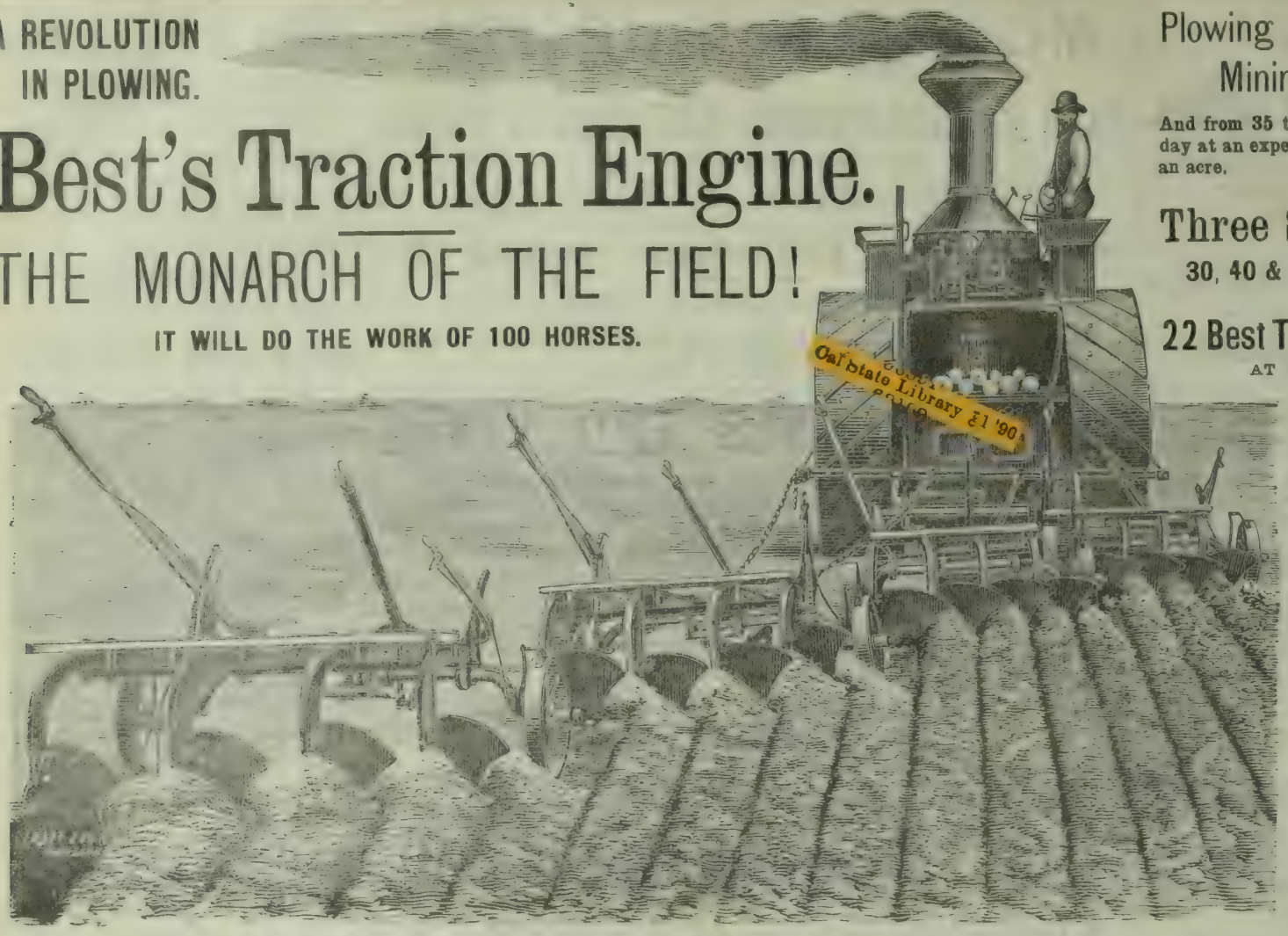
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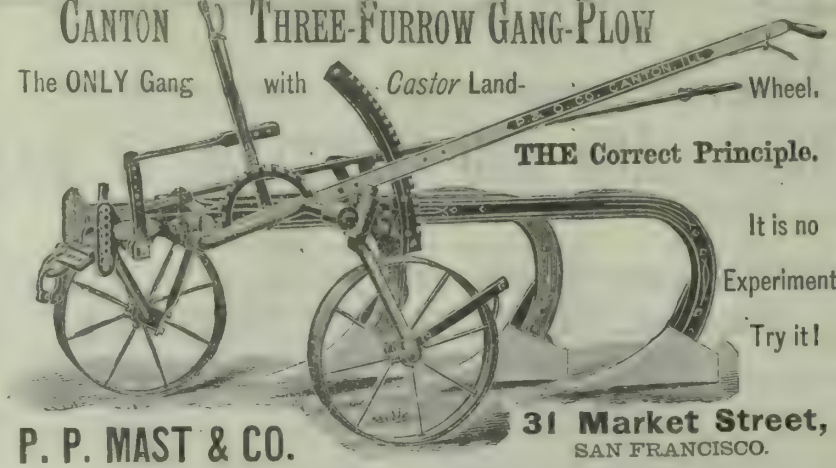
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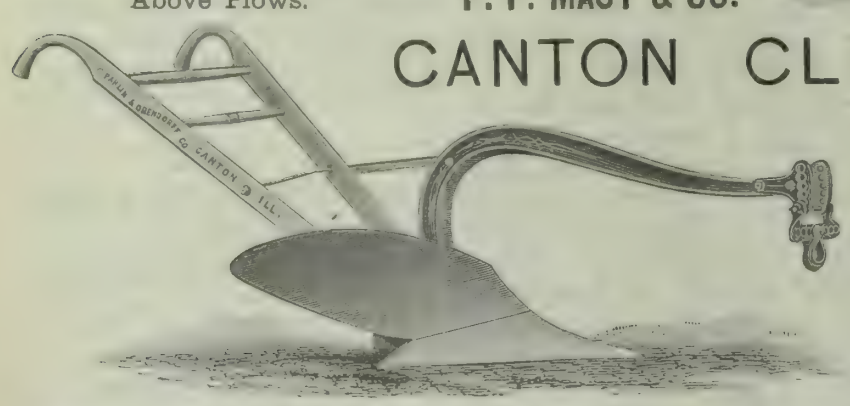
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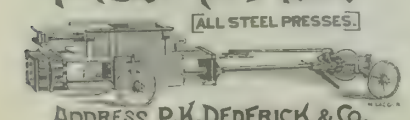
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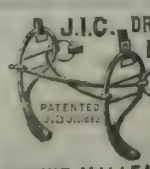


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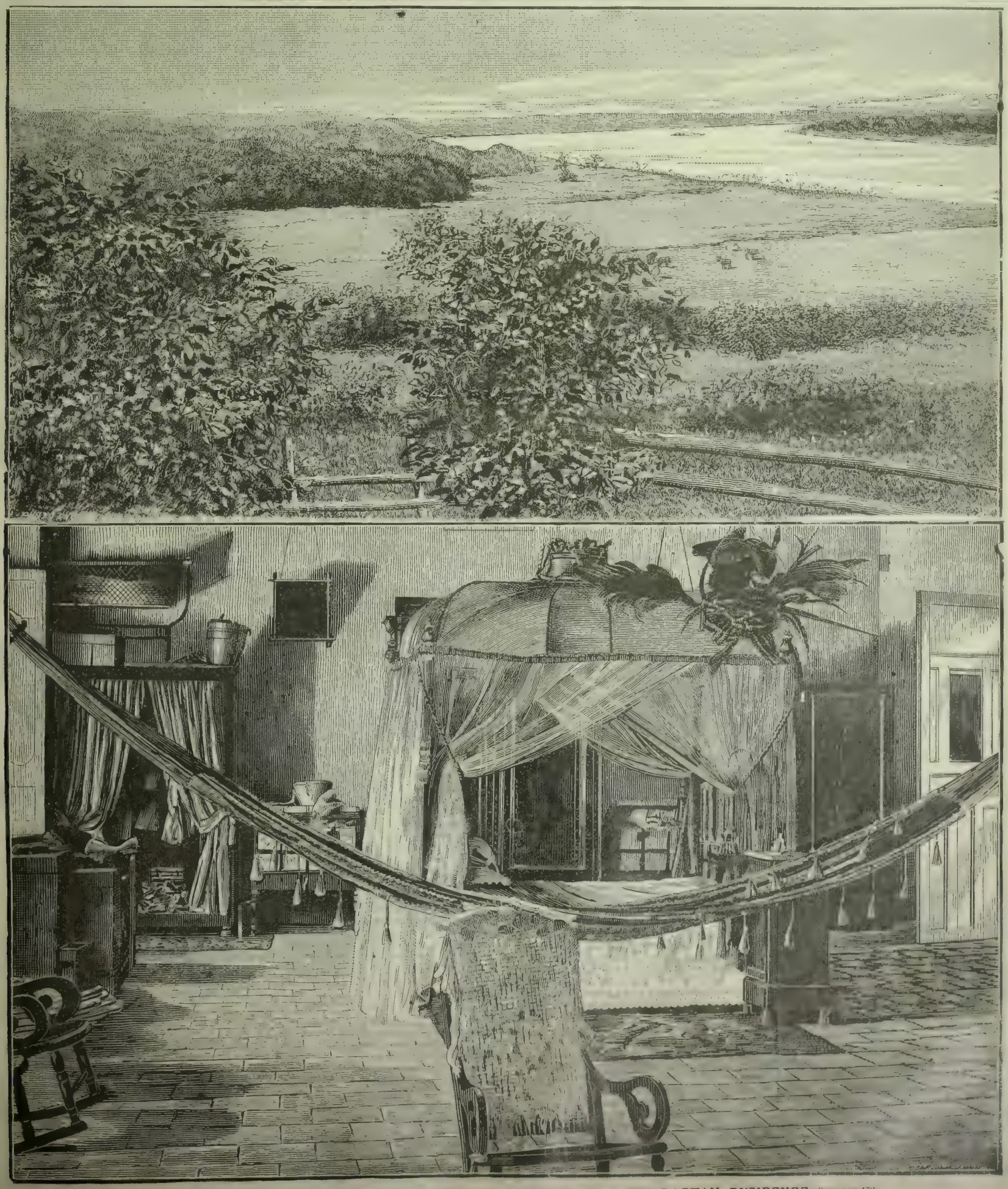
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IN NICARAGUA—THE SAN JUAN VALLEY—AN INTERIOR IN A NICARAGUAN RESIDENCE—See page 478.

THE GARDEN.

The Gopher.

The following instructive essay on the common gopher of this [illegible] was prepared for the *Great Southwest* by F. Stephens of Santa Ysabel, Cal. It should be read and preserved for reference:

The pocket gopher (*Thomomys Talpoides*).—Color varying from reddish-brown to nearly black, lighter below and darker about the mouth; inside of pockets light-colored, sometimes white. Form, mole-like, with a blunt head. Pockets open externally on the side of the lower jaw. Length, nose to base of tail, five to eight inches; tail, two to three inches. Upper incisors without a median groove, which distinguishes it from the members of the family in the Eastern States, all of which have a groove down the middle of the upper front teeth. Found from the Rocky mountains to the Pacific. Typical from northern variety *bulbivorus*, in the Pacific Coast region; variety *umbrinus* in Lower California and Arizona; variety *perpallidus* in the Colorado and Mojave deserts. The last variety is very pale, nearly white sometimes.

The above description is sufficient to enable any one to recognize the animal I am writing of, and most farmers know it too well already. The name "gopher" is applied to very different animals in different parts of the United States. In the Mississippi valley it is often given to several species of ground-squirrels which burrow in the ground, but spend part of their time on the surface, while the true gopher lives altogether underground. In some of the Southern States the name is applied to numbers of the tortoise or land turtle family.

The pocket gopher probably breeds two or three times a year, and judging from the numerous mammæ (10 to 12) the litters will average about half a dozen, so that it is little wonder that they increase fast. Very little is known about the breeding habits of the pocket gopher, and the breeding nest is undoubtedly placed deep in the ground, and therefore not likely to be found often. I have taken females, evidently suckling young, at all times of the year.

The runs or prolonged burrows are very extensive; practically endless, as they often run into one another. The runs are usually but a few inches beneath the surface. The object in making the runs is to procure food, which is principally the roots of plants, and are, of course, the most abundant near the surface. A considerable part of the food, however, is the plant itself, which is sometimes carried a short distance to the entrance of a hole, or, as is more often the case, a tunnel is run under the plant and it is pulled in from below. A small portion of their food is such earthworms, beetles and similar animal food as may drop into their runs, which they seem to travel over daily for the apparent purpose of picking up such bits. The pocket gopher does not feel at all safe on the surface of the ground and will not venture many feet in the open air, but, if it sees a desirable plant at a distance, will run a tunnel to it rather than to carry it any distance on the surface. They are good, practical engineers, and will run a tunnel several feet and come up beneath a melon without showing any sign on the surface until the hollowed-out melon is rolled over.

It is supposed by many that the pockets are used to carry out the dirt seen in the mounds marking the course of the runs, but such is not the case. I have trapped hundreds of pocket gophers, principally for the purpose of ridding the ranch of them, but sometimes for scientific specimens, and have shot some in the act of building the mounds as they come to the surface with fresh dirt, and have yet to see the first dirt in the pockets of such animals, but I have seen bits of roots, bits of plant stems and leaves in their pockets very often. Careful watching by others, whose conclusions I indorse, shows that the animal loosens the dirt with its powerful fore feet and works it behind itself with fore and hind feet, in a manner similar to that of a dog in like work, until it gets a sufficient quantity, when it turns around, and lying flat on the bottom of the run with the wrists of the fore feet close together under its nose and the claws spread wide apart, it pushes the pile of dirt before it, using the hind feet only for propulsion. A little examination of the fore feet will show any one that in this manner the animal can push a much larger quantity of dirt ahead of it than it could carry in its pockets, and the quick flip that is given to throw the dirt away from the mouth of the hole when coming out, explains why many persons think they throw the dirt out of their pockets with their fore feet. The work is done so quickly that it needs much close watching to see how it is done. When the ground is soft, some of the earth is pressed aside, so that less needs to be carried to the surface, and in very dry weather, when the ground is quite hard, but little work is done, the animal subsisting on such food as it can obtain in the old runs. At such times one may as well lay away the traps until the next rainy season begins.

The pocket gopher is a serious pest in orchards, gardens, alfalfa-fields and similar places, and it is desirable to know how to rid the premises of them. It can be done, but only by perseverance, and when done one must keep at work around the edges of the place to catch those that come in from adjoining places. When several join, it becomes easier for each.

After numerous experiments, I have settled on the use of traps as the most preferable method, and I want two kinds of traps. I use the No. 0 Newhouse (the smallest size, worth about $3 per dozen) and a wire trap that I think is called the C. V. or something similar. In it the gopher enters a wire loop, when a bent point catches him from below. One needs a dozen of each to do much trapping, as it is too slow with a less number. If there are cats around, fasten a light wire two or three feet long to the C. V., so that you can stake it, or the cats will carry off both gopher and trap. You want some bits of board six or eight inches square, stakes to stake the traps with, and these should be long enough that you can see them at a distance or you may find it difficult to find your traps, especially in weedy places. You also want a bit of stiff hoop iron bent into a fish-hook shape to widen the entrance to the runs, and a shovel, and you are ready to begin. Make your rounds in the morning and at night, as then the gophers are most active. If you find a fresh hole yet open, enlarge it sufficiently to run in a C. V. six or eight inches; leave the entrance open in this case. Look out that no lumps of dirt lie in the hole beyond the trap to give the animal warning. If you find a fresh mound with the entrance closed, dig with the shovel until you find the side branch connecting the mound with the main run, feel along this side branch until you find the main run, and open it until you can set a Newhouse trap in the main run itself, with the pan of the trap in the middle of the run and level with its bottom. Disturb the run as little as possible. Use no bait. The object is to catch the animal as it passes in its usual rounds. Close the mouth of the hole you have made with a bit of board covered with dirt, so as to stop out all light. Sometimes you will find that the animal has detected the trap and filled it with dirt. In this case, it will have made a new run a few inches beyond the trap, where you can try it again. Sometimes in digging below the mound you will open the main run itself. In this case, set a C. V. in each side and close the hole with a board as before. You are not likely to get more than one animal in a place. Sometimes they get very cunning and hard to catch; then, after a few trials, change to the other style of trap. By far the most effective time to trap is after rains, when they are very busy and careless of traps.

Poison can be used to a small extent by putting a few grains of poisoned wheat or a raisin with a little powdered strychnine in it in the run, but the entrance should be closed. A good cat is very effective in catching gophers, and the barn owl is one of the farmers' best friends, as they live principally on pocket gophers and feed their young on them.

THE VINEYARD

Report of Commissioner Bundschu.

Charles Bundschu, Viticultural Commissioner for the San Francisco District, has filed the following annual report with the Board of State Viticultural Commissioners: I am gratified in reporting to you that the state of viticultural matters pertaining to the Third or San Francisco District may be considered in a fair condition of prosperity.

The depressing and unfavorable circumstances that impaired the healthy advancement of the industry for some time past, appear to be supplanted with a feeling of renewed confidence and hopeful expectation.

I find that in all the different sections comprising this extensive district the stock of old wines held in first hands is limited and the new vintage could be taken care of without difficulty. Although special inducements have been offered this year for the preparation of dried grapes on a larger scale, sufficient wine grapes have been reserved for wine-making purposes to make our vintage a very abundant one and sufficiently large to replenish the stock for the regular trade requirements.

Santa Clara county has developed into one of the great centers for the production of red wine varieties, and the general characteristics of the wines—good color and body—make them a desirable product for the great bulk of our export clarets. The Charbona variety, extensively cultivated in the past, has been largely eliminated and replaced by grafts of the Burgundy and Bordeaux types, greatly increasing thereby the value of the product. Some of the finest claret types are grown in this wonderful section, especially in the mountain regions, and after undergoing proper treatment and cellar handling their merits must and will command general approbation and appreciation; they have compelled recognition heretofore and will continue to grow in public estimation hereafter.

San Mateo county is also making strenuous efforts to increase its acreage of vineyards; its vineyardists are planting out the choicest varieties in the mountain regions, evidently well adapted for the cultivation of the vine. These new vineyards will soon come into full bearing and will undoubtedly produce satisfactory results.

The Santa Cruz mountain district has had good opportunity to show its superiority in many respects. The wines are not very heavy in alcohol, but develop a most delicate flavor and highly distinctive aroma, which may be attributable to the proximity of the ocean. The yield of the vines is generally light, cultivation more difficult and expensive than that of the valley lands, but the result shows immense possibilities limited only by the degree of skill and knowledge of the vineyardist to assist nature's efforts and to overcome difficulties of fermentation and development.

Alameda county and especially Livermore valley appear to have made the most formidable progress in the general rivalry for the production of higher types of the table wines. The distinction of the highest awards of merit that were accorded to the products of this now famous district by the Paris Exposition of 1889 must be considered evidence of superiority of climatic conditions and adaptability of soils, especially to Sauterne and Bordeaux varieties, as well as the wine-maker's skill and careful methods of making, treating and ripening their products.

So far as general statements may be relied upon, the Third District is free from the attacks of the phylloxera, and although no serious apprehensions are felt on the part of the vine-growers, abundant provision is made for the introduction and propagation of resistant vines. In fact some newer vineyards of the district have been entirely planted in resistant stock and grafted with the most approved varieties.

The conditions of trade have not been very favorable for our California growers for some time past, although the shipments from this port and interior points show a healthy increase in volume; prices have declined to a remarkably low and unprofitable standard. One of the principal reasons for this unfavorable condition of affairs in the past is undoubtedly an overproduction of inferior wines, which under the ordinary pressure of commercial competition have found their way into the channels of trade and under competitive prices have degraded the prestige and dragged down the prices of our superior products. The general opinion that all our wines should have a certain age before they could advantageously be placed on the market has induced many to hold their products for future prospects. It should be remembered by all parties interested:

First. That only a limited portion of our wines can be safely placed aside for storing and ageing, and that quality alone can form the criterion for judicious selection.

Second. That the conditions essential for the preservation, for the improvement and for the maturing of wines into a really fine product must be thoroughly understood.

Third. That when the fundamental conditions of original soundness, excellence of quality and means of preservation coupled with the knowledge of methods are wanting, all attempts at ageing wines will most assuredly result in failure, sacrifice and disappointment.

When only eight or ten years ago it was firmly asserted by representative authority and published all over the State, that California could never produce too much wine and that the then prospective vintages (variously estimated at forty to fifty million gallons) would be readily disposed of—when it was stated that the happy owner of a hundred acres of bearing vineyard would be the enviable possessor of an estate equal to an independent fortune—then nobody anticipated that even the largely reduced yearly quantity of about eighteen million gallons could bring about a disastrous flooding of the wine market. That the prophetic glorification of the future of our industry was not to be realized up to the present time, is due in a great measure to the fact that our American population are very slow in adopting the habit of drinking in moderation—a habit almost as old as the world and to-day indulged in by the most enlightened and cultured nations of Europe.

The planting and growing of a vineyard is only the beginning of the problem of "making wine," the solution whereof is its profitable marketing. The production of ordinary wines may be comparatively an easy task, but the selection, nursing and ageing of wines of superior quality is an accomplishment acquired only after untiring application and experiments coupled with natural ability and skill.

I am most happy to note quite an advance among the growers of this district in all the qualifications of successful wine men, and in proof of my assertion I point to the improvement especially in the quality of wines made these last two years. I doubt not but that the future will show still better results and bear witness to the correctness of my judgment.

I look upon our past and present struggles as an unavoidable reaction from over-sanguine expectations, which must naturally adjust itself and then the wine industry will once more be established on a basis remunerative to all.

S. F., Oct. 25. CHARLES BUNDSCHU.

The Situation in Grape-Growing.

EDITORS PRESS:—I am a new subscriber to the PACIFIC RURAL PRESS and read with interest the articles on farming and tree culture. In your issue of November 15th is an article "The Future of the Wine Interest." While it is true the wine grape has not paid very well for the last few years, when we take into consideration the destruction of the vine by the phylloxera and other diseases, the outlook is not very bright for the wine grape. One other thing I would call attention to is the sentiment growing over the United States against wines and all intoxicating drinks. Some say that it will not hurt the wine interest in California. Look at the number of States east of the Rockies under prohibition, and it has been lately stated that the Southern States have nearly as much territory under local option as the North has under prohibition. California has been nearly doubling the prohibition vote every two years of late, and if the tide does not turn soon, the time is not far distant when those having grapes only good for wine might not find a market for them. It seems to me the wisest thing for vineyardists to do is to plant a grape that can be dried, canned or put to some other profitable use. Then they would be on the safe side of the question.

Mr. Wehner advises buyers to buy lands already planted to vines and bearing. So far as my experience goes, it is nearly always cheaper to buy improved land rather than unimproved land. NELSON WARD.

Compton

THE APIARY.

Bee Culture in the Sacramento Valley.

EDITORS PRESS:—On a recent trip to Sacramento and Yolo county, I visited Mr. Adam Warner of Clarksburg, Yolo county, an extensive apiarist who keeps bees in both counties. I found Mr. Warner at home. He had just finished taking off about a ton of honey, mostly in one-pound sections. The honey was as fine both in color and flavor as any I have seen this season.

"What kind of a crop did you have this year, Mr. Warner?" I asked.

"Not very large," he answered; "a little over a ton. You see the high water kept things back so this last spring that the bees did not have a chance to do much."

"That is very fine honey," I remarked. "By the look of it I should think that it was gathered from alfalfa."

"No doubt part of it was; but the honey this year I don't think is as good as that I had last year. I have noticed, though, that the honey raised the last few years is a great deal better than that obtained when Harbison kept bees here."

"That is no doubt owing to the wild growth being cleared out and replaced with alfalfa, fruit bloom, etc.," I answered. "About how many colonies have you, Mr. Warner?"

"I generally keep between 250 and 300 stands in six different apiaries. I give the ranchers $20 a year for the privilege of keeping bees on their places. How many colonies do you think can be safely kept in one apiary, taking it season for season?"

"Well, that is hard to tell," I answered. "I have heard of keeping between five and six hundred in one apiary, but that is in the lower counties where there is excellent bee pasturage, and where bees gather from three to five hundred pounds to the colony. In your location I think you could safely keep 100 colonies without overstocking. A great deal depends on the season. Some seasons there is abundant pasturage for 1000 colonies in one location, and again 25 will overstock it in unfavorable seasons. I once kept 130 colonies in one apiary in El Dorado county, and they did first rate."

"Yes, I am sure I could profitably keep 100 stands in one location without overstocking, in fact, I am going to try it anyway next season. In the future I intend to devote all my time to bee-keeping. I have sold all my stock and intend renting my ranch, so that I can spend all my time with the bees."

"Have you ever tried the Carniolan bees?" I asked.

"No; these I have are hybrids and Italians, and they are splendid bees for honey gathering. I have heard about the Carniolans being a very gentle bee. A bee-keeper down below told me that they did not sting at all."

"Oh, yes, they will sting as well as any other kind of bees," I answered; "but with proper handling you can look through a good-sized apiary without getting stung. Carniolan bees cap their honey very white and use little or no propolis, so that it is a pleasure to handle frames and sections; they gather as much honey as any race of bees, and are excellent defenders of their hives against robber bees. Do you have any trouble by bees robbing here in your apiaries?"

"No, bees don't rob here; at least none of mine ever have. I have heard that some bee-keepers have great trouble by robbing."

"It is only in certain locations that bees rob each other very bad," I observed; "as long as there is sufficient pasturage for them to work on, there will be no trouble. In Placerville we sometimes have considerable trouble with robber bees, but higher in the mountains bees rarely if ever rob. I see your hives are the Harbison style. Do you practice artificial swarming, or do you allow your bees to swarm naturally?"

"No; I divide all my bees. I divide them once and then try to keep down all natural swarming afterward. I tell you there is considerable in knowing the right time to divide your bees. I wait until the hive is overflowing with brood and bees and then divide. Some bee-keepers divide too early in the spring, which I think puts them back too much and takes them too long to get started again. I want all my colonies strong, every one of them."

"But don't your bees still persist in swarming after being divided?" I asked.

"No; after being divided once, I give them plenty of room, and they generally settle down to business, and very few of them ever swarm.

Runaway swarms have a hard time in seeking a suitable habitation in a country like this, where there are so few hollow trees; they will go in old buildings, barns, chimneys, almost in any place where there is not much noise; sometimes they build out in the tules, but are generally swept away by the high water in the winter-time."

"I see you have quite a lot of Harbison section boxes on hand. Do you like that style?"

"No; after they are all used up, I am never going to use that style again. The one-pound section sells the best and is the best, all things considered."

"You do not use a regular section case, do you?"

"No; you see my sections are clamped together in this style;" and he showed me seven one-pound sections clamped together by four very thin strips; one at each corner. "You see," he continued, "I can put 21 one-pound sections on a Harbison hive, and by having sections clamped this way, it facilitates handling when taking the bees out of the sections, and when packing honey for shipment; the box I use for shipping honey holds 63 one-pound sections. Do you ever have much trouble in taking the bees out of the sections?"

"No; the style of hive I use, I can take off a great many sections and bring but very few bees in the house."

"You do not use the Harbison hive?"

"No, I use the regular movable frame hive, while yours is somewhat of a fixed frame. I should think the Harbison hive would be a splendid hive to move bees in."

"Yes, it is; you see the frames are all set at fixed distances, and it is simply no trouble at all to move bees in that style hive."

"Yes, I must say that it is one of the best hives for moving bees that I have ever seen; but that style of entrance is not Harbison's invention, is it?"

"No, that is my own; it is no trick at all to close up a hive this way; Harbison's style of entrance was too unhandy."

Mr. Warner's invention consisted in having an entrance cut in the bottom board, to within an inch of the end of the hive; he did not have that triangular-shaped opening by the entrance of the hive which is characteristic of the ordinary Harbison hive; but instead, the front part of the hive was a straight piece of board clear to the entrance; he had a strip of board cut, so that it would just fit and close the entrance perfectly tight; this board rested at one end of the entrance, and was held in place by a screw driven in full length, which allowed the strip to be moved up or down at pleasure; another screw was put in the other end, but only driven in part way, so that after the hive was closed the strip could be securely fastened.

The Harbison hive allows considerable ventilation, and I should think large colonies could be moved quite a distance in ordinary weather.

I shall have more to say of this interesting visit in my next letter. S. L. WATKINS.

Grizzly Flats, Cal

FORESTRY.

Reports on the Sequoias.

WASHINGTON, Nov. 19.—Andrew Caldwell, the Special Land Office Agent, who was sent from the Visalia Land Office, has filed his report with the Land Office on the mammoth trees of California. He finds that the Land Office plats on the subject of mammoth trees are not always correct in locating the sequoias, but by interviewing old settlers, miners, mountaineers and local surveyors, he secured information which greatly aided him in his work. The greatest body of sequoias, he says, are to be found in Townships 15 and 16, Range 29 east, and Townships 15 and 16, Range 30 east, Mount Diablo meridian.

He says: "The Kaweah Co-operative Colony Company are making squatter claims on much of this section, and unless it is stopped there is danger of their making entries of all the desirable lands upon which the great trees are standing. It would be an irreparable loss if this one large and perfect body of sequoia giganteas should fall into private hands and be cut down or otherwise destroyed simply to gratify and possibly enrich the leaders of this body of misguided enthusiasts." A sawmill in the vicinity, he says, is creating much havoc with the forests thereabout.

A newspaper giving a short paragraph about the discovery of a group of trees, some of which were over 600 feet high, said to have been discovered in Pierce county, Wash., caused Commissioner Graff to detail Special Agent Mosier to investigate the story. He went to the locality named and found the author of the newspaper story, who said that the trees were in a remote canyon in the southeast corner of Pierce county. Some of the trees, he said, were 400 feet high and many of them were 13 feet in diameter. Deep snow prevented Agent Mosier from penetrating this mountain region, which has never been explored by white men.

It is hoped by the Department that some means may be devised by which samples of these trees may be shipped to the World's Fair at Chicago. Of course their transportation by rail would be out of the question, and the only other way would be to take them by ocean around the Horn and up through St. Lawrence river and the Great Lakes or else up the Mississippi river to Rockford, Ill., and thence to Chicago over the prairie country.

THE FIELD.

California Weeds.

Mr. Thomas Magee, a city man with rural interests and proclivities, recently wrote for the *Evening Bulletin* in an interesting way upon the weeds most common in this State according to his observation, and we quote as follows:

Only the most notorious weed freebooters will be mentioned, which, like the poor, we have always with us in nearly all the lower valleys of the State, but especially in our bay counties. They are on all rail, county and private roads. They have squatted on and preempted a large share of every hill, valley, bank and ditch. Rich or poor land seems, in one sense, alike to them. They pay no rent, yield not a cent from their crops, and the more luxuriant their yield the poorer they make the man who owns or leases and farms the land which is cursed by their unsightly presence, and in some cases made offensive by their disagreeable odor. These best-known weeds are mustard, dog fennel, dock and sorrel, tar-weed, skunk-weed, pig-weed, four thistles (California, Spanish, Scotch and milk thistle), knot grass and morning-glory. Of these, one of the most land-usurping and plentiful is the dog fennel or fetid camomile. The rays of its flowers are white and the disks yellow. Although the flowers are, of course, borne on the main stems, they do not all appear there, and, therefore, cannot be completely extirpated but by the hoe, plowing or hand-pulling. Cutting by the scythe or mower fails to reach the lateral spread of the stalks, or to get at the flowers close to the ground. This weed is everywhere and attains its most luxuriant growth close to the fences where the hoe or hand-pulling only can reach it. In Moraga valley and other portions of Contra Costa county, and in the Alameda hills, it grows so rank in hay and grain fields and emits such an acrid dust when thrashed in the latter that men have to use a large wet sponge over their nostrils, which is tied around the head to keep the dust out. This dust burns the eyes like pepper, produces choking sensations in the throat and is most irritating to the nostrils.

A Costly Importation.

There is more or less fennel and other weeds and their seed in all bay county hay and grain. Professor Hilgard tells me that dog fennel first appeared in California about eight years ago. It came in a hay-packed crate of crockery. Whether this hay came from the East or Europe Prof. Hilgard could not say. It was dropped somewhere on Oakland point. The dog fennel, thus introduced in this State, spread slowly on level ground, but when it reached the Alameda hills the plant spread, the professor says, like wildfire. That importation, it may be safely said, was the most expensive for farmers that ever reached the State. Any one who carelessly or ignorantly throws hay on the ground to cattle is sure the following spring to find a luxuriant crop of dog fennel or mustard there, if plowing meanwhile and the sowing of a good crop do not at least partially check the growth of the weeds. We say partially, for about two weeks after the good crop is cut, fennel, or a fragrant species of tar-weed, called by some pepper weed, will be found appearing as a second crop. This species of tar-weed, if in grain or hay fields, does little harm, as it never appears until the good crop is cut, and when plowing-time comes it is plowed under. It should be weeded out of pastures that are not plowed.

Tar and Milkheads.

Bad as dog fennel is, it is grateful to the eye and nose compared to tarweed. Except as to odor, the word "nasty" cannot be applied to dog fennel, but no other word can describe tarweed justly. As an unclean agricultural pest it takes high rank. It blackens and leaves ineradicable greasy stains on the hands and clothing that touch it. It greases and blackens the muzzles and limbs of animals that are compelled to graze where this weed is growing. Tarweed is so dirty and sticky to the touch, so shabby in its colors to the eye, and in every way so offensive, that a redeeming feature, in the farmers' eyes at least, cannot be claimed for it; yet all of the tarweeds are charming plants, and their flowers are very beautiful. There are some 12 species of tarweed; the worst, because the largest and most greasy, is the *Madia Sativa*. It is cultivated in France as an oil-yielding plant.

Milkweed, more properly milk thistle (*sonchus oleraceus*), is too well known to need description. Cows and turkeys are fond of it. It is particularly plentiful on moist ground. Because of the excessive rains of last winter milk thistle attained a more luxuriant and extensive growth last spring than in any year of the past ten. Its leaves are of a white and shabby green, veined with dull maroon colors. When this plant withers its seed, leaves and stalks suggest nothing but plant rags and shabbiness.

The Thistle.

Animals will eat California thistles when they are green. The real name is Napa thistle or *Tocalote*. This thistle grows from a tough, thick and sticky stalk to a hight of one to two feet. Its stems put forth many branches, of a shabby green color, which are harsh and sticky. When growing it is tolerable to the eye, but in the fall when withered and in entire possession of a field, it is suggestive of utter land neglect, plant-rustiness and farm ruin. There are other weeds far more offensive than this thistle, but there are none that attain to greater ultimate and utter plant-poverty and meanness to the eye.

Besides the California thistle, the Scotch thistle lifts on high its tall stalks, crowned with flowers of purple. With its large pale-green leaves, veined and streaked with clean white, it is not an unsightly looking plant, even if it warns off touch and intrusion by its rigid and prickly armament. The Scotch thistle is making rapid headway toward monopoly of the land in many places, especially in Marin county. Marin is now largely a county of Scotch thistle crops, and is likely to become almost wholly so, at least in its pastures, if severe measures for its extinction are not soon resorted to. This thistle has one saving feature—cattle will eat it when other feed is short. This thistle is not so offensive to the eye as the other weeds enumerated, although when shriveled into leaf rags and utterly dried out of verdure and moisture, it is anything but an attractive feature, or one telling of pasture vigilance or land cleanliness.

There is no Canada thistle in California. It appeared once in Butte county, near Chico, some ten years ago. Owing to Gen. Bidwell's determined efforts it was stamped out. The State is under heavy obligations to the general for the eradication of this plague.

Knot Grass an Outlaw.

Knot grass (*polygonum aviculare*) now covers the side paths of all roadways and the roads themselves out to where hoofs of horses and wheels of vehicles keep down all vegetation. It does not grow upright, but laterally from a wiry, deeply rooted central stem; its decumbent stems spread out in all directions. It belongs to the buckwheat family and is not a bad weed. Cattle, in lieu of anything better, will eat it. It clings close to the ground and forms a rough carpet of dirty green. It is improperly called pigweed, because hogs are fond of it.

Bad as all of our other weeds are, the worst of them are beautiful in color and grateful in odor compared to skunkweed (*gilia squarrosa*). It grows to a hight of four to nine inches. It is composed nearly wholly of spines or burrs. It is wholly given over to disgrace in color and general appearance, and, to add the last element of degradation, its odor suggests the presence of a whole colony of the unclean animals after which it is so appropriately named. Where it is growing, no animal will feed, even when good pasture is found near it. The most enthusiastic botanist would find it difficult to say a good word for skunkweed or to frame an apology for Nature in making it. The best that can be said for skunkweed is that it is scarce. Strange to say, this outlaw in odor, and worse than tramp in stubby spines and raggedness of appearance, is related to some of our most beautiful spring flowers. Sheep will eat almost all other weeds, but even sheep draw the line at skunkweed.

The Spanish Thistle.

The Spanish thistle, the spiny cockle-burr (*xanthrum spinosum*), is armed with slender, very sharp and needle-like spines of great length. The long rowels of a Spanish spur must have borrowed their length at least from the Spanish thistle. In heavy soil it clings to the ground, though occasionally found in clumps three feet in hight. The long, sharp needles form perfect *chevaux-de-frise* against all intrusion of touch or passage. This weed is a great pest to both cattle and horses. The thistle needles—and they are needles in both length and sharpness—enter their muzzles and legs and are greatly dreaded for that reason. This thistle takes the first premium as a weed nuisance, with no redeeming feature, either of shape or color. Every biped curses it, and if cattle were gifted with speech, doubtless their first profit in utterance, like Caliban's, would be to curse, and curse the Spanish thistle. It came from Spain, and immigrated to California with the Mission fathers.

The *large* milk thistle, with its acanthus-like succulent leaves, is easily kept under, and is eaten by cattle. It is not, therefore, a very troublesome, though a very thickly growing weed nuisance where it has a foothold.

Mustard Weeds.

The tall and very graceful mustard plant, with waving clusters of sulphur-yellow flowers, was remarkably abundant this year in the early spring, especially on the Oakland side of the bay, between Fruitvale and San Jose. This plant in that region last spring usurped one-eighth of many grain-fields. It was so generally and thickly spread in Alameda county that few attempts were made to pull it. This can only be done by hand, and farmers, especially lessee farmers, too often do not attempt the tedious task. This variety of mustard adds grace of form and wealth of yellow color to the landscape. There are three species of mustard. One of them, the rape-seed plant (*brassica rapa*), is believed by botanists to be the progenitor of the cabbage and cauliflower, which are of one family. One species of mustard is as shabby in color, shape and general appearance as the first described is graceful and beautiful. Like the large dock, it shows a wiry candelabra-like spread of faded green color. The stalks are quite as hard to the hand as wire, too. And this, by the way, is a striking characteristic of weeds. They nearly all have extremely hard stalks, are harsh and rough to the touch and unpleasant to the eye. Indeed, the weeds which have most afflicted the farmer proclaim themselves to be such at once to the sense of touch and sight, while the odor of some of them is offensive likewise.

The Morning-Glory.

Where the seeds of weeds come from, or how long they may remain in the ground before germinating, is sometimes a mystery. In San Joaquin county, not long since, a bank, or levee, ten feet in hight was thrown up by the excavation of a ditch of equal depth, adjoining it. The following spring the top of the bank, which, of course, came from the bottom of the adjoining ditch, was covered by a rich growth of mustard. In some portions of our bay counties, but especially in Alameda, weeds, like mustard, dog fennel, California thistle, and, above all, morning-glory, threaten to take entire possession of the land. No one looking at morning-glory, and ignorant of its nature and ravages, would dream of its being anything but a beautiful and desirable floral addition to our fields. The fact, however, is that its presence is a dire affliction, and its eradication in some districts, where it has been allowed to obtain a strong foothold, is thought by many to be almost impossible. It belongs to the convolvulus family. Innocent and beautiful in appearance, and slender, almost thread-like, in its stem, the morning-glory is, nevertheless, a strangler, and a most powerful one, of other plant life. It can destroy them all and take entire possession of the land. Morning-glory in grain-fields climbs and entwines the stalks, and practically kills the plant by preventing the heads from filling out. From each joint of its long, creeping root-stocks a new plant may be developed. It is a remarkably rapid grower. Sowing of salt on some land in the vicinity of San Leandro was lately resorted to as a *dernier resort* to extirpate morning-glory, which had there displayed a vitality and power to conquer all other plant life that was as marvelous as it was disastrous. Sowing with salt means the disuse of the land for two or more years. Professor Hilgard informs me that morning-glory can be extirpated by steadily cutting off the tops as they appear for one full season. In addition to these, the most abundant and best-known weed plagues, there are the true pig-weed (*amarantus retroflexus*), the white pig-weed (*amarantus euxolus*), lamb's quarter (*wenopodium album*), tall knot-weed (*polygonum Pennsylvanium*), several docks (*rumex*), good Henry (*Chenopodium bonus Henricus*), but they cannot here be described, for the writer knows nothing of their habits, except pig-weed, which has the largest spread of all our weeds.

Weed-growing, shallow plowing, dirty and poor seed sowing and no crop rotation or land fertilizing will keep a farmer poor anywhere. The difference in cost between the poorest and the fullest and the plumpest seed is very little, but if the former could be purchased at half the cost of the latter, it still should be rejected. Sow only the very best seed if you would have a full and therefore heavy crop. In farming, as in morals, the gospel is: "Whatsoever a man soweth, *that* shall he also reap."

Sowing Foul Seed.

Foul-seed sowing exceeds all other causes of the widespread existence of weeds. No one should ever sow seed nowadays of either wheat, oats or barley without having it cleaned. It costs $1.50 to $2.50 a ton to do this, or the farmer can do it himself with a hand-cleaner. But if the cleansing of the seed cost $10 a ton, it should be done. One of the lessees of a large island on the Sacramento river, himself a dealer in seeds and produce, says no seed should ever be sown without cleaning. He says to neglect this is to lose $10 to save say 15 cents. The ounce of prevention here is worth not a pound, but almost a ton of cure. With weeds, too, possession is not nine but ninety and nine points of the law. The greater richness of our land here, and our climatic wealth in superabundant sunshine (and this is a subject I have never seen treated), cannot keep poverty from the door of those who neglect nearly every maxim of sound agriculture. Hand-pulling of weeds is the best mode of disposing of them. That system of weeding brings up root and stem; the hoe is the next best, and where neither can be resorted to, the mowing machine, about the middle of July, will get away with most of the dog fennel in pastures; but the mower will by no means make thorough work of it. Horses or cattle will not touch either dog fennel or tar-weed unless they are starving, but sheep will eat both. The sheep, of course, do not prefer either to good pasturage, for they will let both alone in a field where even knot-grass is to be had.

If it were possible to turn sheep all over the counties of Alameda and Contra Costa after the grain and hay crops are gathered, they would do much toward exterminating many weeds. Sheep can clear land of all weeds except morning-glory, dock and sorrel. These two last must be rooted out. Whether hand-pulled, hoed out or cut by a mower, when dried, all of these weeds should be most carefully burned. Most of the weeds named are composite plants—that is, plants with compound flowers—perfect plant seed-mills, in short. These weeds, therefore, are in every way fitted to maintain a roothold in all land and to increase and multiply at a fearfully rapid rate. Incessant vigilance and warfare are alone the price of liberty from their ravages. This warfare is now but feebly maintained. Its vigor must be increased, for the land must be saved for a cleaner and much more profitable agriculture.

Patrons of Husbandry.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

National Grange Notes.

Dear Brother:—The 24th annual session of the National Grange closed at 10:30 P. M., Wednesday, Nov. 19, 1890. The session lasted eight days. It is claimed by those who have attended many sessions that more good work was done at Atlanta than has been done for many years at any one session. Certain it is that the body was at work nearly all of the time. We had three sessions per day, and then the committee work was an extra. Some of the discussions were hot and heavy, yet during the whole session there was not one personality, not one accusation of unfairness, and no acrimony or ill-feeling. The debates would be a credit to any parliamentary body. Though there were disagreements as to methods there was no disagreement as to the main issue, viz.: the protection and elevation of the Farmers of America, and all agree that the Grange is the organization through which this relief must eventually come. Other organizations, more or less of a political nature, and which have a membership of a very peculiar combination, may, for a time, ride into power. And yet it is charged that politicians now have a finger on some if not all of these organizations. During the U. S. Senatorial contest in Georgia, there was a most bitter and determined fight between a farmers' organization and the combined opposition. The opposition had in its ranks some of the best farmers of Georgia, who said they could not affiliate with a secret political organization.

That the Grange is growing in strength and influence is very patent from the reports of State Master. Nearly every State Master predicts a bigger gain in 1891 than for any year in the past decade.

The ritual for juvenile Granges was adopted, and the manuscript is now in the hands of the printer. By its provisions for the organization of juvenile Granges, the National Grange provides that the juveniles must be under the protection of a subordinate Grange. Children of the farm, *over* 8 and *under* 14 years of age are eligible.

Pomona Granges asked for a separate annual word, but, as at the last session, the request was not granted.

The report of the Committee on Agriculture, written and submitted by Bro. Page of Missouri, was an able paper. The same can be said of the report of the Committee on Education, Bro. Bowen of Connecticut, Chairman.

Bro. Hale, who is now in California, sent a very pleasing letter from the "Sunset Land," which was enjoyed by all the members of the National Grange.

The constitutional amendment, as submitted by the State Grange of California and urged by "yours sincerely," was adopted and will now be at once submitted to the various State Granges for adoption or rejection.

The A. W. will soon be in California. You and your readers may begin to guess what it is. In the meantime I trust Secretaries will be very prompt in sending their December report and the quarterly dues to you, so that they may become early in the new year possessed of the new annual word.

Am sight-seeing for a few days on my return trip, but expect to be "home" by the 10th of December.

Have seen the great iron works at Birmingham and at Bessemer, Alabama; also visited Fort Walker, where Gen. Sherman and his forces had such a "warm reception" when attacking Atlanta. Saw the Government monument erected on the exact spot where Gen. McPherson was shot.

Am getting a few points at Memphis, the "great cotton center" of this portion of the Union. From here I go to Jackson, Miss., and then to the famous Vicksburg, where I expect to get some valuable information.

Before closing, I must not forget to say that Bro. and Sister Kimbrough of the Georgia State Grange did all in their power to make our stay in Atlanta pleasant, and they succeeded to the fullest extent. The sunset admonishes 'tis time to quit. More anon. E W. D.

Memphis, Tenn., Nov. 24, 1890.

Pescadero and Grange.

Editors Press:—At a special meeting of Pescadero Grange held on Nov. 29, the first and second degrees were conferred, and it was decided to meet at 11 A. M. on the first Saturday in December, and confer the third and fourth degrees on a class of five and have a Harvest Feast, and elect officers for the ensuing year, in the afternoon.

The weather is fine; if it continues so one more week, Pescadero Grange will be in fine condition for the new year.

Some of the farmers in this section are getting anxious for rain, as feed for stock is getting scarce with them. The hay crop was not as abundant as usual, and those who do not have a surplus in good years are sure to be short in poor years. In this favored country men are liable to depend upon the climate and fail in their calculations. The light rain that came so gently laid the dust, brightened the foliage of evergreens and made the air delicious.

Dec. 1, 1890. I. C. Steele

Connecticut's Past Master's Talk to All Farmers.

Tulare Grange Meeting—What Past Master Hale Had to Say.

On Thursday, Nov. 20th, Bro. J. H. Hale of Conn., in company with C. H. Shinn of the *Overland Monthly*, and inspector of experimental stations in California, met with Tulare Grange in open meeting in Goldman's hall, at 10:30 A. M. After music by the choir, the chairman, Bro. A. P. Merritt, introduced Bro. J. H. Hale to the meeting.

The Tulare *Register* reports: Bro. Hale is a very good sample of a shrewd Yankee farmer of the better sort who says many homely things in a very straightforward manner. He said if anything is to benefit the farmer it must come by his own exertions and cease looking for outside assistance. He would not say that farmers were ignorant; they were as brainy as any other class, nevertheless, farmers did not know their business as they ought to, did not know it as well as the merchant and manufactnrer knew theirs and of whom they were envious. In every other business but farming it was deemed necessary to know expenses and gains in detail and govern accordingly in order to be successful. That farmers could live at all under their present slipshod, haphazard style of business proved farming to be a profitable occupation if it were reduced to a system. Farmers had lately been talked to in a very misleading manner, to rise in their power and glory and take possession of the ballot-box. This was wrong. Class legislation and class representation was as wrong when that class was a farmer as when it was a lawyer. It would be better for the farmer to better understand how to run his own business before venturing to run the business of the State. He should learn the value of details of everything on his farm, give systematic attention to everything done, and cited as an illustration the Standard Oil Co. of Cleveland, Ohio—not that he loved trusts, but that he loved their systematic prevention of leakages. By allowing nothing to go to waste and economizing in every thing they could sell oil cheaper than any small institution could. He advocated judicious laziness. Farmers work too much. Not that he would have them quit work and spend their time on the streets, but they

Should Think More.

Mind is more than muscle. A mule has four times the muscle of a man; use the muscle of the mule. Was in St. Joseph, Michigan, and saw asparagus for sale. One lot was roughly put up in boxes to be returned. Another in neat white boxes which did not cost half of the other, was put up neatly in bunches, tied by red tape in neat bows, tied no doubt by a woman, and brought 40 per cent more, cost less than the other. Curiosity led him to the home of the man and found him doing less hard work and showing more general prosperity than his average neighbors. Knew a milk dealer who kept an account with his cows, each having a separate account, and the cow that did not show a profit was sold to the farmer who did not keep books. He asked all the farmers present who kept farm accounts or even a cash account to raise their hands. Not a hand was raised.

Experiment Stations

Will be of great value to the systematic, scientific farmer. The Wisconsin experimental stations are doing more for the farmer than those of any other State, though they are perhaps not so scientific as some. Every kind of business to be successful must have associations, a Grange idea pervade the whole; in meeting together we learn and often, too, from the otherwise most foolish.

Oppression coming from taxes is but a trifle compared to the oppressions brought on the farmer by himself. For instance, the farmer should make a more comfortable home than anybody else, but does not have as comfortable a home as his city cousin. He suggested an idea to Tulare Grange which is in use in Connecticut Granges. Committees are appointed to visit the farms of the Patrons and report how they found them. This caused an emulation and stimulated the less energetic to further energy.

Farming Institutes.

Farmers in the East realizing that they could not do everything as well as deserved to be done, got their several States to appropriate certain moneys annually for this purpose. Wisconsin gives $12,000; New York, $16,000; Ohio, $5000; Pennsylvania, $10,000; and each of the New England States, $3000.

The method pursued is to get the successful in any branch of farming to prepare essays on their specialty. In Wisconsin, 160 meetings of two days' session are held annually. The experiment station is always represented at those meetings. Every dollar spent that way represents a return of $1000

Farmers must use their influence in the Legislature by letting it know what farmers want. The majority in legislative halls are honest, but they do not know the wants of the farmers and cannot know if farmers persist in staying at home and growling instead of informing their representatives. Tariff has in the past been largely against the farmer, but the present McKinley tariff is more fair to the farmer because he asked for it. In the East, sometimes the different Granges united and sent delegations to Washington with petitions numbering 300 or 400 brothers and sisters.

Chas. H. Shinn's Remarks.

Mr. Shinn took hold of the subject with a good deal of enthusiasm; had only lately taken hold of experimental station work, though he had long been an agricultural writer. Said that we had a State that would yet contain a population of 30,000,000. The day was coming when every home in the State would have its ornamental orange trees, date and palm trees. But to get them, many experiments would be required, and this the stations are doing, and it is their endeavor to get the press interested in what they are doing, and items of interest to farmers will be presented in their newspapers; and thus the endeavor would be to replace the Old World fruits with a better article grown at home, with better dates than grown in Asia Minor, better prunes than in France, and better raisins than in Spain, a higher grade of people, for the higher the grade of people the greater inclination existed for eating fruit instead of meat. The coming centuries would look back upon the present settlers as giants who brought order and culture out of chaos and desert plains. He traced the course of culture through the gold, cattle, wheat and fruit periods, and gave an enchanting picture of the future destiny of California.

He differed from Bro. Hale in thinking that we had not the same right to go into politics as other classes. Farmers were not making themselves felt as they ought to in public institutions. He cited the college institute, where were 700 young men and women, 60 of them women, and there were only 14 of the whole studying agriculture.

Tulare alone should send 100 young men to study agriculture where the course of study was free, with an endowment of $7,000,000. He advocated the scratching of tickets and

Voting Only for the Best Men,

And so mystify the politicians that they could never even guess the votes they were certain of. He recommended a simpler book-keeping to the various States, especially in this State. California has in her books 78 funds, Massachusetts only 4.

Future population will settle the problem of markets, and everything grown in the United States will be consumed there. Free trade must some time be the policy of the world, but our present policy is tariff for revenue only. The best kind of taxation is that which gets the most money from the people without their feeling it. The land question, too, will come to the surface and have to be settled. Land and interest are now what makes millionaires. Farmers will be compelled to study financial questions in banking and taxation. The hope of the United States to-day is in the farmer as a strong wall on which the tide of ignorant foreigners and other evils will strike and be held back.

Our lands will become more productive as we learn more. The time is coming when one acre will feed more than 160 acres do now. An instance was cited of land on Alameda creek, which was valued at $10 an acre 20 years ago, when an Italian rented it for vegetable purposes, for which he now pays $40 per acre annual rent and supports a good-sized family. If nut-bearing trees were planted on the highways of the United States, in a few years the yield would be enough to pay the national debt.

In the Afternoon,

Bro. Hale stated his mission here as the special agent of the eleventh census to gather statistics of tropic and semi tropic fruits and nuts, and then gave as an offset to California brag that in his little peach orchard in Connecticut of 35 acres he had sold $28,000 worth last year.

The meeting was rendered exceedingly interesting by questions and answers, in which Bros. Hale and Motheral took the principal part, and in which the shipping qualities of the various kinds of prunes, peaches and grapes were discussed. Bro. Motheral moved that a committee be appointed of three to inaugurate an Institute of the Farmers within a month and state the subject of discussion and place of meeting. The committee appointed were: N. W. Motheral, John Tuohy and J. W. Mackie. The committee met and decided the second Wednesday of December, in Goldman's hall, if attainable, at 10 A. M. Subject, "What, when and where should we plant for future profit?"

The National Grange.

The National Grange closed its session at Atlanta, Ga., on last Wednesday, the 26th ult. Resolutions were passed during the session favoring the Conger Lard bill, the Paddock Pure-Food bill, the Meat Inspection bill, favoring the opening of the markets of the world to American agriculture, deprecating socialism and Anarchism, favoring the Australian Ballot system, urging the necessity of closely watching the Interstate Commerce bill to prevent its repeal, urging the Government to foreclose its mortgage on the Pacific railroads, favoring the Government loaning money to people upon land and other good securities.

The session just closed was one of the most successful in the history of the Grange, in point of number of delegates present and the interest taken by them in the proceedings. The Government was represented for the first time officially in the person of Wm. Saunders, who was one of the founders of the National Grange and the first Master of the Order.

North Butte Grange.

Editors Press:—On November 29th, myself, wife and Sister Elliott of Merced Grange went up to Live Oak to participate in the work of the Grange. Arriving at the Grange hall at 10 o'clock, we found a number of Grangers had already assembled, among whom we found Bro. Coulter, with his ever-smiling face, extending the right hand of fellowship with the grip of a true Patron.

Shortly after we arrived, the Grange was called to order by Worthy Master Hedger. After they had gone through with the regular order of business until they came to conferring degrees, when the Worthy Master requested B. F. Frisbie to do the degree work, and Bro. Coulter to render the secret work of the Order. At the proper time, the Grange was closed in the fourth degree and opened in the third. When the L. A. S. and A. S. presented a class of 17 for the third degree, which your humble servant had the honor to confer, after being duly instructed in the secret work by Bro. Coulter. I also conferred the fourth degree, after which Bro. Coulter explained to the class, in his usual impressive manner, the unwritten work of the fourth degree. We were invited to take seats at the table for a Harvest Feast. Three long tables were loaded with all the good things that the Matrons of the Grange know just how to prepare. I will not try to describe it, for I could not if I wished. There were 125 Patrons seated at these tables. After the inner man had been satisfied, we returned to the Grange hall, where we were called to order by Worthy Master Hedger. After a song by the Grange, the Worthy Master introduced Bro. Coulter, P. M. S. G., who gave us one of his best speeches, to which the Grangers listened with a great deal of attention. It was one of his best efforts, and he did the Grangers a lot of good. After Bro. Coulter, came Bro. B. F. Walton of Yuba City Grange, who gave the Grange some good advice; then we listened to Bro. Ohleyer, Sr., who gave the Grange some good thoughts to think about. Bro. Ostrom followed, telling us what the Grangers ought to do during the coming winter in the halls of legislation at Sacramento. He suggested a great many good ideas, which, if the Grange would carry out, I think would be of benefit to the farmer.

Sister Elliott of Merced Grange spoke a few encouraging words for the Grange. Bro. Frisbie talked to the new class of Patrons, giving them good advice for their future use as Grangers, and how to make the Grange a success and how they can become good working members of the Grange.

The Grange was then closed in due form, and all returned to their several homes, feeling that the day had been well spent, and wishing North Butte Grange a grand success in their new hall.

The visiting brothers and sisters were as follows: Thirty from Yuba City Grange, ten from March Grange, eight from Gridley Grange and one from Merced Grange, all of whom felt as if they had received some good from their visit to North Butte Grange, and I think that North Butte Grange felt as if it had received a benefit from the visits from those other Grangers, and I think that such visits do a Grange a good deal of good. Fraternally yours,

B. F. Frisbie State Deputy.

To All Farmers.

To those farmers not already members of the Grange, we would say the present is an excellent time to turn a new leaf and join the Grange. Do not wait to be asked.

If you are willing to join the organization and work for the progress and welfare of farmers in obtaining rights and privileges that for one reason and another have not been secured to your class, make your willingness known to some member of the Grange by word or letter. If eligible, you are wanted inside the gates.

There are few farmers, their wives, or children 14 years of age or more, living on farms, but would be personally benefited and pleased with their enterprise in joining the Grange, even should they not find it convenient to always remain members.

Ninety-nine out of every 100 practical farmers who have joined the Grange will bear testimony in favor of the organization, whether they continue their membership or not.

Not less than 99 in 100, to say the least, who join are benefited thereby, for, if not satisfied with their material gains, they are certainly well rewarded by benefits worth more to their lives than silver or gold.

We have been led to write of this matter at this time by the near approach of the New Year and holiday season. We hope it may be the means of many a good farmer making himself, as well as his family, the best New Year's present of any season yet, namely, a membership in the noblest of farmers' organizations ever devised.

Tulare Farmers' Institute.

Wednesday, Dec. 10th, is set as the day for the farmers of Tulare and adjoining counties to meet for conference and co-operation in organizing a Farmers' Institute. Important questions will be discussed by local as well as able speakers from abroad.

Farmers, talk this matter over, notify your neighbors, and bring your families, enjoy the occasion, and build better for the future than you may have yet dreamed of.

Farmers' Alliance.

National Farmers' Alliance and Industrial Union.

President.....L. L. POLK, Washington, D. C.
Vice-President.....B. H. CLOVER, Cambridge, Kan.
Secretary.....J. H. TURNER, Washington, D. C.
Treasurer.....H. W. HICKMAN, Puxico, Mo.
Lecturer.....BEN TERRELL. Washington, D. C.
Executive Council—K. A. Patty, Macon, Miss.; Isaac McCracken, Ark.; Evan Jones, Dublin, Tex.
Executive Committee—C. W. McCune, Washington, D. C.; Alonzo Wardall, Huron, South Dakota; J. F. Tillman, Palmetto, Tenn.

Officers for 1890-91.

President.....MARION CANNON, Ventura
V. Pres't.....PETER ROTH, Black's Stat'n Yolo Co.
Secretary.....C. W. PEDLAR, Gilroy
Treasurer.....J. W. HINES, San Jose
Chaplain.....MRS. J. KENNEAR, Modesto
Lecturer.....J. L. GILBERT, Fresno
As't Lecturer.....P. K. WOOD, Los Angeles
Door-Keeper.....J. B. JOHNSON, San Jose
As't Door-Keeper.....MRS. M. A. TALCOTT, San Jose
Serg't-at-Arms.....C. W. MARTIN, Santa Barbara
State Bus. Man'g'r, J. M. MOORE, 297 Linden Ave., S. F.

Executive Com., JNO. S. DORE, Fresno; JESSE POUNDSTONE, Grand Island (Colusa Co.); JAS. MORGAN, Santa Barbara; E. M. WARDAL, Monrovia (Los Angeles Co.); DAVID REED, Monterey
NATIONAL DELEGATES—J. S. BARBEE, Santa Barbara, and D. C. VESTAL, San Jose. [Session of 1890 opens at Osceola, Fla., Dec. 2d.]

Organizing Deputies.

J. B. RIGDON for Alameda and San Benito counties.
KATE L. SQUIRE for Santa Cruz and Santa Clara counties.
F. P COOK for Merced and Stanislaus counties.
H. W. RHYNE for San Luis Obispo county.

National Farmers' Alliance.

First Meeting of the New Industrial Union in Florida.

OCALA (Fla.), Dec. 2.—The National Farmers' Alliance and Industrial Union met at noon to-day. President Polk delivered the annual address, which congratulated the Alliance on its achievements since the last meeting.

"Retrogression in American agriculture," he said, "means national decay, and powerful and promising as is this young giant republic, yet its power and glory touch not the degradation of the American farmer."

Both Parties Condemned.

The harm incident to the centralization of the money power and the upbuilding of monopolies was then pointed out, and both political parties were condemned for forcing and encouraging this condition. The President urged that additional organizers be sent at once into Oregon, Washington, Ohio, New York, New Jersey and other States.

Among the recommendations was one that an organization be formed, to be known as the National Legislature, composed of the National President and the Presidents of the State Alliances, to look closely after the legislative reforms demanded by the Alliance, both in the State Legislatures and in Congress.

In his remarks upon the proposed National Legislative Council, President Polk said an organization of this kind would wield a power which would enforce the respect of any legislative body to which it might appeal. Touching upon the political action of the Alliance, President Polk said:

Political But Not Partisan.

"While our organization is political, it cannot be partisan or sectional in its action. In support of this declaration we proudly point to our whole past record and to the recent popular elections."

Outlining the future financial policy of the Alliance, Polk said it would demand the restoration of silver to the rights and equalities of legal tender which gold possesses, the issue of Government currency direct to the people, equalization of taxes, prohibition of alien ownership of land, ownership and control of transportation lines by the Government, limit of the public revenues to the economic administration of the Government, graduated taxation of incomes, and the election of United States Senators by the direct vote of the people.

Cheering Old Enemies.

President Foulks of the South Dakota Alliance made a short address, speaking forcibly upon the breaking down of sectional lines. An old Union soldier from Indiana moved that all ex-soldiers in the hall who indorsed those sentiments rise. Forty or fifty stood up amid the wildest enthusiasm; then an ex-soldier from Wisconsin called upon all Union men to give three cheers for the old Confederates in the Alliance. They were given with a will, after which the Confederates returned the compliment in a manner that left no doubt as to the genuineness of their feeling.

The rest of the session will be secret.

The annual meeting of the National Colored Farmers' Alliance will be held to-morrow. The organization embraces 22 States and has a membership of over 1,000,000.

OLD SUBSCRIBERS.—We recognize the names of many of our old subscribers to the RURAL among the names of the officers and members of the Alliance, who no doubt will be pleased to have this Alliance department in their own farming paper.

Hanford (Tulare Co.) Alliance meets every Thursday night at their hall, W. Ogden Pres., H. Crane Secretary.

President Cannon Talks.

Marion Cannon, the newly elected President of the California State Alliance, in an interview says:

"The Alliance proposes to go into politics in California and the country at large, but in a certain sense only. Understand me, we have not formed and are not forming any new political party. We desire to, and shall, if possible, work through the medium of the party organizations already in existence. We will not put tickets of our own in the field excepting when such course is absolutely necessary. We mean to and will control legislation. We propose to do this by indorsing our friends for office and by allowing those who are not our friends to stay at home; that is what the Alliance did in Kansas and other Eastern States.

"When men are nominated for Congress by the several parties, we shall make it our business to find out exactly how those nominees stand upon matters of legislation in which we are interested. If neither nominee can or will give us satisfaction in this regard, our district conventions will then put our own nominees in the field. We do not, however, desire to do this if it can be avoided. We will hold district conventions in the several districts. We are organized to secure certain legislation, and we will not give up until we shall have secured control of Congress."

In the Presidential Campaign.

"And will you take part in the Presidential election?"

"Most emphatically, yes. We have no candidate, but we will play a part, and a most important one. Whoever is not our friend can remain at home. But, after all, Congress is the most important thing. All the abuses to which we have been subjected—and I believe that you will admit that we have been an abused class, without going into our declaration of principles already printed in the *Examiner*—have originated in Congress, and we must begin there to rectify them."

"You will not attempt to take part in local political affairs?"

"No. State and local officers are executive. They must enforce the laws as they find them, from the Governor down."

"The Alliance is an exclusively national organization, then?"

"More national than anything else. It will make itself felt in the election of a Legislature to choose the next United States Senator from California in 1893. You can depend upon it making itself felt there—not only in California but all over the United States. Every man who goes to the United States Senate from the West in 1893 must go pledged to support our measures, as the legislative candidates will be pledged or they will stay at home. We will control the United States Senate and Congress in four years from now, I firmly believe, despite everything that the Republicans can do or say.

"At least ten of the new Senators from the West will be our friends, and that will give us the balance of power there. We should have held the balance in the lower house this time had not the Democratic victory been so sweeping. We may even yet hold it. A large number of the new members are Alliance men—I have not received all their names yet—and these will not go into any party caucus. That is true now and will always be true."

Measures, Not Men.

"And you have no candidate for the Presidency?"

"We have nothing to do with men. We are seeking measures, and as the first of these in four years the Government will own the Central and Union Pacific roads. We will take them for their debts."

"Do you believe, Mr. Cannon, that the farmers of the country can be held together with sufficient firmness long enough to accomplish the objects that they have set out to attain?"

"I do, most firmly. My experience at the State meeting convinced me that we are all right, so far as California is concerned, and we all know how matters have gone in the East."

"You say you have no choice for the Presidency?"

"I say it again and again. We will have at least two more State meetings before the next Presidential election, and there will be plenty of time to discuss that. But we shall look to the platforms, not the candidates, of the parties in that fight."

Railroads and Telegraphs.

"The Pacific railroads will be the first point of attack?"

"I do not say that. We want those roads and we also want the Government to control the telegraph lines. We wish these systems put under Boards of Control, who will be empowered to employ and discharge men, in fact, who will conduct their affairs in all things as the present Boards of Directors do."

"You are not afraid of the employments under these Boards of Control being made places for political hangers-on?"

"No; I do not think there is any great danger of that sort to be apprehended. Now, do not write too much of what I have told you. I do not wish to make any statement for publication further than has been made already in our platform."

State Alliance.

The following is in addition to the report of the session of the State Grange, held at San Jose, which was published in our last number:

On motion of Nixon of Yolo, it was decided to take an informal ballot instead of making the usual nominations.

The chair appointed Bros. Wood of Los Angeles and Witherell of Stanislaus as tellers, and the informal ballot was had, resulting as follows:

E. C. Tully of San Benito, 4; John Roth of Tulare, 2; Marion Cannon of Ventura, 17; D. C Vestal of Santa Clara, 2; J. L. Gilbert of Fresno, 4; Peter Roth of Yolo, 7; J. W. Hines of Santa Clara, 1; John S. Dore of Fresno, 2.

Marion Cannon, temporary chairman, declined, but the convention refused to accept, and on a ballot being had, Cannon received 37 votes; Peter Roth, 1; blank, 1; total, 39; and Marion Cannon was declared by Vice-Chairman Schilling duly elected as President of the State Farmers' Alliance and Industrial Union. Bro. Cannon returned thanks in a very impressive manner, showing a due appreciation of the honor conferred and of the duties and responsibilities of the office.

It is a matter of regret that his exact words cannot be given as a part of this record. The remainder of the officers were elected without peculiar incident, and when the list was completed it stood as follows:

[See Directory at the head of this department for list.]

Brief speeches were made accepting the various offices and expressing thanks for the honor conferred.

On motion, the order of business was suspended and the State Organizer, J. S. Barbee, proceeded to install the officers-elect, the remaining officer requiring no installation.

He called to his assistance James Morgan of Santa Barbara. The ceremony was performed in a very creditable manner and the officers-elect took their seats.

A rising vote of thanks was unanimously tendered Bro. Barbee for his untiring energy in pushing the work of organizing to completion.

Third Day—Satuday, Nov. 22.

The Alliance convened for its third day's work as per adjournment, and was opened in ritual form. Consideration of the report of the Committee on Constitution and By-laws resumed. Art. X of the by-laws was thoroughly discussed, amended in several particulars and adopted. Art. XI, Secs. 1 and 2 were adopted.

At this point the order of business was suspended and a unanimous vote of thanks was tendered the San Jose Grange for courtesies extended in vacating their hall for the benefit of the Alliance.

The order of business was again resumed and further by-laws adopted; but owing to want of time the matter was not classified by the committee into articles and sections. After due consideration and discussion it was decided to raise the initiation fee to $1 and the quarterly dues to 50 cents. The county dues to the State Alliance were fixed at $1.30. All dues payable quarterly in advance. That portion of the by-laws reported by the committee prohibiting the organization of Sub-Alliances within the corporate limits of any town or city, was, on a motion to strike out, thoroughly discussed and the whole matter laid on the table indefinitely. Los Angeles County Alliance paid in $1.65 dues to the National Alliance, Bear Valley Sub-Alliance of San Benito county, 55 cents, Monterey County Alliance, through David Reed, $3.70.

On motion, the Executive Committee were instructed to ascertain the amount of money necessary to defray the expenses of this convention, and report after recess. On motion, the Alliance adjourned until 1:30 P. M.

At 1:30 P. M. the Alliance resumed business, and the President announced the appointment of committees as follows:

On motion, all matters relating to the establishing of a State organ were referred to the Executive Committee.

A unanimous vote of thanks was tendered Bro. F. P. Cook, clerk of the Committee on Constitution and By-laws, for his efficient services on that committee.

We shall give a perfected copy of the Constitution and By-laws as soon as received.

State Agent.

J. M. Moore of Tulare expects to arrive in San Francisco by the last of this week. He expects to remain here, as this will be the headquarters of the State Agent.

Ballot Reform.

Last Sunday's *Examiner* concluded an editorial on the Farmers' Alliance and its work, with the following:

"The farmers do not wish to see their well-weighed votes swamped by the purchased ballots of the stuffers in the cities. The way to prevent such a misfortune is to secure the passage of a ballot reform law. Would it not be a good plan for the Alliance to make its influence felt this winter by notifying every member of the Legislature that a vote against the Australian system will be considered a disqualification for re-election in 1892?"

We wish to say for the benefit of the *Examiner* and other doubting Thomases that the Alliance has already taken hold of this matter by passing resolutions touching this very point, and it would be extremely proper for each Alliance, if possible, to personally interview their member of the Legislature and inform him of the fact that this great reform is demanded by the great mass of organized farmers and toilers of the State. If it is not possible to see your member personally, he should be written to, so that he will have the fact brought directly to his attention and that no dodging of the issue presented will be tolerated in any form.

Which is the Whichest?

EDITORS PRESS:—At the Fruit-growers' Convention at Santa Cruz, Senator L. W. Buck gave us to understand that the future of fruit-growing depended on increased railroad facilities.

I then rose and asked the Senator whether in view of this fact he did not consider it would be well to spend our national resources on these increased railroad facilities rather than on the needless war-vessels upon which the Secretary of the Navy proposes to disburse $1,500,000,000 during the next 13 years. The Senator gave a guarded reply, but the convention applauded the question.

Subsequently Mr. I. M. Benson of Clements asked to bring in a resolution something as follows:

That this convention is impressed with the fact that the success of the California fruit-growing industry depends largely on increased railroad facilities.

That, in view of this fact, this convention deems it would be wiser to expend our national resources on such reproductive public works as transcontinental railroads, rather than on such unproductive superfluities as ironclad vessels of war. The same skill, the same labor, the same material can be expended in either manner, usefully or uselessly.

Chairman Cooper would not permit Mr. Benson to put the resolution to the meeting, whereupon Mr. Benson uttered a stage whisper, "Well, we must wait till the Farmers' Alliance comes along!"

I would like, Messrs. Editors, to offer to the people of this continent the resolution of Mr. Benson, and through the medium of the RURAL put to them this question: Of these two methods of spending our national resources, "which is the whichest?"

The tax amounts to $120 for every family in the United States, and it is to my mind for a purpose utterly repugnant to American institutions and opposed to the dictates of common horse sense.

What thinks the Farmers' Alliance?

EDWARD BERWICK.

Carmel, Nov. 30, 1890.

[Will some Alliance discuss this question and report for the RURAL?—ED.]

Work in the Field.

EDITORS PRESS:—Wednesday and Thursday evenings of this week I gave lectures, by invitation, at Alliances in this county, and to-night and to-morrow night will give two more.

Wednesday night I found the schoolhouse in Pioneer district filled to overflowing, and my lecture to the Pioneer Alliance, No. 5, was heartily indorsed by a liberal contribution and applause, as well as the addition of ten new names to the roll, making their list of members one of the largest in the vicinity of San Jose. The intelligent criticism by various members upon the important questions of the hour give great hope of future progress.

Thursday being Thanksgiving, Mr. Rigdon, another National organizer, was invited to join me in addressing the Alliance at Meridian, where we found another flourishing Alliance of intelligent, earnest workers in the cause of human progress. Most of the large audience were already members of the Alliance, and at the close of the evening's entertainment, which was assisted very much by the Lecturer, Mr. Lovell, giving a fine reading of the poem "Bernardio del Carpio," and singing by the young people, we added to the list the name of every eligible person in the audience, not already a member of the Alliance, so you can see how encouraging the work has become.

MRS. KATE L. SQUIRE,
F. A. Lecturer and Organizer.

San Jose, Cal., Nov. 29, 1890.

Farmers' Alliance and Industrial Union Directory.

[This directory will be extended from time to time. Officers and members will please examine and write us of all omissions or corrections. All Secretaries are earnestly requested to forward the name of their Alliance and the officers thereof.]

Monterey County.

No.	Name.	Sec'y.	P. O. Address.
1	Vine and	F. G. Brun[illegible]	[illegible]
2	Eagles.....	Miss Hannah M. Cr[illegible]	[illegible]
3.	—Hames.....	M. D. Miller,	Bra[illegible]ley
4	Pleasant View.....	G. A. H[illegible]	[illegible]
5.	—Long Valley.....	Jerry Casey, Jr,	San Lucas
6	Oak.....	Olson & C[illegible]	San Lucas
7	Hope.....	Miss R. J. [illegible]	Jolon
8.	—Equity.....	W. P. Beauchamp,	Soledad
9	Santa Rita.....	Miss [illegible]	Santa Rita
10	Cloud.....	W. H. [illegible]	Metz
11	Peach Tree.....	Mr. Mary [illegible]	Peach Tree
12	Gloria.....	A. Norton,	Gonzales
13.	—Fair View.....	M. A. Moon,	Gonzales
15.	Melville.....	C. A. H[illegible]	Parkfield
16	Hesperia.....	Joseph B. Sayler,	Bryson
17.	—Pleyto.....	A. Volkert,	Pleyto
18	Vollerton.....	Guy Hopper,	Vollerton
19	Parkfield.....	Edwin Parker,	Parkfield
County Alliance.....		W. J. Smith,	San Lucas



Back Where They Used to Be.

Pap's got his patent right, and rich as all creation,
But where's the peace and comfort that we all had before?
Let's go a visitin' back to Griggsby Station—
Back where we used to be so happy and so pore!

The likes of us living here! It's just a mortal pity,
To see us in this great big house, with cyarpets on the stairs,
And the pump right in the kitchen, and the city! city! city—
And nothing but the city all around us everywheres!

Climb clean above the roof and look from the steeple,
And never see a robin, nor a beech or ellum tree!
And right here in ear-shot of at least a thousand people,
And none that neighbor with us or we want to go and see!

Let's go a visitin' back to Griggsby Station—
Back where the latch string's a hanging from the door,
And every neighbor 'round the place is dear as a relation—
Back where we used to be so happy and so pore!

I want to see the Wiggenses—the whole kit and bilin
A drivin' by from Shallow Ford, to stay the Sunday through,
I want to see 'em hitchin' at their son-in-law's and pilin'
Out there at Lizzy Ellen's like they used to do.

I want to see the piece quilts that Jones' girl is makin'
And I want to pester Laury about their freckled hired hand,
And joke about the widower she come purt' nigh a takin',
Till her pap got his pension 'lowed in time to save his land.

Let's go a visitin' back to Griggsby station—
Back where's nothin' aggervatin' any more,
She's away safe in the wood around the old location—
Back where we used to be so happy and so pore!

I want to see Merindy and help her with her sewin',
And hear her talk so lovin' of her man that's dead and gone,
And stand up with Emanuel to show me how he's growin',
And smile as I have saw her 'fore she put her mournin' on.

And I want to see the Samples on the old lower eighty,
Where John, our eldest boy, he was took and buried—for
His own sake and Katy's—and I want to cry with Katy,
As she reads all his letters over, writ from the war.

What's in all this grand life and high situation,
And nary pink nor hollyhock bloomin' at the door?
Let's go a visitin' back to Griggsby Station—
Back where we used to be so happy and so pore!

—*James Whitcomb Riley.*

One October Morning.

Flowers stood on the window-sills; all sorts of pretty knick-knacks and feminine appointments brightened up young Mrs. Clifton's morning-room, while over everything the soft autumn sunshine fell with enhancing touch.

The golden rays lingered longest in the chestnut braids which crowned the bride's shapely head, but they found no reflection in the face beneath; its beauty was clouded by a look of sorrowful perplexity. Elizabeth Clifton had been married just a month, and the first shadow had come over her happiness.

"I suppose it was some tiresome business that upset Henry so," she sighed, "for it was just after he had read his letters; it must have been the one he thrust into his pocket that had the bad news. But how completely his manner to me changed! I don't understand it. When I asked him if anything was the matter, he actually mumbled something I couldn't make out, and then the clock struck, and we heard the whistle of the train, that provoking train! it always comes at the wrong time. But the worst of all was his not kissing me good-by! To be sure, he had done so once when he first got up from the breakfast-table, thinking he wouldn't wait for the mail, and I know he was in a hurry when that whistle sounded, for it just gives him time to reach the station; but it wouldn't have taken a minute to say good-by again, and instead he rushed off without a word!"

By this time, the young wife, in spite of herself, was crying quietly. But she was a brave girl, and did not give way any more than she could help. After a little she decided to go out and take a walk. She would probably have time before her mother-in-law had risen, and the fresh air might do her good. No, she would not sit and mope any longer, so jumping up suddenly, Elizabeth carefully removed all traces of weeping and put on her garden hat. She was about to step toward the door when a knock sounded thereat.

Looking hastily in the mirror to see whether any tear stains were visible on her face, she opened the door as little as possible, that she might not be seen. Her mother-in-law's maid stood in the hall.

"Mrs. Clifton is ready to see you, ma'am, whenever you wish to come," the girl said respectfully.

"Very well, Jane; I will be there in a few moments," and giving another peep into the glass to be sure that her eyes were not red, Elizabeth went to make her regular morning visit to the invalid.

The young couple had spent the first week of their honeymoon in a pleasant trip to Niagara, returning thence to pay a visit to the elder Mrs. Clifton in her pretty country home in one of the picturesque valleys of Pennsylvania.

The bride had never seen her husband's mother, and had rather dreaded the ordeal of making her acquaintance. She found her very charming, but was haunted by a secret fear that her admiration was not returned; she fancied that she was undergoing a critical scrutiny from the fond parent whose only child she had married. This morning Elizabeth particularly shrank from the interview, for she feared that her face was a telltale one. However, the visit must be gone through with; so, summoning all her courage, she boldly knocked at the door of her mother-in-law's sitting-room and was at once admitted.

"Good morning, my dear," said the elder Mrs. Clifton, in a low, sweet voice, and the young lady knelt to receive her usual kiss.

The invalid pressed her pale thin lips against Elizabeth's soft rosy ones, and then, laying her hand gently on her daughter-in-law's shoulder, looked mildly but searchingly into the upturned face.

"How do you feel this morning, mother?" asked Elizabeth, gently.

"Very well, thank you, for me; but how are you, my child? Didn't you sleep well last night? Your eyes look dull and heavy."

"I have a slight headache," answered the young wife, hoping thus to account for her clouded face. "How did you think Henry seemed when he stopped in to say good morning and good-by to you before he came in to breakfast?" she continued, trying to speak carelessly.

"He looked very well—splendid," was the reply. "Didn't you think so too?"

"Oh, yes, certainly," said Elizabeth hastily. "It is too bad for you that he had to rush off to attend to that bothersome business of mine, leaving you alone with nobody but a stupid old woman to keep you company; but never mind, it won't take him more than a day or two, and the matter was very important—it involved considerable money. Besides," with a little laugh, "the honeymoon ended yesterday; you must come down out of paradise."

"Don't trouble about that, I am not in the least lonely," answered Elizabeth; "and, as you say, the honeymoon is over."

But her heart sank within her at the ominous words. Was this what Henry's manner that morning meant?

"My dear," said the elder lady, closing the book which had been lying open on her lap and putting it on a wicker chair that stood close by, "I was only joking. I hope and pray that Henry's and your honeymoon will never be over. As long as you love each other, you have a glimpse of paradise."

There was silence for a few moments. Elizabeth seated herself in a rocking-chair, took off her hat, which she had forgotten in her pre-occupation, and began talking about indifferent matters.

At last, in obedience to her mother-in-law's suggestion, and thankful to be released, young Mrs. Clifton started out for a walk. It would be better than staying in the house, trying to sew or read, and there was a shady wood near by, where she could be undisturbed. It opened on the high road, but a fence kept out all intruders. As Elizabeth neared her destination, she noticed that a tall tree outside the wood was bent and nearly uprooted, while the branches were almost denuded of the leaves which only two days before had glowed in all the red and gold glory of autumn. Then she remembered that it had stormed the previous day—one of those violent storms which sometimes come early and rob the forests of their foliage. With a shiver, Elizabeth wondered if a chill had come over everything—was the winter indeed come?

Left alone in her quiet room, the elder Mrs. Clifton leaned back in her armchair looking grave.

"Poor child! I wonder if they have had their first quarrel? Well, I suppose it must come some time. They will be all right by evening. I am sorry Henry was obliged to be gone all day; I wish I could help them," and she ended her soliloquy with a sorrowful shake of the head.

In the meanwhile, Elizabeth did not get a chance to enter the wood, for, as she stopped by the bent tree, she glanced up the road and saw in the distance a party of ladies and gentlemen whom she fancied she recognized. They evidently knew her, for they waved their handkerchiefs, shouting and gesticulating frantically. As they came nearer, she saw that they were the young people belonging to several families in the neighborhood, all of whom had called on her and at whose houses she had visited.

Elizabeth stood her ground.

"There is no use in retreating into the wood," she told herself; "they would only follow and hunt me up. I must submit."

She did so very unwillingly, however, for she did not feel in the least like seeing strangers. She consoled herself by thinking that they probably had some object in view and would soon go on their way. She was disappointed in this, for no sooner had greetings been exchanged than the foremost of the party—Miss Earle, a young lady to whom Elizabeth had taken quite a fancy and who was a favorite of Mrs. Clifton's—cried out:

"How lucky! We were just coming to the house after you. We had planned a picnic for to-day, but yesterday's storm has made the woods too damp, so we have decided to take a straw-ride instead. You must come—it is great fun—and your husband too; isn't he at home?"

"Mr. Clifton was called away to-day on business," answered Elizabeth, "and I'm afraid I can't leave mother for any length of time."

But the party would not accept this excuse. Mrs. Clifton the elder was used to being alone—they knew that—and she (young Mrs. Clifton) must be lonely with her husband away.

Protestations were useless; so, finally, seeing there was no way of escape, Elizabeth yielded gracefully, only stipulating that she must tell her mother-in-law where she was going. Two or three of the party wanted to go in her stead, but this she positively refused to allow. There was a farm a short distance up the road, where their conveyance awaited them, and Mrs. Clifton agreed to meet them there. Some of the people would have insisted on accompanying her; but, being possessed of quick intuition, and divining that the young bride was in no mood for company, Miss Earle dragged the whole party toward the meeting-place, leaving Elizabeth to hurry home alone.

"If they have had a tiff, she had better forget her misery in company, after she has had time to recover herself," was Miss Earle's wise reflection.

Young Mrs. Clifton informed her mother-in-law of the invitation, which she was of course urged to accept, said good-by, and went to her own room to make some changes in her toilet. She lingered over the process as long as possible, putting off the moment of joining the merry-makers until she felt she must go. Then she started out at a very laggard pace.

Hardly had Elizabeth entered her room, when her husband knocked at his mother's door.

"Why, Henry! you have got back very early," cried the invalid in surprise, when her son appeared in answer to her "Come in."

"Yes; Ormsby was away. I couldn't do anything. I shall have to go to-morrow," Mr. Clifton answered, as he stooped to kiss the face upturned to his. "If I hadn't known you expected me home this evening, I would have remained all night."

This total ignoring of his wife startled Mrs. Clifton, and one look into her son's stern face strengthened her fears.

"Poor babies! they must not really quarrel," she thought, and then she spoke.

"Henry, my dear boy," she said gently, "if you and Elizabeth have had a disagreement, find her at once and make it up. Don't let it go on, I beseech you."

"Mother, it is much worse than a disagreement. Has she said anything to you?" was the reply.

"Nothing, my son, and I do not wish to know; it is entirely between you two. I only beg you to do as I say."

There was silence for a moment or two, and then Henry asked gloomily:

"Where is Elizabeth?"

Mrs. Clifton explained her daughter-in-law's whereabouts, adding:

"If you go at once, Henry, you may be able to overtake her before she reaches the rest of the party." And she accompanied the words with a beseeching look.

An instant's hesitation, and with an abrupt good-by, the young man left the room, while his mother leaned back with an air of relief.

"It will surely all come right now," she told herself.

Young Mrs. Clifton was just leaving the wood to set out on the high road toward the farm, when she heard her name called in a voice that she recognized at once as her husband's, though the tone was new to her ears. She waited until he came up to where she stood. Then, in a very ceremonious manner, he accounted for his unexpected appearance. In a tone equally cold, Elizabeth informed him where she was going, pointing toward the farmhouse as she spoke.

Young Mr. Clifton had removed his hat and held it in his hand when addressing his wife; but a sudden cold gust of wind made him put it on again. After she had finished speaking, he said gravely:

"Elizabeth, I have something to say to you; will you give up this pleasure party if I make your excuses to them, and listen to me for a few minutes?"

The idea of giving up the pleasure party struck young Mrs. Clifton with a sense of bitter absurdity. For a moment a spirit of defiance possessed her, and the answer "No" trembled on her lip. In that short space of time, her life's happiness perhaps hung in the balance.

"I will wait here," Elizabeth said at last, and, lifting his hat very ceremoniously, her husband, with a formal "Thank you," walked rapidly up the road.

The minutes seemed like hours until he returned. Elizabeth stood motionless just where he had left her. He came quite close and looked keenly into her face.

"I have a letter here I would like you to read," he said, in horribly judicial tones, "but first let me explain how it came into my possession. If you will look at the address, you will notice that the word 'Mrs.' is written very much like 'Mr.'—the 's' is hardly noticeable. Jane gave it to me this morning with my mail. I hastily broke it open without even glancing at the outside, not being a woman, and—perhaps you can explain the rest."

Elizabeth received the extended envelope mechanically, looked at the direction, and then took out the inclosure—two sheets of closely written note-paper—looked at that and then up at her husband.

"I have not read it all," he said, in a very quiet tone.

"Perhaps if you had you would have seen it was not for me," his wife answered, just as quietly.

Elizabeth felt only a terrible anger—all other feelings seemed in abeyance. She looked at the letter again, while her husband watched her in dull amazement. What did this mean? Was it guilt or innocence?

Suddenly it flashed over her what her husband must have felt when he saw the words of endearment on the page—"My own darling"—must have stared at him the instant he unfolded the sheet.

"Henry," she began, lifting her clear eyes to his, "if you had shown me this before you went away—"

"I had not time," he hastily interrupted.

But she went on without heeding him: "It would have saved us both a very unhappy morning. I have been foolish, I knew that, and so I did not dare to tell you. Henry, that letter was intended for Cousin Kate Ashton. See, the signature is 'Edward St. Clair.' Don't you remember he was in love with her, but the family forbade an engagement—would not even permit a correspondence? In a moment of weakness, I said he might address his letters to me, and then I would re-inclose them to Kate. I have been sufficiently punished for my folly."

"Elizabeth, forgive me!" was all her husband could say, and for answer she smiled up at him through her tears.

Presently Henry told her how near he came to not showing her the letter.

"It was my dear mother who induced me to do it," he said, tenderly, and Elizabeth whispered:

"Let us go thank her; she need not know how foolish I have been."

"Dear, we will look the secret of our folly in our own bosoms," Henry answered, "and perhaps we have learned a lesson we shall never forget, this one October morning."—*Peterson's Magazine.*

Pertinent and Puzzling.

What parent or teacher has not been puzzled by the flow of questions from a boy, whose eagerness for knowledge keeps his tongue running when the weary one longs for its cessation? A writer in *Life* says:

I took my boy off for a sail on a Sound steamer a short time ago. Here is what he asked me in the course of the day:

"Do they call this a sound steamer because it makes a noise?"

"Is that water down there any wetter than the water in the Atlantic ocean?"

"What makes the water wet, anyhow?"

"How many men could be drowned in water as deep as that?"

"If a mamma fish couldn't get any worms in the water for the little fish, would she go ashore and dig for them?"

"Suppose a whale came along and sat for three days on an oyster, so that he couldn't open his shell, would it suffocate the oyster?"

"Doesn't the dampness ever give clams malaria?"

"Does it hurt to get drowned?"

"Is that big man with the gold buttons on his coat the papa of all those men who do whatever he tells them to?"

Chaff.

UNLIKE a horse, a man may be driven to drink, but not to water.

"MORE in sorrow than in anger"—the letter O.—*Binghamton Republican.*

FLATTERY pats a stupid young man on the head and he wags himself.—*N. O. Picayune.*

THERE is something fundamentally wrong about the man who never gets mad.—*Somerville Journal.*

CRAWFORD: Time's money, you know. Merritt: And yet I would sooner have a girl who has forty millions than one who has forty years.—*Chicago Light.*

SHE: It's such years since we met that perhaps you never heard of my marriage. He: No, indeed. Is it—er—recent enough for congratulations?—*Harper's Magazine for December.*

GIRLS ARE ALIKE EVERYWHERE.—Myrtle: Florence, is that Fred Dumley's handwriting? Florence: Yes, dear! I'm engaged to him, you know. Myrtle: Yes, I know it. I was engaged to him last summer. Florence: The dear boy! I wonder who will marry him eventually?—*London Punch.*

YOUNG FOLKS' COLUMN.

Barjonah's Bear Hunt.

[Written for the RURAL PRESS by MRS. M. E. B.]

Many years ago there lived in the little village of Hillsboro a youth who rejoiced under the rather egregious name of Barjonah Ichabod Whitefield, but was better known among his friends as Jonah, until one eventful day when his name became distorted into the quite appropriate one of Bear Jonah.

He was a tall, awkward boy of about 16, with fiery red hair, pale blue eyes, and was abundantly supplied with freckles and what his brother termed insupportable conceit. In fact, his marvelously high estimate of his own capabilities, and unerring judgment in all things, became so conspicuous a trait of his character as to overshadow many good qualities he possessed. Barjonah was very fond of hunting, and his highest ambition was to excel all his companions as a superior marksman.

About 30 miles from the village in which Barjonah resided was a mountainous region where his uncle, Dave Whitefield, owned a large cattle ranch, and as Barjonah was frequently invited to spend his vacation there with his cousin Fred, who was about a year his senior, he had many opportunities for indulging in his favorite pastime. He had already saved a number of deer, panther and fox hides, and triumphantly exhibited them to his young friends as proof of his prowess, while he would relate wonderful stories of his adventures, the all-important pronoun "I" taking so prominent a part in all his narratives as to cause the exchange of many knowing winks and sarcastic nods of the head among his listeners, unknown to himself.

One evening in June, Barjonah received a letter from his cousin Fred which threw him into the greatest excitement. In his letter, Fred had stated that two fine calves were missing from the pasture back of the barn, and that large bear tracks were found around a pond in the same inclosure where his father's cattle were pastured. The letter ended with an invitation to Barjonah and his particular friend, Joe Brady, to take a trip up in the mountains and lend their aid in hope of exterminating the bold thief and thereby prevent further depredation.

Both boys obtained the consent of their parents, and Barjonah soon made the fact known in the neighborhood. He had stored his mind with what information he could glean from the sportsmen of his acquaintance, had read several competent works on the subject of hunting and trapping, and felt himself equal to almost any emergency.

"There is a science about hunting," said he to the little gathering of friends who dropped in for an evening call the night before his departure, "which most of these hunters do not understand. Now I am going to show Uncle Dave and Fred how to get a bear without running one's self half to death climbing canyons and hazarding one's life to accomplish it. I say," he continued, growing eloquent over his pet hobby, "let careful planning or headwork, so to speak, take the place of so much unnecessary physical toil—in short, work on strictly scientific principles."

"Ahem-m," began Joe, clearing his throat with unnecessary emphasis; "how many bear have you killed in that way, anyhow?"

"I congratulate your uncle upon the efficient help he will have," said another.

"Or rather for having the disagreeable job taken off his hands," remarked a third innocently.

But Barjonah would not deign to notice the sly thrusts put to him by his companions.

It was late the next evening when the two boys arrived at Dave Whitefield's residence, and very tired and hungry they were after their long ride on horseback. Supper over, planning began for the next day's hunt.

Barjonah lost no time in airing his pet theories, and sought earnestly to bring his uncle to accept his way of thinking and approve of his plans; but an hour spent in oratorical display intermingled with choice quotations from authorities on the subject of hunting which he had stored up in his mind for this particular occasion had no effect on Uncle Dave. He had had too much experience in such matters to consent to be led by a mere boy, and the only consolation Barjonah received when his lengthy discourse was ended was the remark, "Young man, ain't you a leetle cranky?"

The next morning all hands were up promptly at four. The horses were saddled, the hastily prepared meal finished, and all were ready.

Uncle Dave coupled the younger of the hounds by means of a short iron rod attached to the collar at the neck. There were six in number, leaving old Bugle, the magnificent start-dog, free to run at will.

They took the direction of the cattle pasture, then rode over the hill toward the lakes. They had proceeded quietly on their way for about three-quarters of a mile when suddenly Bugle tossed up his nose with a sniff, gave a short bark, then ran to and fro with his nose to the ground. The other hounds also became impatient and eager for a chase. Bugle gave a series of low, whining barks, and seemed bothered about following the track; but soon his barking assumed a more triumphant tone, and he started over the hill in hot pursuit. This was the signal for uncoupling the other hounds, which Uncle Dave accordingly did, and away they went bawling and barking, making the forests ring with canine music in a way which would have struck terror to the heart of old Bruin if he were within hearing.

This being Barjonah's first real bear hunt he was greatly excited; so much so that he quite forgot his labor-saving plans, and would have rushed after the dogs, regardless of the "unnecessary outlay of strength" to which he referred the evening before, had not his uncle restrained him.

"Take time, sonny; there is no hurry. We can't do much until the animal is treed," said Uncle Dave. "We must use 'head work' for our horses, and not 'expose them to unnecessary fatigue,'" he added slyly.

"While we are waiting, give us poor ignorant fellows another lecture on scientif—" began Fred, but a warning look from his father caused him to leave the sentence unfinished. The men followed on slowly after the dogs, and on reaching the top of the mountain could distinctly hear them in a canyon some distance below. Here they left their horses and descended the gorge on foot. They found the dogs circled around a large tree, and high upon one of the branches, hugging the trunk of the tree, sat an immense brown bear growling savagely and looking formidable enough.

Bang went three rifles simultaneously, and each boy declared that his shot had hit the mark. The bear was certainly wounded and evidently thought it best to change his quarters, which he did with surprising agility for so clumsy a creature. As he neared the ground the dogs sprang back to avoid too close contact with the brute, then started again in pursuit. The men followed, but a small pebble having worked its way into one of Barjonah's shoes, he stopped a few moments to remove it, saying he would catch up with the rest soon. Now the cattle had made numerous trails through the thick underbrush, and Barjonah, who had now lost several minutes, hurried on, selecting what he thought to be the path over which the others had passed, but after a walk of about half a mile the path ended by the side of a brook. He now started back on a run, but on arriving at the place he started from was unable to tell which path to take, the trails being so hard and rocky that no foot tracks could be detected. It would have been useless to halloo in hope of being heard, as the men were now far in advance, and the distant bawling of the hounds upon the track would prevent his being heard; so he sat down where he was and waited. Meanwhile, the men who were about a mile beyond had stopped to listen and ascertain whether the bear had again been treed; but the bear, with the well-known sagacity of its species, by crossing and recrossing the creek, had thrown the dogs off the track, and having thus gained on them ran around in a circle, after the manner of bear when close pressed, then after crossing the creek had traveled on. The men following slowly came upon the dogs where the bear had given them the dodge, some following the circle round and round, and others running back and forth by the bank of the creek, so there was nothing to do but to patiently await developments.

Meanwhile Barjonah was growing impatient. He had counted on winning fame for himself on this day, and proving to his uncle and all else concerned, by his superior skill and the ease with which he would bring down that bear, that he was by no means the crank they thought him to be, and now to get left in this manner, the others would undoubtedly carry off the palm of victory and have the laugh on him. It was unbearable. His meditations were getting very uncomfortable, when a slight crackling of the brush some distance away attracted his attention. Then came the sound of something moving among the fallen leaves; nearer and nearer it came, and then Barjonah, who was partly concealed beneath a growth of underbrush, saw a little animal making its way clumsily across the opening to the right. It proved to be a baby bear, and not seeing Barjonah it passed within a few feet of him. The little creature had evidently been frightened over something and was endeavoring to reach some place of safety. Barjonah raised his gun to fire, when the thought flashed across his mind to capture the little fellow alive and take him home for a pet. He started in quick pursuit, and as the little animal's strength was well-nigh exhausted, the capture was an easy one. Each man before starting out had been provided with a sack of convenient size for carrying home the hide, tallow and a portion of the meat for feeding the dogs, provided their day's hunt should prove successful. Barjonah fearing the cub's maternal parent might be prowling around the near neighborhood, hastily dropped it into the sack and fastened his burden securely to his back by means of a stout rope, the cub resisting stoutly meanwhile. Barjonah's fears of motherly interference were only too well founded, for just at this juncture a low growl and heavy pattering of feet denoted that reinforcements were advancing. The bear limped painfully and was panting loudly, and Barjonah in one frightened glance recognized the ferocious beast as the same one they had encountered that morning. Having gained on the dogs, she had gone to her young and was endeavoring to make way with it to some place of safety, but being crippled and weak from loss of blood, had fallen somewhat behind her cub, and now the infuriated beast, mad with the pain of her wounds and roused to frenzy by the very audible snarling and growling of her cub on Barjonah's back, was making straight for him as rapidly as circumstances would permit, with mouth open and tongue protruding, every deep savage growl sounding like a death-knell to the poor lad. In his haste to capture his prize he had left his gun on the ground where he had been sitting when the cub first made its appearance. To return for it was out of the question. He grabbed and tugged frantically at the sack in hope of detaching it from his back, but it was no use; his precious burden clung to him with a tenacity "stronger than a brother's." Indeed, Barjonah feared their close union would exist "until death did them part." Then remembering that a large bear cannot climb a tree of small circumference, he started on the run toward the nearest group of saplings, and selecting one he thought strong enough to hold his weight, began, without waiting for ceremony, to climb the tree, and despite the added weight of bear flesh, accomplished the feat with an agility which would have done credit to an expert tight-rope performer. He was none too quick, however, for Mrs. Bruin noticing the very energetic manner in which her victim was proceeding to put space between them, redoubled her own efforts, and now stood with little glittering eyes and lolling tongue directly beneath Barjonah's more lofty place of retreat. The cub did not appreciate the high position in the world in which he found himself placed, and growling and struggling, he soon with his sharp little claws made a rent in the sack of sufficient size to permit of his head protruding therefrom.

Far in the distance came faint sounds by which Barjonah knew the hounds were still working on the track. As the barking became more and more distinct, the bear, seemingly realizing that there was little time to be lost in speculation, proceeded to enliven matters by grasping the little tree in both great paws and working it to and fro. The slender sapling bent and swayed with the boy's weight together with the bear's efficient aid, and things were assuming a serious aspect. Here was a dilemma for which he, with all his vaunted superior knowledge, was unprepared. He could remember no rule or hint from his numerous guides and helps for hunters which could apply to such a case as this, or aid to extricate him from his perilous position. His learned discourse to his uncle the evening before came with peculiar force upon his mind. Then he thought of his mother; of her grief over his early demise under such touching circumstances. Then a tiny drop, glimmering in the sunshine, took a fall of about twelve feet and lay sparkling in the grass below; this was followed by many others, accompanied by the unmistakable sound of sobbing. Yes, the mighty hunter was in tears. Every minute seemed an hour to the frightened and now thoroughly humiliated boy, and although he had probably not been treed over half an hour at the most, it seemed an age to him. The little tree was beginning to succumb to his weight, bending so low that each swaying motion brought him within three or four feet of the bear's reach.

Uncle Dave and the boys, tired of waiting the slow tracking of the dogs, started back to look for Barjonah. The hounds, having taken the bear's return track, were not far behind them when the men came to the little opening where they had left Barjonah. What a spectacle greeted their astonished gaze. There, not more than forty yards from where they stood, clinging desperately to the low-bending tree, which was creaking beneath his weight, was Barjonah's trembling form, hatless, his hair on end, every big brown freckle emphasized by contrast to the ghastly pallor of his face, and around the pale blue of his dilated orbs a clearly defined circle of white was distinguishable; while the cub, whose persistent efforts to extricate itself from its difficulty had been partially successful, now hung with about a third of his body protruding from the enlarged rent in the sack, and the distressed mother stood just below, looking anxiously up at her offspring, a low growl escaping her now and then, and unheeding the advance of the foe, evidently determined to stand her ground rather than desert her little one.

Crack! went a rifle report, followed by two others in quick succession. The bear fell heavily, and before it could regain its feet, out from the brush darted Old Bugle, followed by the other dogs, and a warm meeting took place. The older dogs, whom many previous encounters of a like nature had rendered cautious, darted here and there, giving the disabled bear the benefit of their molars whenever possible without coming in too close contact with Mrs. Bruin's huge paws.

One of the younger and less discreet of the hounds, however, ventured too near and received a forcible reminder of his familiarity from the bear's animated appendage, which filled the air with howling and sent the dog on an ignominious retreat into the brush. Barjonah, from his perch on the tree, silently sympathized with the dog in its humiliation, probably from a sort of fellow feeling, bringing to his mind his own high aims of that morning and his subsequent inglorious defeat.

A well-aimed shot from one of the rifles, which took effect in the heart, now laid the bear low, and the dogs soon put an end to its existence. Barjonah now started to descend from his place of refuge, when a twig caught in one end of the rent in his sack at the same moment that his hold was loosened preparatory to slipping down. This tore the sack open, and the cub, in obedience to the laws which govern the universe, fell, like Newton's renowned apple, to the ground with a heavy thud. Stunned by the fall, the dogs made short work of it.

"Well, Barjonah," said Uncle Dave, when that young man reached terra firma once more, "you have showed us how to conduct a bear hunt on your 'strictly scientific principles.'"

"Yes," broke in Fred, "you treed your bear, but if I had to climb the tree with it tied on my back in order to accomplish it, I fear I shouldn't feel that 'headwork' had superseded 'physical labor' to a very striking extent."

Then followed more good natured bantering with select quotations and extracts taken from the learned discourse they had been treated to the evening before. Then Fred wound up with "Three cheers for Bear Jonah, the champion hunter of Hillsboro!"

They were given with a will by the boys, while Uncle Dave tooted his hunting-horn as an accompaniment.

Uncle Dave really felt sorry for the boy, but thought the lesson would prove a healthful one to his overwise nephew.

Barjonah's return to the village the next day, which was several days in advance of his chum, occasioned some surprise among his friends, but his meek and quiet behavior surprised them still more, so different from his usual loquacious and conceited manner, but with the return of his friend, the problem was speedily solved.

Poor Bear Jonah, for this name clung to him ever thereafter, had won fame for himself, certainly, but it was fame of a very different character than that for which he had hoped. But the trial proved a blessing in the end, as it became the means of uprooting one of the most disagreeable and unlovely traits of character possible for a young person to acquire.

DOMESTIC ECONOMY

Hash.

EDITORS PRESS:—No, not the genuine article, but a few remarks on several subjects. In making

Bread

At night it is far better not to knead or mix it up stiff but leave it limber, so that it can the more easily be worked over in the morning, and if you wish it limber do not mix all the flour with all the water or milk at once. Put the flour in gradually after having mixed all the water with about half the flour, and this gradual process of putting in the flour will easily enable you to leave the dough in a more workable state for morning. Another thing: I have found that the majority of women bake their bread too much, get too hard a crust on top. Now *I* am a man, but all the same I dare to advise you, as I have done considerable baking myself, and that under the tuition of the best cook I ever saw.

Beans.

Did you ever buy any beans and have to throw them away? The matter with them probably was that they were not baked enough, as they ought to be baked not less than 12 hours, not a minute less. I find most women know this nowadays, but not the city bakers, and because, baked three or four hours, they are not fit to eat, are very indigestible, and the cause of many persons saying they cannot eat them.

Dried Fruit

Should always be soaked over night in cold water, as it is thus made tenderer and more easy to cook in the morning. This is especially true of prunes, which require a good deal of cooking in order to make the skins acceptable to the mouth, while the stomach should not be even consulted in the matter—*never swallow them.*

C. P. N.

Aunt Mary's Biscuit.

There are only a few things requisite for the making of good soda biscuits, but those few are of the utmost importance. A dear old lady in New England, called "Aunt Mary" by all who knew her, was justly celebrated for her unrivaled success in that line. I have many times watched the process from the flour-barrel to the breakfast table, but my best efforts have never produced anything approximating her biscuits, writes a contributor to *National Stockman.* Her first thought was of the oven, the heating of which was by the use of wood. She followed the same rule observed the world over, of two teaspoonfuls of cream of tartar and a pinch of salt mixed with a quart of flour, but one of the main points in which she was very particular was that the liquid should all go in at once, and she for many years invariably used the same bowl filled (up to a certain blue stripe around the border) with equal proportions of milk and water—about a cupful of each—in which she dissolved a teaspoonful of soda. She was very quick in her movements, and it was an incredibly short time until she had sprinkled a little flour on the board where she placed the dough, which was quite soft, and dipping her hands in the flour (she never used the rolling-pin), she gave the mass an encouraging little pat—in which I think there must have been some peculiar charm—and in a moment they were cut out and ready for the oven, which by this time was in condition to impart, by the first whiff of its atmosphere, a rising ambition to the biscuits, without which heat they certainly would have been a flat failure.

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Trees, Etc.—W. R. Strong Co., Sacramento.
Poultry—Dellwood Poultry Yards, Napa.
Insurance—Smedberg & Mitchell.
Garden Tools—S. L. Allen & Co., Philadelphia, Pa.
Peach Pits—C. J. Berry, Tulare.
Spray Pumps—Wm. Wainwright.
School—Bowers' Academy, Oakland
Horse's Tail Tie—Des Moines Novelty Co, Des Moines, Iowa.
Poultry—Geo. Trefzer, Sacramento.
Beet Sugar Facture—E. H. Dyer & Co, Alvarado.
Bee Hives—A. I. Root, Medina, O.
Wheeler's Carbon Bisulphide.
Seeds—J. P. Sweeney & Co.

See Advertising Columns.

The Week.

Although the rain comes late and not until many had begun to seriously deplore its delay, the storm, which is active as we write on Wednesday evening, is heavy and far-reaching, and is not likely to cease until the whole State is drenched.

According to experience it comes soon enough and a fair measure at proper intervals will ensure full production of all crops. Such a season will be immeasurably better than the last one and better, too, than one with very early rains and a long, dry spell following.

We look now for an exceedingly active December in all agricultural affairs and a confident disposition all around which will make Christmas the merriest within memory. The air is full of developments of all kinds, and to close up the year as present conditions promise will be to begin the new year with a rush forward in the lines which during the last year have been most profitable, and this activity will communicate life and energy to all honorable lines of effort. Evidently the outlook is for a good year.

Rains and Rain Lore.

Now that the rains have come with a vim and vehemence which promise plenty of water, Rural readers will be interested to study over the weather wisdom from the Chief Signal Service Officer, which we print on another page of this issue. It cannot be doubted that the careful and systematic study of our local meteorology is yielding very satisfactory results, and one is a better popular understanding of the conditions to which our climatic peculiarities are due and the agencies immediately concerned therein. This is a justification of the constant efforts made by our farming population years ago to secure a local weather bureau, and which were finally successful in securing such an establishment. This branch bureau has been in charge of several able gentlemen during the few years of its existence, and each has done something to advance the work and more widely popularize it. Lieut. Finley, the present incumbent, already shows his mastery of the situation, and his work promises to be of great value to all our industrial interests. Now that this branch of the signal corps of the army is to be transferred next July to the Department of Agriculture, we hope that provision will be made for the extension of the work on this coast. By perusing the paper by Lieut. Finley, which we print on another page, it will be seen how weather conditions are dependent upon manifestations on the northwest coast and the ocean adjacent thereto. Lieut. Finley holds that if weather stations were located along the Alaska and British Columbia coasts, and connected by telegraph with the main Signal Service offices, the coming of cyclonic areas to the coast could be foretold days ahead, and much damage averted by the timely warning.

In view of this need of our coast, it is interesting to read what Secretary Rusk says on the general subject in his report to the President last month. We quote as follows:

Under an Act approved October 1, 1890, Congress directed "that the civilian duties now performed by the Signal Corps of the army shall hereafter devolve upon a bureau to be known as the Weather Bureau, which, on and after July 1, 1891, shall be established in and attached to the Department of Agriculture."

In accordance with this Act, I have included estimates for the ensuing fiscal year for carrying on the work of the Bureau thus created in this department. I deem it evident from the discussion which attended the passage of this Act, and from the wording of the Act itself, that in making this transfer of the Weather Bureau to this Department, it was the intention of Congress that the work of the Bureau should be extended, in so far as might be necessary to a full co-operation of this branch of the service with the work of the several divisions already established in this Department for the benefit of agriculture, without in any way restricting its general scope. In this spirit I have submitted estimates for the coming year on the basis of the wider range of work thus contemplated, and I take the opportunity of expressing here my own conviction that in many ways the work of meteorological observation which this Department will be thus enabled to carry on in conjunction with its other work, will be found of great value to the farming interests of the country. It is indeed self-evident that to complete the study of soil conditions, of animal and plant life, a study of the climatic conditions of our country is indispensable.

We hope this policy will be carried out, and in it the secretary will certainly have the interest and support of our people.

There is one thing in Lieut. Finley's reports which may alarm those who only read casually, and that is his frequent use of the words "cyclone" and "cyclonic." The careless reader in the "Great West" may conclude that the Pacific Coast is even a more cyclone-beridden country than the Mississippi valley. As we understand it, what is called a cyclone and for which people in the Mississippi valley retire to their dug-outs, is really a tornado, and that cyclone, meteorologically speaking, is nothing of that kind and is not necessarily a dangerous disturbance at all. Therefore do not misapprehend Lieut. Finley's meaning when he speaks of "cyclones" and do not conclude that this is a country in which the tornado flourishes, for it is not.

"Going West"—What the Term Has at Different Periods Implied.

It is not more than 80 or 90 years since the term "going West" meant, with the people of Virginia, moving over the Blue Ridge; with the people of Pennsylvania, emigrating beyond the Alleghany mountains; while in New York a removal to Genesee valley, about the center of the State, was looked upon as "going West." Later on, emigrating to Ohio, Illinois, Michigan and Indiana, each in its turn was considered "going West," up till about 1840 everything beyond the Mississippi being regarded as "the Far West!"

Since California became the *ultima thule* of westward immigration, it is no longer easy to say just where the "West" is. Practically, the dwellers on this coast have no occident. Where the inhabitants of our Oriental States now locate the "West" we are not advised. We suppose they continue, as of old, to speak of the central group of States as the West, though with us they lie so far to the east. Our geographical nomenclature in this, as in some other respects, calls for amendment. We require at least a new classification of the States. The Republic should be divided into the Northern, Southern, the Middle or Central and the Western States, the latter taking in all west of the Rocky mountains, while the Middle or Central group takes in all between the Rockies and the Mississippi river, except such portion of Louisiana as lies west of that river. The Northern tier of States might properly be made to comprise all the territory north of Virginia and Tennessee.

Grouping the States in the manner here proposed and naming the several groups according to their geographical positions would enable us to fix the "West" somewhat definitely and give to these other subdivisions of the Republic more precision than has been the custom.

The President's Message.

Congress convened on Monday, when the President's message was read and heralded through the press to all parts of the United States. For a short session the message is much longer than the average, but this can be overlooked when it is considered that he must devote considerable space to the important subjects under debate at the last Congressional election.

Taken as a whole, the message contains much to commend; but like all annual messages to Congress it contains weak points open to attacks from the opposition, but it is this divergence of opinion that makes a politician's life endurable, and which is also calculated to keep each party on the alert for the best interest of the country.

The most interesting features in the message can be briefly stated as follows: Approving reference is made to the Pan-American conference; which marks an epoch in the history of the Western Hemisphere. The President surprised (probably agreeably so, too,) the country by disavowing the action of Mizner, Minister to Guatemala, in the Barrundia case, and the Minister has been recalled. In briefly referring to China, he states that he has made a proposition to the Governments of Mexico and Great Britain to consider a conventional regulation of the passage of Chinese laborers across our southern and northern boundaries. On the silver question he fails to recommend free coinage, but says that "it having been thought best to renew formally the suggestion of an international conference looking to an agreement touching the full use of silver for coinage at a uniform ratio, care has been taken to observe closely any change in the situation abroad, and no favorable opportunity will be lost to promote a result which it is confidently believed would confer very large benefits upon the commerce of the world. The recent monetary disturbances in England are not unlikely to suggest a re-examination of opinions upon this subject."

The receipts of the Government for the fiscal year are given at $463,963,080.85, and the expenditures at $358,618,584.52. The recommendation of the Attorney-General that greater care be taken in the examination of applicants for citizenship is indorsed, as is the recommendation that pool-selling in the District of Columbia be prohibited. The Behring-sea difficulties have not been adjusted. The Pension Disability Act has not entailed a greater outlay than was expected. The beet-sugar industry is declared to have passed the stages of experiment and may be regarded as a complete success.

The President predicts that recent legislation will quicken and enlarge the manufacturing interests, increase markets for farm products and cause general prosperity, and he shows that there has been a general improvement in trade and industry during the year; that the number and extent of business failures have decreased; that business, as shown by Clearing-house returns, has increased; that prices of agricultural products have advanced to a marked extent, and that labor troubles have diminished.

The President discusses at some length the McKinley tariff, and deprecates the idea of subjecting the Act to important changes until it has been fairly tried. Reciprocity receives a large share of favorable attention.

The President's reference to the water question possesses peculiar interest to this coast. He says that "the owner of the water is the owner of the lands, however the titles may run. All unappropriated water sources and all necessary reservoirs should be held by the Government for equal use at fair rates." He suggests that the Government should take charge of the watersheds.

The message ends with recommendations to Congress for the passage of apportionment and appropriation bills. For the encouragement of American steamship lines connecting domestic and foreign ports, an especial plea is made for the Oceanic Steamship Company of San Francisco, whose steamers ply between San Francisco and Australia, and which may be driven out of the business unless the United States comes to the rescue. The President calls attention to the danger of a rival subsidized line from British Columbia.

For the incorporation of an international American bank to facilitate business with the other American nations.

For an increase in the salaries of United States Judges to $5000 a year.

For the settlement of Mexican and Spanish land grants.

For the passage of a national bankrupt law.

For an international copyright law.

For the passage of a law compelling railroads to use couplers and brakes on freight trains.

For the passage of laws reserving all water rights and reservoir sites in the arid regions for public use.

For the passage of laws to enable the Post-office department to contract with the telegraph companies to establish a postal telegraph system.

For the passage of laws for preserving the purity of the election, and a special recommendation for the passage of a bill similar to that known as the "Force" bill during the last session of Congress.

In Nicaragua.

The course of events apparently justifies anticipations of the realization of the interoceanic canal enterprise via Lake Nicaragua. In his message to Congress this week, the President says: "The Nicaragua canal project, under the control of our citizens, is making most encouraging progress, all the preliminary conditions and initial operations having been completed within the specified time."

The progress of the enterprise adds new interest to scenes representing the locality through which the canal will pass and the life of the citizens of the country which will thus become commercially one of our nearest neighbors. On our first page this week, two such scenes are presented, one representing the river along which ships will ere long be speeding from ocean to ocean, and the other giving a glimpse of an interior of one of the mansions of the country.

The landscape shown lies in the valley of the river San Juan, from Fort San Carlos, Nicaragua. The town of San Carlos, at the junction of the Rio San Juan with Lake Nicaragua, is rapidly assuming the proportions of a city in view of its future importance when the canal is built. The proposed route of the canal, laid out by the engineers, is from the harbor of Greytown on the Caribbean sea to Brito on the Pacific. Its total length is 169 miles, of which 38 miles will be excavated canal, 130 miles navigation by Lake Nicaragua, the river San Juan, the outlet of the lake, the basin of the river San Francisco and through seven locks. A canal without locks is impracticable across Nicaragua.

The lake is an inland sea 90 miles long and 35 to 45 miles wide. The lake will be connected with the Pacific by a canal and with the Atlantic by slackwater navigation in the river San Juan by a short section of canal from the river San Juan to the basin of the river San Francisco, and by a canal from the eastern end of that basin to the Caribbean sea.

The interior view on our first page shows an apartment in a mansion of the better class. It is certainly an apartment designed and fitted up for the comfort of its occupants, manifesting a good degree of taste and showing some of the characteristic architectural and furnishing features of the country.

HORTICULTURE.

The Fruit-Growers' Convention.

Opening Address by President Cooper.

We continue our reports of the recent convention of fruit-growers at Santa Cruz with the full reproduction of the opening address delivered by President Ellwood Cooper of the State Board of Horticulture as follows:

This will be the Fourteenth Fruit-Growers' Convention and the tenth held under the auspices of the State Board of Horticulture. In addressing you on this occasion, it would be appropriate to review what has been accomplished, both at these ten conventions and by the State Board, this year completing the first decade of its existence. I refer you to the Biennial Reports of 1885 and 1886, 1887 and 1888, the Annual Report of 1889 and the Annual Report of 1890, which is now ready for distribution, and includes the transactions of the last convention held in Los Angeles in the spring of this year. I cannot pass over this opportunity of complimenting our Secretary for his indefatigable efforts in having this work ready for distribution at this convention.

All those familiar with the workings of State institutions, and the necessity of constant watchfulness and preparation in time, will comprehend the energy that must be given to secure the early presentation of such a report. I desire on the part of the members of the board to express our sincere thanks for his promptness in this regard. The Fruit-Growers and people of the State engaged in kindred pursuits who can profit by these reports, and those especially who have contributed nothing toward the knowledge therein contained or the labor of compilation, should feel grateful for the privilege they enjoy in their perusal, and in obtaining such valuable information. We, the guardians of the State appropriations, receive no compensation for our labor and time given to the management and production of this work.

The reports contain essays by the most intelligent and largest fruit-growers of the State, comprising the matured experience of years, failures as well as successes, and discussion by equal authority and entitled to equal attention. They treat of every branch of the fruit industry as now carried on in the State, and every part of each branch from selection of varieties to the planting and to the manipulation in every particular until the perfect fruit is presented for sale in the different markets throughout the country. In many cases the localities adapted to the successful culture of certain fruits are well defined, so that the fruit-growers have at their command all the knowledge that has been obtained by the best experience. I call the attention of beginners to the reports, and repeat what I said in my first opening address, delivered in Los Angeles in November, 1885: "If we expect to succeed in our fruit enterprises, we must read."

The first law in the interest of horticulture was passed on the 4th of March, 1881. A Horticultural Board soon after was organized. Prior to this organization very little united action had taken place in our State. It is true there were a few men who, as pioneers, were struggling to establish the importance of our horticultural interests, and by their publications had created that interest which secured the legislative Act with the necessary appropriation.

I referred to this subject in my opening address before the Santa Barbara convention, held April 9, 1888, to be found in the Report, pages 163 and 164, to which I call your attention.

At the first inception of the law, fruit-growers were groping in the dark; their operations were mere experiments, the results uncertain. To-day there is no uncertainty among the intelligent fruit-growers; many branches of the industry are now a science well mastered. I venture the assertion that nowhere in the world is the business so generally and so well understood as in California. The dissemination of important knowledge, the progress made, has reached the most isolated fruit-gardens, as well as the most princely orchards. Fruit-growers vie with each other to discover new facts and to disseminate them. We are united, our mutual efforts have secured for us this year a success beyond our most sanguine expectations. It is the result of our united efforts.

I think you will bear me out in the assertion that this decade marks a greater advance in horticulture than any century heretofore in the world's history. I do not wish to be understood in this statement to claim for our generation a superiority of intellect. Other circumstances have contributed to our progress—the nation, our republican form of government, the freedom and liberty of our people, our public schools. In my early schoolboy days, at the beginning of the public-school system in the rural districts of Pennsylvania, it was quite common to have young men from 20 to 30 years old in these schools taking their first A-B-C lessons. At that time it would have been impossible to disseminate scientific knowledge of agriculture or horticulture. How different it is to-day! In our State, the most humble citizen, in his pre-empted rural home, has access to literature and understands and practices the most improved methods that lead to success in his business. We ought to be thankful that we have such a country, such a Government, and feel a deep sense of gratitude for all the blessings that we enjoy.

As successful horticulturists, we meet here on common grounds. There is no party politics in the production of fruits. We have to deal with the inevitable laws of Nature and comply with all that she demands. We of course do not wish to undervalue or discourage the zeal of our people in the political controversies that take place periodically by the partisans representing the different policies of the most advanced system, because it is the safety of the Government; and without good government there can be no continued material prosperity. We, as Americans, can never be too deeply impressed with the fact that whatever evils or defects are observable in our institutions, it is within our power to remedy or remove them. We could easily draw from retirement our best men and invest them with the offices and responsibilities of administration. Judge Story has said:

> Republics are created by the virtue, public spirit, and intelligence of the citizens. They fall when the wise are banished from the public councils, because they dare to be honest, and the profligate are rewarded because they flatter the people in order to betray them.

I hope and trust that I may live to be with you at the end of the next decade and that we shall have the same prosperous condition, witness comparative like progress in the advancement of all our interests, enjoy an equally advanced Government, and that intellectually, morally and spiritually, we shall more nearly approach the divine.

At the last convention, held in Los Angeles, citrus culture elicited a very warm and general discussion. The different theories concerning the best manner of propagation would tend to create a doubt in the minds of those about to plant orchards of oranges or lemons as to the proper root upon which either should be grown.

To me there appeared to be but little positive knowledge on this point. The range of opinion among the most intelligent growers is too wide to warrant successful results in the enterprise. More care and serious thought must be given to this subject.

Citrus Fruits.

People are rushing into the citrus production more rapidly than the home nurseries can produce the trees. It will be found that stock imported from China, Japan or Florida is unsafe. In each case the nurserymen have no interests in the results. They desire simply to sell their stock, knowing that they would not be held responsible in the event of the early death of the trees or the spread of dangerous insect pests. Every planter should have the trees grown in his own neighborhood or near enough that he could ascertain by trustworthy information from what seed they were produced, the manner of propagating, of budding, and the care given to them while in the nursery.

The preponderance of opinion seemed to favor the sour-orange root for both lemon and orange, but this was questioned on the ground that the best citrus results could not be obtained by the passage of the sap through the orange root, and that on the other hand sweet oranges of superior quality could not be produced by the sap passing through the sour-orange root. In regard to the function of the roots as a means of transmitting the sap, or the chemical action that must take place before the perfect fruit is formed and matured, I will not enter into discussion at this time, but a very important question arises as to the seeds, even if we admit that the sour-orange is equally adapted for both fruits. From which sour orange shall we get our seeds? There are in Florida sour-orange trees adapted to the low wet lands. In the West Indies we have the native sour orange in the high valleys and on the mountain slopes, where the land is well drained, growing into immense trees without irrigation and adapted to a climate having two dry and two wet seasons each year. It would seem that seeds from the fruit of such trees would be more desirable. Baron Ferd. von Mueller, the great botanist of Australia, has said that an orange tree well planted and well cared for will give fruit for a period of 2000 years. A gentleman friend of mine told me once that he saw an orange tree in Mexico that bore 20,000 oranges in one season. In the employment of our time and in the expenditure of our money we should give our best thoughts so as to procure the greatest and most lasting results.

In our last report, pages 97–104, will be found a most interesting essay on olive culture by C. F. Loop of Pomona. In referring to this essay, I simply wish to call your attention to the various names of selected varieties that he recommends, and state that there are such a multiplicity of names by the different writers in the different countries that too much reliance must not be placed in their names. It is only by our own experience that we shall gain the knowledge so much desired, viz.: What variety produces the best fruit for making oil and pickles.

Many have been led to believe that our Mission olive is a seedling and that there are many better varieties. The early priests or founders of our Missions were too intelligent, and knew too well the value of the olive, to risk the seeds; and if we were to draw any inferences from their work, we would naturally conclude that they probably brought the very best variety that could be obtained. I certainly would incline to this opinion. The Mission olive is a most excellent fruit both for oil and pickles, and we should proceed cautiously until we discover a better.

Insect Pests

Menace our business. Their ravages are the greatest drawback to our success, and notwithstanding our experience, we advance very slowly in counteracting them. We have had just one lesson. That lesson should impress us more seriously. It is nature's remedy, and on which we will be compelled to rely sooner or later to save our fruits. I have reference to the Australian beetle, *Vedalia Cardinalis*, the importation of which achieved the almost complete annihilation in one season of the *Icerya purchasi*, the worst and most formidable insect pest ever known to civilization. Our largest citrus-growers, who one year ago contemplated bankruptcy and the complete destruction of their orchards, now rest without anxiety in the full confidence that their orchards are saved, and that they will be protected from the ravages of the *Icerya purchasi* in the future by this ladybug.

I call your attention to my opening address at our last convention, held in Los Angeles, to be found in the last report, pages 39 to 41. I most urgently recommend that we pass a resolution as the sense of this convention to ask an appropriation of $10,000 from our next Legislature to defray the expenses of an entomologist to Australia and adjacent islands to procure the parasitic insects as mentioned in the address referred to above, and that a committee be appointed to have the matter in charge. We have repeatedly memorialized Congress asking for an appropriation for this object, commencing with the Riverside Convention held in April, 1887, and at each subsequent convention. We have not been successful, and it will be wiser to rely upon ourselves. The Hon. Secretary of Agriculture will, without question, give us every aid within his power and furnish us an entomologist with sufficient experience to assist us in the work. Let us not delay further in this matter. I hope to be able to report at the next fall convention a *second lesson.*

Oxide of Zinc in Dried Apples.

In Consular Report of March, 1890, No. 114, our consul, Chas. F. Johnson, at Hamburg, pages 480 and 481, says that the chemical board of examiners declared that large quantities of American sliced (dried) apples contained oxide of zinc, free from water, in such proportions as to be pernicious to health. The Police Department stopped the sale of such apples, and the dealers still had them on hand Dec. 24, 1889. This, if true, should claim our most serious attention. Our interests are too great to be jeopardized by any such drying processes, and our condemnation cannot be too severe of the parties concerned. This recalls me to a suggestion made at the convention held in National City April, 1889. I refer you to the annual report of that year, page 329.

I recommended that one of the important measures to be adopted by the fruit-growers was fruit inspection. Perfect fruit is always salable in every market. The success of the vast majority of fruit-growers depends upon a combination that will secure to the consumer a good, wholesome article. There must be no doubt on this point. To surround our business with the necessary safeguards that will protect the industry, we must have fruit inspectors invested with the power to confiscate all poisonous or seriously damaged fruits, green or dried. It will take many years to arrive at proper rules or laws of inspection, hence the necessity of early commencement.

I submit these suggestions for your consideration.



HIEROGLYPHICS ON A PORPHYRITIC BUTTE IN THE MOJAVE DESERT.

Pictured Rocks in the Mojave Desert.

[Written for the PRESS by JAMES H. CROSSMAN.]

The work of the Silver Valley Land & Water Company has shown that a large portion of the Mojave desert can be rendered productive and habitable. There also seems to be sufficient evidence to prove that at a comparatively recent period, geologically speaking, this region of country contained a considerable population, and to support a population, there must necessarily have been vegetation. To say the least, we find here evidences of man's handiwork in the sculptured characters to be seen on the faces of a small porphyritic butte standing out on this desert and known as

Rattlesnake Rock.

This name having been given it by reason of the immense number of these reptiles that find shelter in this mass of rocks. This butte is situated about two miles north of Daggett and 1½ miles east of the Waterloo mill, standing solitary and alone on the barren plains. It is seldom visited and but little known, not being on the line of travel. It was called to the attention of the writer by Mr. J. Alderley of the Waterloo mine. Visiting the spot, a sketch of the rock and the hieroglyphics engraved thereon

was made—the same being represented in the cut herewith given.

The implement used in making these characters was evidently a dull-pointed stone, as the lines are not sharp and the sides of the indentation show marks of striation. That these characters are no erratic figures emanating from the brain of the stupid and ignorant aborigine of the present day, is very evident. They were formed by the hands of a superior race who had acquired the art of recording their ideas and history in symbols and characters, and who possibly may have been allied to the mound-builders that at a remote period populated the American continent from Lake Superior on the north to Bolivia on the south, Yucatan and Central America being the central point of this civilization, which must have been somewhat advanced, judging from the works of art, ruined cities and other monuments of progress to be seen in these countries. Many of their sculptured characters bear a strong resemblance to those of the Egyptians and Chaldeans. The characters on the rock here spoken of are similar in many respects to those of Yucatan. Doctor Le Plougeon, writing on the subject, states that the Mayas in Yucatan used many words and names common to all or nearly all the ancient languages of which we have any knowledge; that they used letters and characters belonging to the most ancient Chaldaic alphabet; and that their mode of writing was similar to that of the Babylonians. He even claims that the continent we live on was the cradle of the world's civilization. Other works of art also exist in this region which are equally as interesting as this sculptured rock.

About six miles from this spot, in a northerly direction, in the Calico range of mountains and two miles east of the town of Calico, an ancient tunnel has been driven into the hill through a granitic rock of a slaty structure for a distance of 180 feet. Some stoping has been done here and a shaft has been sunk at the mouth of the tunnel 30 feet in depth, the tunnel being 4½ feet high and 3 wide. The implements used in this work, judging from marks and abrasions on the rocky wall and roof, were stone hammers and gads of the same material. The mineral sought for was a peroxide of iron of a brilliant red color, which the people who performed this work undoubtedly used as a paint in decorating their persons and wares. Numerous well-formed stone mortars and pestles were found at the mouth of this tunnel, which was undoubtedly driven by the same race that recorded their history on this sculptured butte, but at a period anterior to the cataclysmic volcanic disturbance that destroyed both the flora and the fauna of this once fertile and populous land.

As a point of considerable interest, and one well worth noticing, it may be stated that Donnelly, in his "Atalantis, or the Sunken Continent," has for his frontispiece a character similar to that found on the Rattlesnake rock—a mythological symbol of something, but that is left for the archæologist to determine. The figure alluded to represents apparently the globe with a serpent or other huge reptile attached to or attacking it.

PUBLIC AFFAIRS.

The Silver Dollar and the Farmer.

EDITORS PRESS: — Some months ago you kindly published a letter entitled "The Silver Dollar, *not* the Poor Man's Dollar." I therein endeavored to point out that it was as much the duty of government to "bull" the barley market as to "bull" the silver market.

I also tried to show that the proposed action of our Government in entering the silver market and buying up silver to add to the already fabulous stock in the Treasury vaults, could in no way inure to the poor man's benefit. But each great political party vied in outbidding the other in their professed desire to serve the "poor man's interest" by coining Mints full of silver dollars. Really, to conciliate the clamorous "silver ring," who raised the "poor man" shout.

For a time the silver market boomed! The produce market, thank Heaven, also boomed! This resulted: Politicians eagerly claimed that the boom in the produce market was in consequence of the increased buoyancy in the silver market.

This was simply the old *non-sequitur* (does not follow) of *post hoc ergo propter hoc* (*after* this therefore *because of* this).

Now the utter inconsequence of the two things is proved by the entire collapse of the silver market, while the produce market (unstimulated by any fictitious demand) booms as gloriously as ever.

I trust this may open the eyes of the Farmers' Alliance before they commit themselves to the folly of unlimited silver coinage. It merely means that our farmers will *ultimately* be called on to take pay for their produce in what will be virtually a debased coinage. Silver has and will come from all parts in response to our demand at fictitious prices, and our country will be denuded of gold.

If there were any real need of silver coin for bona fide circulation, the glittering millions would not be cumbering the Washington vaults.

Farmers of California, do not be deceived by the cuckoo cry of "poor man's dollar." It is the silver man's trick of scrouging you out of your nests. EDWARD BERWICK.

Carmel, Nov. 22, '90.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

EARLY PEAS.—Haywards *Journal*, Nov. 22: For the past three weeks Henry Frederickson of Castro valley has been shipping early peas to the city and supplying customers in this place. He has charge of the Frenchman's place, adjoining Whitehill's property, and by means of a little irrigation has raised a fine crop of peas a month or two earlier than has ever been recorded.

FALL SEEDING OF WHEAT.—Haywards *Journal*, Nov. 29: O. C. Luelling, who farms the extensive Norris ranch in San Ramon, was in town Wednesday. This weather just suits him, for he has been able to dry plow a large amount of adobe, and by the end of the week he will have cut up over 300 acres. It is being planted to wheat.

Butte.

RAILROAD FACILITIES WANTED. — Oroville *Register*, Nov. 21: The enormous planting of fruit along both sides of Feather river will demand a railroad within the next two years to move the crop. There will be the fruit from at least 4000 acres to move in two years, on the banks of the river, and by the end of another year that acreage will be largely increased. If to this we add the enormous quantity of fruit that must be moved from Thermalito, it will be seen that a railroad will be needed to handle the output.

RANCHO CHICO RAISIN PACK.—Chico *Enterprise*, Nov. 28: The last car of raisins from the Rancho Chico was loaded up to day. Mr. Brown, the raisin expert, who has been superintending the curing and packing of the raisin crop, says that this last car makes a total of 13 carloads of raisins shipped to Chicago. Each car contains 1000 boxes, so that the total output is 13,000 boxes.

BUYING ORANGE TREES.—Oroville *Register*, Nov. 27: The fact that B M. Lelong, secretary of the State Board of Horticulture, has recently purchased 15,000 young orange trees here, shows that this section is rapidly becoming known to orange-planters.

Colusa.

WAITING FOR RAIN.—Maxwell *Mercury*, Nov. 29: Our farmers are getting anxious for rain. Seeding is over with and everything depends upon the season as to the amount of grain we have for export. From our observation this vicinity has never been better prepared for a larger grain yield than at present. The acreage of summer-fallow sown to wheat is much larger than usual, and the holding off of the rains has forced our people to do first-class work, by way of preparing the soil for seed.....Williams *Farmer*, Nov. 29: The farmers in the immediate vicinity of Williams are nearly or quite through seeding their summer-fallow, and are now awaiting the rains with that smile of satisfaction a man has when he feels that his work is well done. The ground this season, despite the wet winter, is nearly all in good shape for a crop next summer. The ground being so thoroughly soaked by last winter's rains will not require near so much water this winter to insure a fair average yield of grain.

Fresno.

THE KIND OF HELP.—Fresno *Republican*, Nov. 28: The question of labor has long been a serious one in the San Joaquin valley, and many people have been compelled to employ Chinese, much to their reluctance. The idea had gained ground that it is impossible to get along without Chinese labor in this county, but this erroneous idea is happily dying out. A. D. Barling says: "I have employed a great deal of white labor, picking in the field, and am so well pleased that I shall never employ a Chinaman on my ranch again, if I can help it. The Chinaman is a nuisance on a ranch, any way. He is not desirable help and not cheap. My experience has shown this. A white man will pick 75 trays a day, while a Chinaman will not pick over 35 to 40. The Chinaman is slow and plodding. I have experimented with white labor and Indian, too, and the white man is the laborer for me. It is better to pay the white man double wages. I have paid $1.25 a day and board and $1.75 a day without board for pickers, this year. About the packing-house I employ white men only; never had a Chinese there. I have no difficulty in getting good white labor and experienced none in keeping it. Of course I provided a comfortable place for them to live and sleep in, and gave them good food and plenty of it. I gave my people the same food that I sit down to myself—just as good as any hotel in town serves. I gave them the best cuts of meat and plenty of it, with vegetables, bread, etc. I treat the women with especial consideration, and they have steadily remained with me. In short, I have treated my help as white people and have had no trouble. I hope to have all white labor next season."

OLEANDER RAISIN PACK.—Fresno *Expositor*, Nov. 26: The season's shipments of the Fresno Raisin Company at Oleander will amount to between 60 and 65 carloads. They have already shipped 42 cars and are hard at work on the rest of the pack. The total output this year will amount to fully 150 carloads.

Humboldt.

A QUESTION OF BEEF.—Arcata *Union*, Nov. 22: Farmers and stockmen are growing tired waiting for rain. The ground is too dry to plow, the old grass in the hills is about gone, there is no immediate prospect for new grass, and the outlook is growing dubious. Since the first of last month, up to yesterday, we have had but little more than half an inch of rain, while during the same time last year we had more than ten inches. The question is, where will we get our spring beef? It looks as if grass cannot be depended upon, and hay and grain are too high priced to feed.

Kern.

TRANSFORMING A DESERT.—Independence *Independent*, Nov. 21: Antelope Valley, south of Mohave, in Kern county, is as barren looking a region as can be found on the Pacific Coast. Cactus and sagebrush are all that is seen there in the way of vegetation, and so far as we know, there is not a running stream of water in the whole region, and yet settlers are fast gathering there, locating land and making homes. Water is found near the surface and with good cultivation the land needs but little water to make it fertile and produce good crops.

Los Angeles.

A BIG ONE.—Downey *Champion*, Nov. 29: One of the handsomest and most perfect sweet potatoes that we have seen was raised by John M. Rogers on his place near town. It weighs 15 pounds and will be forwarded to the Chicago Exhibition.

A BIG ACREAGE IN ANTELOPE VALLEY SEEDED TO GRAIN.—Los Angeles *Herald*, Nov. 29: Mr. White, one of the most extensive farmers of Antelope valley, says that the grain crop in the valley this season would consist of 100,000 acres. The delay in the rains was all right; farmers there did not need any rain until the middle of December, which would insure a large yield. The grain land is summer-fallowed, which Mr. White thinks is much the best plan. One farmer tried both summer-fallowing and winter plowing; on the land treated in the former way he got a crop of 12 sacks to the acre, and on the latter only eight sacks. Mr. White thinks that summer-fallowing is best adapted for all grain regions in Southern California.

WATERMELON PREMIUM.—Los Angeles, Nov. 29: Mr. John McGirk of El Monte has received the following letter from a seed merchant at Philadelphia in reference to a watermelon grown on his place and sent East to compete for a prize:

PHILADELPHIA, Oct. 30, 1890.

Mr. John A. McGirk, El Monte, Cal.—DEAR SIR: It gives me pleasure to inform you that, after due investigation, I have decided that you are entitled to the premium offered for the largest prize jumbo watermelon raised from seeds purchased of me the past season, owing to your having raised a jumbo weighing 131¼ pounds; consequently you will find inclosed herewith a draft on the Third National bank of this city for $100, being amount of prize offered, etc. Yours truly,

WM. HENRY MAULE.

Marin.

WHO GETS THE BUTTER PROFIT?—San Rafael *Tocsin*, Nov. 29: Butter is booming away up into fabulous figures. Had the ranchers only kept their pickled stock until this fall, they would have occasion to remember this year with pleasurable emotions. The difference in price between what the majority sold for and what could be realized now for pickled roll would just about pay the usual rent of a dairy ranch. As it is, the commission men will make this enormous profit.

DRAINING A MARSH LAND.—San Rafael, Nov. 29: Messrs. Mackay and Flood have about completed a system of canals to drain thoroughly the stretch of marsh land between the old toll-road and the San Quentin hills, extending from the town to Sims Island. This piece of fertile land is to be turned to agricultural account.

Orange.

PEANUTS.— Orange *Post*, Nov. 29: The peanut is cultivated much the same as a potato. It requires a very light, sandy soil, and will do well without irrigation except upon the driest lands. When ready for the harvest, the nuts, attached to the subterranean stems, are plowed out and left to partially dry upon the surface of the ground, after which they are picked, cleaned and sacked, and are then ready for market. Two kinds are cultivated, the California and the Tennessee. The former is the favorite here, though it is claimed that the latter is more prolific. In the latter variety the nuts are crowded closely together, while in the former they are more widely scattered on the stems. Statistics have been obtained from five tracts of land upon which peanuts have been raised. These tracts have been taken here and there at random and will perhaps give a fair average of yield and profits. First tract, 20 acres; yield, 400 sacks or 16,000 pounds; value, at 6 cents per pound, $960, or $48 per acre. Second tract, 9 acres; yield, 191 sacks; value, $458.40, or $51 per acre. Third tract, 8 acres; yield, 200 sacks; value, $480, or $60 per acre. Fourth tract, 10 acres; yield, 400 sacks; value, $960, or $96 per acre. Fifth tract, 3 acres; yield, 200 sacks; value, $480, or $160 per acre.

Santa Barbara.

PERFUME FARM PROJECT. — Santa Maria *Times*: L. E. Blochman has quite a perfume farm in Cat Canyon, having over 3000 lavender plants on his place. Mr. Froude, who has charge of the place, has extracted some of the oil and finds it to be first-class in every respect. The plants grow thriftily and are doing well, and as the oil is rather an expensive kind, it no doubt, with the proper facilities for extracting, could be made quite a paying business. As far as experimented with, it has proven a success.

San Benito.

AN ALMOND CROP.—Hollister *Free Lance*, Nov. 28: G. A. Moore has finished gathering his almond crop from his 20-acre orchard. The variety is known as the Languedoc. Over 9000 pounds have been gathered, which will bring from 14 to 16 cents per pound, and perhaps higher, as the almond crop this year has been very light all over the State.

San Diego.

LARGE VEGETABLE AND FRUIT FARM.—Otay *Press*, Nov. 27: Dr. H. P. Woodward is employing help on his fine, fertile ranch up the valley, cultivating and getting ground ready for four acres of potatoes and other vegetables. He has just set out 1300 orange trees and will enlarge his strawberry grounds, adding another acre for the cultivation of this profitable crop.

ALFALFA AND GYPSUM.—Otay *Press*, Nov. 20: Montgomery Bros. are now busy clearing and plowing their bottom land for planting alfalfa. They will use gypsum as a fertilizer.

Stanislaus.

THE TURLOCK CANAL.—Modesto *News*, Nov. 28: The main canal of the Turlock Irrigation District is rapidly approaching completion. The work is one of which the directors and engineer may well be proud. In a short time, the portion of the canal now under construction will be finished, and persons who desire to fully appreciate the work should make an inspection of it at once. The unfinished work must be seen to fully understand its magnitude and extent. When smooth and rounded up in its finished state, no one can imagine the labor used to bring it to such perfection. Miles on miles of canal, ranging from 30 to 70 feet in width and from 7 to 70 feet in depth, have been cut through material varying from soft sand to hardest granite, and in situations from the level surface to the heart of solid hills, which required deep tunnels.

Sutter.

RAIN WANTED.—Marysville *Appeal*, Nov. 28: A farmer from Sutter county says that considerable of the summer-fallow in that county had already been sown to wheat, and that unless a rain should come shortly it would not do well. What is needed by the farmers, he stated, was a two-inch rainfall, and then they would be happy. It would start the grain that has already been planted, would put what summer-fallow has not been sown in shape for grain, and would make it possible to do some fall plowing.

Tulare.

VOLUNTEER PUMPKINS.—Hanford *Sentinel*, Nov. 27: A. Onesti reports one volunteer vine on his place as yielding 42 monstrous pumpkins, and another vine raised 30. Some of these were large enough to make the yield of one vine a good wagon-load.

TURKEY RAISING.—Visalia *Times*, Nov. 27: A San Francisco commission merchant traveling in this county last week purchased 3200 turkeys in one day. The prices paid averaged about $1.50 each, the deal thus amounting to $4800. Not less than $20,000 worth of turkeys will have been shipped from this county to San Francisco this week, and there will still be on hand a reserve for Christmas and New Year's. The raising of turkeys is no small part of the business of many of the ranchers on the dry plains, and goes a long way in tiding them over a dry season.

Ventura.

A BIG CARLOAD OF BEANS.—Ventura *Free Press*, Nov. 28: Mr. Lombard shipped the biggest carload of beans which ever went out of the county. In a shipment, a day or two ago, of five cars of beans, there was one car of 721 sacks, aggregating 46,662 pounds.

Yolo.

TREE THINNING.—Pleasant Valley, Nov. 29: E. R. Thurber, who is a practical orchardist, is taking out every other row in his fine-bearing apricot orchard, because the trees have grown too close together. He is cutting out, also, every other row in an orchard near his house. There has been a tendency to put trees and vines too close together, but they are more profitable bearers with a good space between.

HOG RAISING. — Winters *Express*, Nov. 29: While Joseph Melvin farms extensively, he has made provision for keeping hogs by fencing his place into different fields. Some ten years ago he imported some fine thoroughbred stock, and has been increasing the herd until now he has almost a hundred head, besides about a hundred young pigs. Mr. Melvin finds that hogs are the best stock he can keep on his ranch. They are kept at less cost and yield more profit than any other.

Yuba.

LEVEE WORK.—Marysville *Democrat*, Nov. 28: William Elliott, Sr., of Gridley was interviewed with regard to some levee contracts. He said that the breaks at Nelson Point, which he had been at work to close under a contract, were all completed on Saturday evening last. The breaks were three in number, and it took about 14,000 yards of earth to fill them. He had been working a large force of men for 21 days at that point. The Rideout levee will be finished next Tuesday evening. The work extends for 6600 feet from the White House, Sutter county, and will be raised to about 11 feet in hight, being six feet wide on top. The contract for raising the Brown's valley grade from 18 inches to 4 feet, a distance of 7900 feet in length, will be completed this evening. It will have a crown eight feet wide. Jake Schimpf's

contract for putting up a bench for road purposes on the Brown's valley grade, from the Citizens' levee to the old Teegarden ranch will not be completed for about ten days. The Marcuse levee on the west and south of his ranch in Sutter county is being raised. Mr. Elliott is putting up a bench on the inside of that portion of the Knight's Landing extension railroad below Marcuse, which was washed out last winter. This will be a preventive against wash from high water this winter.

FRUIT NOTES.—Marysville *Appeal*, Nov. 28: Little is being done in and around Smartsville in the way of horticulture at present. The orange crop promises to be larger than in any previous year, many new trees coming into bearing this year. Jas. Campbell and John Peardon may have oranges to sell this year, they being among the new producers. Timbuctoo will come in for an increase of last year's yield also. F. D. Congdon has already disposed of some of his new crop, which is fast maturing. Raisin and table grapes are receiving considerable attention also. John T. Vineyard has an increased acreage of all kinds of fruits and especially of the table grape. Almond trees are next in prominence in his orchard to peach trees. Extensive orchards and vineyards will soon surround every country home, and especially those along the line of irrigating ditches. Next will come rapid transit for a ready market—then the wilderness will have bloomed.

DITCH-BUILDING. — Smartsville, Nov. 26: Ditch-building is a prominent feature in the field of labor hereabout. The opposition canal to the Brown's Valley Irrigation District canal is progressing as rapidly as the adamantine ledges through which they are working will allow them to move. Albert Hedges is division boss on the upper end of the ditch. The O'Brien ditch, running near the Park's Bar bridge, is to be pushed to completion at no distant date.

NEVADA.

STOCK CATTLE ARRIVING. — Winnemucca *Silver State*, Nov. 29: Eleven carloads of stock cattle and two carloads of sheep have arrived for Charles McConnell. The cattle are mostly yearlings and two-year-old heifers, and will be turned on Mr. McConnell's range near Willow Creek. At the rate stock cattle are coming into the country, it looks as if times in this county will be much brighter in the future than they have been in the last few years.

PINE NUTS.—Carson *Appeal*: Of late years, pine nuts have grown to be quite an article of commerce on this coast. This season over 11 tons were shipped from this State to San Francisco, where they threaten in some degree to supplant the peanut on the horse-cars. The Indians go out in the pine forests every fall and gather the crop. The red men have attempted to gauge the weather by the quantity of pine nuts gathered, but as a rule the weather has gone along without any visible connection with pine nuts. The nuts, which are less than half the size of the peanut, come from the pine cones; under each leaf is a nut. The cones are gathered and roasted, and the cones spreading apart with the heat, drop the nuts. This accounts for the black soot one occasionally finds on the nuts, which comes off on the forefinger of the right hand. Another way of getting them out is to store the cones away in a safe place and allow them to dry gradually, letting the nut fall out thoroughly seasoned. Nuts gathered in this way are higher priced than the ones which have been "fired." These, however, have to be roasted like raw peanuts.

"I use Ayer's Cherry Pectoral freely in my practice, and recommend it in cases of Whooping Cough among children, having found it more certain to cure that troublesome disease than any other medicine I know of."—So says Dr Bartlett, of Concord, Mass.

BULBS AND SEEDS.—Trumbull & Beebee, the well-known seedsmen of 419 Sansome St., have issued an interesting fall catalogue of bulbs and seeds, showing a fine collection of varieties for the bulb-bed, and of vegetables for autumn sowing, also flower-seeds of recent introduction. The publication should be widely distributed.

PEACH PITS.—Any one desirous of obtaining a supply of peach pits will do well to read the advertisement of C. J. Berry in another column of this paper.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY.

Electric-Lighted and Steam-Heated Vestibuled Trains between Omaha, Council Bluffs and Chicago.
Steam-Heated and Electric-Lighted Vestibuled Trains between Chicago, St. Paul and Minneapolis.
Finest Dining Cars in the World.
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POULTRY YARD.

Poultry and the Tariff.

Chas. R. Harker of Santa Clara, in the first issue of his excellent *Fanciers' Journal*, writes as follows:

A good deal is now being said for and against the McKinley bill. Its effect upon one industry, however, has not been much noticed. Perhaps many of our readers may be free traders enough to denounce even the clause in the bill which protects the American hen.

But we incline strongly to the side of our native hens, every time; or perhaps it is the owner of the hen that we favor, and into whose pocket the McKinley bill indirectly puts a good many bright dollars. How and why? Well, it is the old story of cheap European competition injuring our home markets. In Continental Europe eggs are exceedingly cheap. They can be bought in great quantities there for about five cents a dozen. Even at that price the country people cannot afford to eat them. Ten years ago, some speculative merchants, seeing that eggs sold in New York for 20 and 25 cents per dozen when they might be bought for five cents in Germany, thought it would be a bright idea to import a few. They began in a small way to introduce foreign-laid eggs into the American markets. At first the effect was not noticeable, but it was a paying business and grew to be a big one very quickly. The imported eggs were not as good as the home-laid ones, but they did not cost so much. Cheap restaurants and boarding-houses began to buy them. Even the cheap eggs from the West could not compete with the product of the German hen. The trade grew to enormous size—16,000,000 dozen being imported in one season. Western eggs sought other markets, and some of them—millions of them in fact—were sent to California, depressing prices here. This was all right for those who were not trying to make a little money at poultry keeping, but to poultry breeders it was anything but satisfactory, though many of them did not understand the cause of the low prices and markets glutted with stale but still salable cheap eggs. Instead of diminishing, the imports kept on increasing. European peasants seemed determined to supply us all with eggs and make poultry keeping here an unprofitable business.

Now in steps the McKinley bill and imposes a duty of five cents a dozen on eggs, three cents per pound on live fowls, and five cents a pound on dressed poultry. That will put an effectual quietus on the importing of eggs and poultry from Europe. It was, all quibbling aside, rapidly becoming a simple question of whether European or American poultry keepers should supply our markets with eggs and poultry. The new tariff declares emphatically in favor of American breeders, and American breeders, we suppose, know upon which side their bread is buttered.

We are sorry for our Canadian brethren, who have been sending us 3,000,000 dozen eggs yearly; but by poultry keepers in the United States the McKinley bill should be and will be hailed as the most encouraging piece of legislation that has ever been offered the American hen and her owner since the foundation of our Government.

A Hopeful Subscriber.

Enclosed, Mr. Dewey, you'll see,
Is $3—please put to the credit of me.
I'm a Granger by nature though not in name,
A lawyer in practice—I am that same.
Big cattle and hogs look well on paper;
To breed them, not yet have I got the true caper.
I breed good horses at a very high cost;
I sell them low down and pocket the loss.
I grow hogs—no better can be found;
But pork costs me close to $1 a pound.
Hens are my specialty, but don't you know
For one dozen of eggs it costs $2 to grow?
My delight is the thoroughbred Jersey cow;
But her butter, if you'll hear me just now,
Comes pretty high; but send me the PRESS;
It may teach me better—I'll stand it, I guess.

Oakland, Cal. STEPHEN G. NYE.

"Battle of Gettysburg."

The celebrated Panorama of the Battle of Gettysburg and Museum, corner Market and Tenth Streets, San Francisco, is a wonderful production. It has captured the entire State, doing a great deal of good. There is no better way of passing an hour or so, and in studying American history, than by visiting this Grand War Panorama. If any of our readers have not seen it, it will pay them well to do so.

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CHILDREN

Are always liable to sudden and severe colds, to croup, sore throat, lung fever, etc. Remedies, to be effective, must be administered without delay. Nothing is better adapted for such emergencies than **Ayer's Cherry Pectoral.** It soothes the inflamed membrane, promotes expectoration, relieves coughing, and induces sleep. The prompt use of this medicine has saved innumerable lives, both of young and old.

"One of my children had croup. The case was attended by our physician, and was supposed to be well under control. One night I was startled by the child's hard breathing, and on going to it found it

Strangling.

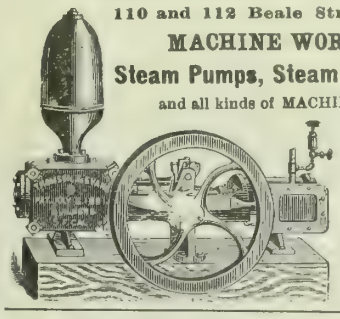
It had nearly ceased to breathe. Realizing that the child's alarming condition had become possible in spite of the medicine it had taken, I reasoned that such remedies would be of no avail. Having a part of a bottle of Ayer's Cherry Pectoral in the house, I gave the child three doses, at short intervals, and anxiously waited results. From the moment the Pectoral was given, the child's breathing grew easier, and in a short time it was sleeping quietly and breathing naturally. The child is alive and well to-day, and I do not hesitate to say that Ayer's Cherry Pectoral saved its life."—C. J. Wooldridge, Wortham, Texas.

☞ For colds, coughs, bronchitis, asthma, and the early stages of consumption, take

Ayer's Cherry Pectoral,

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PATENT
Stovepipe Drums.

It is a perfect SPARK ARRESTER as well as a FUEL-SAVER. Not a spark can escape through the pipe when the damper is properly turned, and for this reason alone, should be on every stove.

It is especially adapted to cooking stoves. If the oven is slow to heat, the drum will correct this fault, throwing more heat around the oven. It will last from 10 to 15 years. Parties desiring can give it a fair trial on their stoves before purchasing.

This drum is sold at the modest sum of $5 and is warranted to give ENTIRE SATISFACTION. For further particulars apply to

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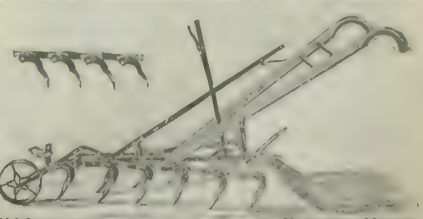


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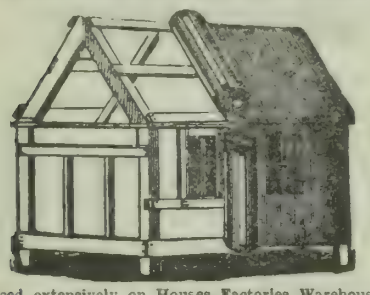
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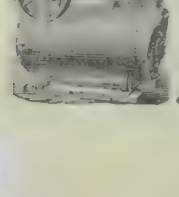
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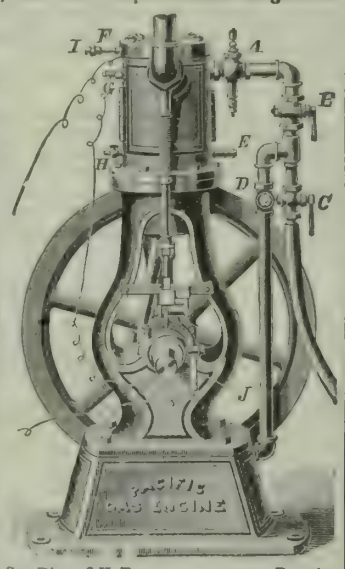
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John Twigg, Third and King Sts., 4-H. P.....Boat Shop
R. Caldwell, Lake Tahoe, 4-H. P.....Launch
Garden City Cannery, San Jose, 2-H. P.....Pumping
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Peter Schmidt, Alameda, 2-H. P.....Pumping
E. C. Bartlett, Sausalito, 2 H. P.....Launch
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H. V. Herbert, Alameda, 1-H. P.....Pumping
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Meteorological.

Why the Rains Were Late.

The Signal Service weather report for November has just been issued. In it Lieutenant Finley of the Signal Corps, in charge of the Division of the Pacific, says:

"The most remarkable feature of the weather for the month is the extraordinary deficiency of rainfall. It is a deficiency which affects the entire Pacific Coast from Mexico to British Columbia. The proximate cause for this deficiency is found in the high latitude of the easterly movement of cyclonic areas from the Pacific ocean. In spite of the fact that there were a large number of these areas, only one of them passed south of the northern boundary of the United States. This area gave rise to a peculiar secondary cyclonic effect which passed southward into Nevada and gave rise to the sudden and rather heavy rains in Western Arizona and Southern California. This secondary area was forced southward by the rapid formation of a high barometer in Washington and Oregon. A weather record for San Francisco, embracing a period of 42 years, shows that never before within that time has the month of November been so deficient in rainfall. The smallest amounts previously recorded are 0.15 of an inch in 1862; 0.25 in 1876, and 0.26 in 1884.

"A chart with the storm track for November, 1884, shows but three cyclonic areas, two of which passed eastward north of Washington and the third through the northern portion of that State. This slight deflection to the southward of one of those areas was sufficient to give California a few light showers. The cyclonic areas for November, 1890, have been peculiar not only for their high latitude but also for their rapidity of movement, which has tended to increase their number, which is unusually large for the month. This rapidity of movement also explains the large number of days on which light showers fell in Washington and Oregon (nearly two-thirds of the month) and the small total of precipitation. The conditions for rainfall were no sooner formed than a change in the cyclonic circulation drove them away. It is not within the province of this review to discuss the question as to the cause of the extreme northerly movement of the cyclonic areas for this month.

"Rainfall—It is everywhere deficient, and the amount of such deficiency varies from .06 of an inch at Keeler to 6.15 inches at Olympia. The deficiency increases in amount from south to north, and is especially remarkable north of the 38th parallel. Rain fell on the following dates: Washington—5th to 11th, 13th, 14th, 17th, 18th, 22d to 24th, 26th to 28th. Oregon—5th to 8th, 11th, 22d to 27th. California—5th to 7th, 22d to 25th. Nevada—6th, 9th. Arizona—6th to 8th. The heaviest rainfalls in 24 hours were .66 of an inch at Fort Canby on the 8th and .56 of an inch at San Diego on the 7th. A fall of 2.65 inches was reported from Globe, A. T., on the 8th. The heaviest monthly rainfalls were .70 of an inch at San Diego and Olympia. The following stations report no rainfall: Walla Walla, Winnemucca, Red Bluff, Sacramento and San Francisco. Snow is reported as follows: Washington (6th), Whitman county. Oregon (6th), Harney county. California (5th), Plumas, Yuba and Sierra counties, 2 to 24 inches; (6th), Ventura county. Nevada (6th, 9th). Arizona (8th), on Pinal mountains.

"Local storms—Hailstorm at Belotta, Cal., 8th; thunder-storm at Quincy, Cal., 5th. High 'northers' occurred in California on the 11th and 12th during the prevalence of an area of extremely high barometer in Northern Nevada, Idaho and Oregon. The barometer during this time was from .40 to .60 of an inch above the normal. In some places the wind was reported as reaching a velocity of over 60 miles per hour, causing damage to fences, trees and roofs of buildings. Floods were reported from Western Arizona on the 8th, causing high water in the Gila and Colorado rivers.

"Temperature—It has been above the normal in all districts. The excess ranges from 3 degrees at Olympia to 12 degrees at Los Angeles. The highest temperature, 96 degrees, occurred at Los Angeles on the 3d; the lowest, 10 degrees, occurred at Winnemucca on the 13th."

An Address on the Weather.

Lieutenant John P. Finley gave a detailed explanation of "Cyclonic Development and Precipitation upon the Pacific Coast" before the Academy of Sciences Monday evening.

"In a mountainous country," said he, "weather conditions are localized. North of the 30th parallel we look to the west for the coming of storms. All storms which enter this country come from the Aleutian islands, or the region adjacent to Japan, the great breeding-ground of storms.

"The precipitation depends upon the parallel along which the storm moves. The rainfall during October, 1889, was the greatest for that month in this city during a period of 42 years, and the reason for it was the lower easterly movement of the storm. As a rule, storms strike Alaska on the Washington coast first, but in this instance they struck the northern part of California directly. This may have been due to an area of high barometer to the north, which caused the storm to deflect more to the south than usual.

"This year for the first time in 42 years no precipitation has been recorded in San Francisco during November, but the signal charts show that there has been no lack of cyclonic movement, as 10 storms were recorded during the month. They, however, all passed along unnaturally high latitudes. They moved very rapidly, and there was no time for a storm to grow to the south.

"The summer storms in Southern Nevada, Western Arizona and Southwestern California were due to the melting of the huge masses of snow in the mountains, which surcharged the air with moisture at the same time that a cold wave passed along the eastern slope of the Sierra and condensed the clouds into rain.

"All cyclonic movements are divided into quadrants. The southeast quadrant is nearest the food supply, that is, the moisture, and hence it is from this section that rain comes. The northeast quadrant develops the greatest cloudiness, with some rainfall. The northwest quadrant is the coldest and driest, while the southwest quadrant, on its western side, partakes of the nature of the northwest quadrant and on its southern side of the southeastern one.

"With signal stations on the Alaskan coast and the Aleutian islands and telegraphic communication, we should be enabled to forewarn every storm and approximate its course.

"It is not alone the Pacific Coast that is influenced by the cyclonic movement from the west. The storm, shorn of its moisture, it may be, keeps on eastward, when it again becomes surcharged with moisture, which is precipitated in the great interior valley and on the Atlantic seaboard. Its breeding-ground then becomes the Gulf of Mexico, and the air currents generated by it produce the hurricanes and destructive tornadoes in the region east of the Rocky mountains.

"The theory of cycles seems more a theory than a fact. I have experimented with the statistics for many years, and I find that you can place no dependence in a recurrence of wet and dry seasons at regular intervals."

The Population of the United States.

Robert P. Porter, Superintendent of the Census of 1890, has issued a preliminary bulletin of census results from which we take the following table showing the population of the United States in 1890, as compared with 1880 and 1870, by States and Territories. The figures for 1890 in this table are not final, but are subject to revision:

STATES AND TERRITORIES	POPULATION 1890.	1880.	1870.
The United States	62,480,540	50,155,783	38,558,371
North Atlantic Division	17,364,429	14,507,407	12,298,730
Maine	660,261	648,936	626,915
New Hampshire	375,327	346,991	318,300
Vermont	332,215	332,286	330,551
Massachusetts	2,233,407	1,783,085	1,457,351
Rhode Island	345,343	276,531	217,353
Connecticut	745,861	622,700	537,454
New York	5,981,934	5,082,871	4,382,759
New Jersey	1,441,017	1,131,116	906,096
Pennsylvania	5,248,574	4,282,891	3,521,951
South Atlantic Division	8,836,759	7,537,197	5,853,610
Delaware	167,871	146,608	125,015
Maryland	1,040,431	934,943	780,894
District of Columbia	229,796	177,624	131,700
Virginia	1,648,911	1,512,565	1,225,163
West Virginia	760,448	618,457	442,014
North Carolina	1,617,340	1,399,750	1,071,361
South Carolina	1,147,161	995,577	705,606
Georgia	1,834,366	1,542,180	1,184,109
Florida	390,435	269,493	187,748
Northern Central Div'n	22,322,151	17,364,111	12,981,111
Ohio	3,666,719	3,198,062	2,665,260
Indiana	2,189,031	1,978,301	1,680,637
Illinois	3,818,536	3,077,871	2,539,891
Michigan	2,089,792	1,636,937	1,184,059
Wisconsin	1,683,797	1,315,497	1,054,670
Minnesota	1,301,017	780,773	439,706
Iowa	1,906,729	1,624,615	1,194,020
Missouri	2,677,080	2,168,380	1,721,295
North Dakota	182,425	36,909	14,181
South Dakota	327,848	98,268	
Nebraska	1,056,793	452,402	122,993
Kansas	1,423,485	996,096	364,399
Southern Central Div'n	10,948,253	8,919,371	6,434,410
Kentucky	1,855,436	1,648,690	1,321,011
Tennessee	1,763,723	1,542,359	1,258,520
Alabama	1,508,073	1,262,505	996,992
Mississippi	1,284,887	1,131,597	827,922
Louisiana	1,116,828	939,946	726,915
Texas	2,232,220	1,591,749	818,579
Indian Territory (b)	.....	.....	.....
Oklahoma	61,701	.....	.....
Arkansas	1,125,385	802,525	484,471
Western Division	3,008,948	1,767,697	990,510
Montana	131,769	39,159	20,595
Wyoming	60,589	20,789	9,118
Colorado	410,975	194,327	39,864
New Mexico	144,862	119,565	91,874
Arizona	59,691	40,440	9,658
Utah	206,498	143,963	86,786
Nevada	44,327	62,266	42,491
Idaho	84,229	32,610	14,999
Alaska (d)	.....	.....	.....
Washington	349,516	75,116	23,955
Oregon	312,490	174,768	90,923
California	1,204,002	864,694	560,247

b The number of white persons in the Indian Territory is not included in this table, as the census of Indians and other persons on Indian reservations, which was made a subject of special investigation by law, has not yet been completed.

c Including 5337 persons in Greer county (in Indian Territory) claimed by Texas.

d The number of white persons in Alaska is not included in this table, as the census of Alaska, which was made a subject of special investigation by law, has not yet been completed.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, *or beyond the time he intends to pay for it*, let him not fail to write us *direct* to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

THE Great Northern has placed an order with the Baldwin Locomotive Works, of Philadelphia, for 50 locomotives, to be used on the Pacific Coast extension.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING NOV. 25, 1890.

441,533. — STOP-BLOCK FOR WAGONS—J. W. Carter, Tacoma, Wash.

441,145.—VISE PIPE-TONGS—John Ellis, Stockton, Cal.

441,154.—HARROW—J. T. Grant, San Jose, Cal.

441,414.—WHEEL CULTIVATOR — D. F. Hunt, Elberton, Wash.

441,419.—FERMENTING-TANK WINE-STRAINER—J. C. Jones, Napa, Cal.

441,584.—PROTECTING PILES—F. Rives, Seattle, Wash.

441,334.—SPEED INDICATOR — F. N. Scofield, Phœnix, A. T.

441,382.—CULTIVATOR — Robert Simpson, Hanford, Cal.

441,598.—SUSPENSION BRIDGE—G. W. & F. P. Stedman, S. F.

441,449. — WAVE-POWER MOTOR—E. D. Stodder, S. F.

20,350.—DESIGN—E. Shepperd, S. F.

The following brief list by telegraph, for Dec. 2, will appear more complete on receipt of mail advices:

California — Albert J. Armstrong, Coronado, boot calk; Hans C. Behr, San Francisco, crushing roll; George H. Clark, Sacramento, burial apparatus; Greenwood Fry, Cottageville, Ky., assignor of one-half to H. M. Crawford, Los Angeles, corn-planter; Lamartine R. Fulda, assignor of one-half to E. Fulda, San Francisco, hoop coupling; Wendell P. Hammon, Oakland, and C. J. Sechrist, San Francisco, fruit-drying tray; Herbert S. Herrick, San Francisco, dose-measuring bottle; Andrew McClain, San Diego, fumigator; Samuel A. Owen, West Berkeley, propulsion of vessels; James Patterson, Stockton, and W. Patterson, Benicia, steam boiler; Florian Stanke, San Francisco, fruit-gatherer; William S. Van Sant and E. E. Eames, Dixon, coin actuated liquid-vending machine.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Fresno County Mentions.

We are in receipt of a letter from our old friend D. T. Fowler, who is one of the directors of the Del Rio Rey Raisin and Fig Company. Mr. Fowler is at present at the company's ranch in Fresno county, and writes as follows:

Work on the Del Rio Rey is prospering. I am pushing preparations for the spring planting of vines and trees all that is possible. We will have the 480 acres all improved this spring. The vines and trees planted last spring have made fine growths.

This section of country is being rapidly improved. We have passed the stage of talk and reached that of action. It is no longer a question of experiment to ascertain what the soil will produce for profit, but one of desire and ability to plant and improve.

Many small holdings will be planted in vines and trees this spring, for illustrations of profit in raisin grapes and various fruits are so numerous that the dullest can comprehend.

Can we predict the future of Fresno county in vineyard and orchard and material wealth 20 years hence? D. T. FOWLER.

THE Government of Guatemala has imposed an export tax of $1.84 a pound on silver because of the increased price of silver in the United States.

"At last I can eat a good square meal without its distressing me!" was the grateful exclamation of one whose appetite had been restored by the use of Ayer's Sarsaparilla, after years of dyspeptic misery. A teaspoonful of this extract before each meal sharpens the appetite.

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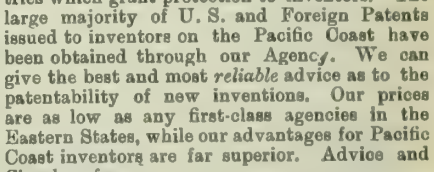
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OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library, containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most *reliable* advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free.

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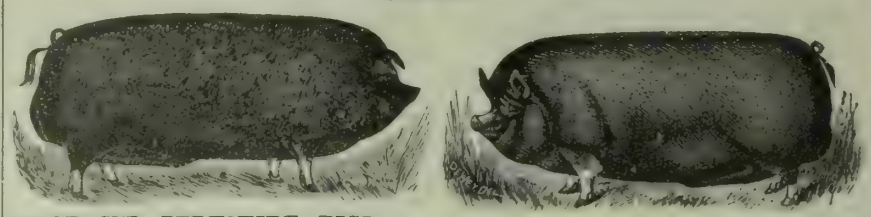
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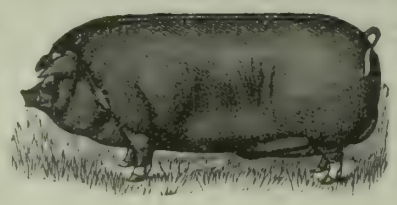
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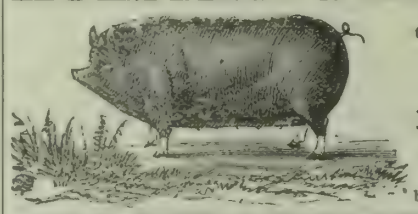
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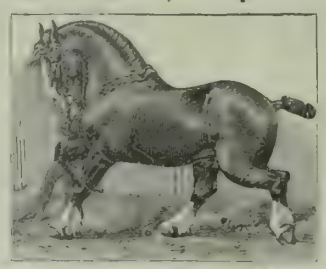
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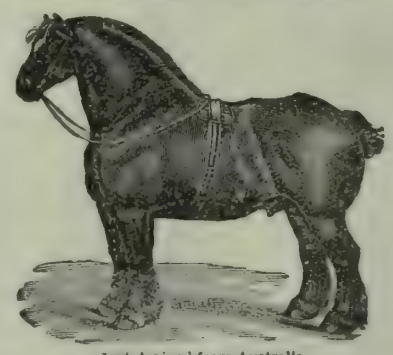
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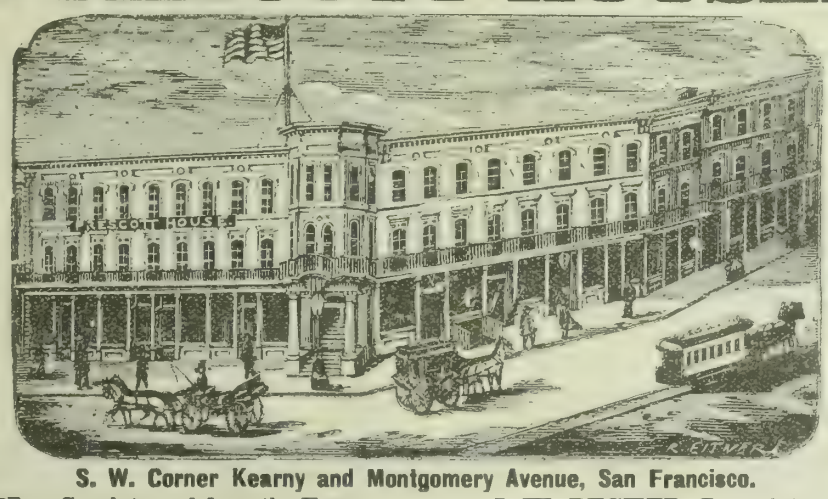
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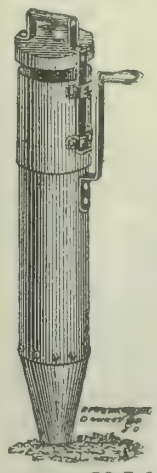
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Dec. 3, 1890.

General trade in farm products has been quite fair. Rains last night and to-day are contributing a more cheerful feeling with the trade, although prices in some commodities are more or less unsettled. Trading in barley has been fairly free at shading prices; even wheat has exhibited more life. The Eastern and European wheat markets have ruled fairly firm. The following is to-day's cablegram:

LIVERPOOL, Dec. 3.—Wheat—Quiet but steady. California spot lots, 7s 4d@7s 6d; cargoes off coast, 37s 6d; just shipped, 37s; nearly due, 37s; cargoes off coast, quiet; on passage, Red very dull and White firmly held; Mark Lane wheat, steady; English country markets, steady; French, firm; wheat and flour in Paris, quiet; weather in England, wet.

Foreign Grain Review.

LONDON, Dec. 1.—The *Mark Lane Express*, in its review of the British grain trade, says: English wheat was firm. Foreign wheat was weak on large arrivals of Russian and Indian. Oats were firm. Fine American corn is in good inquiry at 28s; round corn, 24s 3d. At to-day's market a small business was done and prices were steady.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Dec.	Jan.	Feb.	Mar.	April.	May.
Thursday	....	....	....	....	....	....
Friday	7s6¾d	7s6½	7s6½d	7s6½d	7s6d	7s6d
Saturday	7s6¾d	7s6½	7s6½d	7s6½d	7s6½d	7s6d
Monday	7s6¾d	7s6d	7s6½d	7s6½d	7s6½d	7s6d
Tuesday	7s6d	7s6½d	7s6½d	7s6½d	7s6d	7s6d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	....	....	....	.....
Friday	37s6d	37s0d	37s0d	Firm.
Saturday	37s6d	37s0d	37s0d	Quiet.
Monday	37s6d	37s0d	37s0d	Quiet.
Tuesday	37s6d	37s0d	37s0d	.....

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per bushel:

Day.	Dec.	Jan.	Feb.	Mar.	May.	July.
Thursday	....	....	....	....	....	...
Friday	102¾	104	...	106⅛	106½	...
Saturday	102¾	104½	....	106½	106⅝	...
Monday	103⅜	104⅝	....	106⅝	106⅞	...
Tuesday	103⅜	104⅜	105½	106⅜	106⅜	...

The closing prices for wheat have been as follows at Chicago for the past week, per bushel:

Day.	Dec.	May.	June.	July.
Thursday	....	....	....	....
Friday	94⅜	101½	....	....
Saturday	92¾	100⅜	....	....
Monday	92⅜	101½	....	....
Tuesday	92⅛	100⅛	....	....

NEW YORK, Dec. 3.—Wheat—$1.05¾ for cash, $1.04 for December, $1.05 for January, $1.06⅛ for February, $1.07⅛ for May, and $1.01 for July.

CHICAGO, Dec. 3.—Wheat—92¼c for December and $1.00¾ for May.

Eastern Wool Markets.

NEW YORK, Nov. 28.—*Bradstreet's* will say tomorrow: There is only a limited inquiry for wool in the seaboard markets, and the situation favors buyers. Strong holders, however, are not disposed to grant further concessions, as the liberal sales the past month have reduced their stocks. Australians in many instances are nominal. Dispatches from London say that the sales which opened on Tuesday are not very encouraging for sellers. Though the demand was fair, prices declined at the outset. Buyers for the American market are doing but little.

Boston holders are showing more disposition to sell. A fair trade for Thanksgiving week resulted. The sales amounted to 212,000 lbs of foreign and 1,792,200 lbs of domestic. Full late ranges for California.

Visible Supply of Grain.

NEW YORK, Dec. 1.—The visible supply of grain is as follows: Wheat, 24,527,000 bushels, an increase of 338,000; corn, 3,144,000, a decrease of 1,184,000; oats, 3,359,000, a decrease of 170,000; barley, 4,750,000, an increase of 345,000.

Dried Fruits.

NEW YORK, Nov. 29.—California dried fruits are extremely quiet, the feeling extending to raisins. The top price for apricots was 20c; plums, 15@16c; unpeeled peaches, 15@17½c. London raisins declined to $2.40@2.50; Three Crowns, $1.90@2; seedless, 8¼@9c; Sultan, 10c. The dark color operates against the latter. Prime big raisins are being largely repacked in the one-pound carton. This package is greatly favored by a large class of grocers.

NEW YORK, Dec. 1.—A local commission house closed out last week about 600 bags of California dried unpeeled peaches at 15c for ordinary to 17c for choice. They were sold chiefly in Philadelphia.

Local Markets.

BARLEY

	Buyer Season. H.	Buyer Season. L.	Seller 1891 H.	Seller 1891 L.	Buyer 1890. H.	Buyer 1890. L.
Thursday	....	....	...	...	....	....
Friday	153½	151	...	...	....	....
Saturday	151½	151	...	...	....	....
Monday	152½	150⅝	110	109½	147	147
Tuesday	149	148	...	...	144½	144½

WHEAT

		Seller Season.	Buyer 1891.	Buyer 1890.	Buyer Season.	Seller 1890
Thursday	h.	....	....	....	....	....
	l.	....	....	....	....	....
Friday	h.	...	...	131½	141½	....
	l.	....	...	131½	141½	....
Saturday	h.	....	...	132	142½	....
	l.	....	....	132	142½	....
Monday	h.	....	....	132½	142½	....
	l.	...	...	131½	141½	....
Tuesday	h.	....	....	131½	141½	....
	l.	....	....	131	141½	....

BAGS—The market is dull, although the rains appear to contribute a more hopeful feeling among some holders. Standard sized for May-June delivery are quoted at 6¼@6⅝ cents.

BARLEY—The market held to fairly firm prices up to Monday, when a weaker feeling set in resulting in lower prices under a rain scare. At the decline, trading was more active in futures on Call. The following are to-day's Call Board sales:

Morning Session: Seller 1890—100 tons, $1.42⅜. Buyer season—100 tons, $1.46; 100, $1.46¼; 300, $1.46¾; 200, $1.46⅝ ₩ ctl. Afternoon Session: Seller 1891—200 tons, $1.06. Buyer season—100 tons, $1.45¾; 300, $1.45⅞; 100, $1.46¼ ₩ ctl.

BUTTER—The market has eased off, closing weak. Free receipts of Western creamery butter and rains at the close have undermined the market. The demands from distant points are less urgent.

CHEESE—The market is higher and strong under limited receipts and a good demand.

EGGS—Although receipts have been light, yet prices have shaded off. The demand is said to be lighter.

FLOUR—The market is fairly active for the season. Concessions are necessary to place a large parcel.

WHEAT—The sample market has held to steady prices. Vessels on berth are receiving fair dispatch. In futures, trading on Call has been light. The following are to-day's Call Board sales:

Morning Session: Buyer 1890—100 tons, $1.29⅞; 1500, $1.30. Buyer season—1200 tons, $1.39¾; 100, $1.39½; 1800, $1.39⅝ ₩ ctl. Afternoon Session: Buyer 1890—100 tons, $1.30. Buyer season—800 tons, $1.39⅝ ₩ ctl.

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Dec. 2d, were as follows:

Flour, qr. sks	85,716	Middlings, sks	2,513
Wheat, ctls	260,146	Alfalfa, "	....
Barley, "	25,057	Chicory, bbls	20
Rye, "	287	Broomcorn, bdls	589
Oats, "	16,666	Hops, bls	163
Corn, "	6,537	Wool, "	166
*Butter, "	427	Hay, tons	1,445
do bxs	190	Straw, "	18
do bbls	6	Wine, gals	144,990
do kegs	41	Brandy, "	21,820
do ½ do	39	Raisins, bxs	10,546
†Cheese, ctls	298	Honey, cs	361
do bxs	5	Walnuts, sks	84
Eggs, doz	7,080	Flaxseed, sks	6,238
do " Eastern.	12,000	Mustard, sks	378
Beans, ctls	3,091	Almonds, sks	439
Potatoes, sks	33,443	Peanuts, sks	160
Onions, "	1,595	Popcorn, sks	660
Bran, sks	9,246	Beet sugar, bbls	11
Buckwheat, sks	....	do do sks	1,350

*Overland 560 ctls. †Overland 368 ctls.

Cereals.

H. Kains Jackson in London *Farmer*, Nov. 10th, writes: What the world says about last year's harvest is to the effect that in 1890 some 267,000,000 qrs of wheat were grown and that the world wants 272,000,000 qrs to eat; therefore, there will be short commons to the extent of about 5,000,000 qrs. In other words, instead of having a £5 note to spend, the bread-eater must be content with about £4 18s 6d. Hungary and Austria are credited with 10,000,000; France with 1,000,000; Germany with 1,000,000; Italy with 3,000,000; Roumania with 2,000,000 qrs more wheat than in 1889. Plus 17,000,000. But on the debit side of the harvest ledger: India is short by 1,000,000, Russia by 2,000,000 and the United States by 11,000,000 qrs of the total grown last season. Without much heeding these figures as to the world, it may be noticed, in regard to these "right little, tight little islands," where an average crop has been grown and where some 18,000,000 qrs have still to be bought and brought from beyond the seas, that the purchasing of this bulk of food from various quarters is a different matter to buying it from old and regular shippers accustomed to the trade like Americans. For instance, the United States are minus, Mid Europe is plus, say 10,000,000 qrs. The question is, can England buy as well of Austria-Hungary as from America? From the latter, big ships are always crossing the Atlantic ferry. In the other case special vessels will have to be chartered, while the country is surrounded by centers of wheat consumption. Probably 10,000,000 surplus qrs available in America would be bought for less money than the same quantity from any other country except Russia. Whatever the reason, this autumn the market feeling is decidedly stronger than it has been of late years, and the foreign wheat is 2s to 4s harder to buy. Farmers are now somewhat slowly following the lead of foreign wheat-sellers, and asking certainly 1s to 2s per qr over the cheapest rates accepted early in October. This upward tendency, while the season keeps still open, is well supported by the movement in a similar direction of flour, maize and oats, so that the advent of wintery weather is expected to give a further enhancement to prices.

The local market for wheat has held fairly strong. While the absence of rains is in favor of holders, yet the increasing tonnage on the way is the most important. Ships will begin to arrive quite freely toward the last of this month, with heavy arrivals looked for in January. These arrivals should make charters weak and lower. The tonnage on the way, compared with like time in 1889, is as follows:

To	1890.	1889.
San Francisco	291,525	209,747
San Diego	12,388	8,955
San Pedro	3,244	904
Oregon	35,491	29,780
Puget Sound	35,747	16,222
Totals	378,395	265,608

As the carrying capacity is about 60 per cent larger than the tonnage, the above is a good showing for holders of wheat. Of the above, fully five per cent is engaged in the coast trade and cannot be classed as wheat vessels.

Barley ruled weak throughout the week. The market did not shade off as much as it was claimed it would. This, doubtless, was due to the fact that although more warehouses (Stockton's included) are added to the Call Board, yet the stock on Dec. 1st is not much larger than on Nov. 1st. Considering the heavy receipts in last month, this showing is greatly in holders' favor. The supply in the interior is light, but then Oregon and Washington are sending us considerable.

Notwithstanding the high prices ruling for oats, the stocks held in Call Board warehouses show a falling off last month of about 500 tons. The demand continues fair. As receipts are moderate, buyers are compelled to pay full prices.

Corn is weak at lower figures. This is due to stocks in the city warehouses showing an increase in last month of over 1500 tons. The supply to draw from is said to be larger than held at this time last year. Dealers buy only in a hand-to-mouth way.

Rye shows a fair degree of firmness, as does buckwheat.

Heavy rains last night, with general rains reported this morning throughout the State, have caused the barley market to go off slightly. As the stock here and the supply to draw from are light, there does not appear any good reason, outside of speculation, for the decline. The consumption in the interior will increase in certain sections and decrease in others.

Feedstuff.

The ground feed market has ruled barely steady, with, toward the close, a disposition to shade prices. Rains throughout the State are generally accepted as forerunners of abundant natural pasturage, which later on will lessen the demand for ground feedstuff.

Hay is essentially unchanged. While the rains will lessen receipts, owing to poor roads, the demand is liable to fall off. The supply in the State is light, much more so than at this time in last year. There are those who claim that if we have severe weather from now into spring, prices will go higher, but others contend that prices are high enough now.

Fruits.

Grapes have been pressing the market, causing a slight shading in prices.

The receipts of apples are very large, and as the demand has not enlarged, the market, except for the more choice varieties, is lower. Large choice highly-colored red apples fetch top prices. Oregon is sending us more liberal supplies than at this time in 1889. The quality is generally good to choice.

The dried fruit market is dull, with prices in buyers' favor. This is always the case toward the close of the year. Sellers who meet buyers when they are in the market for Eastern shipments, are, as a rule, the better off when loss in weight, interest charges, etc., are taken into consideration. Several well-informed parties say that the market will probably do better when the spring trade opens in March and April of 1891. Of course while this is problematical, yet past experience has proven it correct. Peaches are offering quite freely, causing lower prices to be quoted by buyers. It is quite safe to say that no fruit will command top quotations if pressed on the market.

Raisins continue to be shipped quite freely to the East, while receipts at this port are large. The distributive demand this season has been large, causing the very large parts of the pack to go into consumption. The quality has averaged much better than any former season, which speaks well for the future, provided the standard is maintained.

Vegetables.

Green corn from the southern part of the State put in an appearance the past week. The quality is good.

Tomatoes are generally poor. Marrowfat squash are higher. Egg-plants are weak. Cabbage and cauliflower are in good supply, as is celery. The bulk of the latter is bleached and consequently has ready sale. Root vegetables are unchanged.

Onions are firm under lighter receipts and a fair demand.

Potatoes show more strength. An advance has been established in the more choice good-keepers. It is thought that the rains, if continued, will make bad roads and interfere with farmers' deliveries. Oregon and Washington are not sending us as liberal supplies as usual at this season of the year.

Live-stock.

Bullocks are a shade firmer for the better conditioned that cut up without much wastage. Mutton sheep are steady. Small calves are scarce and wanted. Hogs are offering quite freely, but ready buyers are secured for both packing and block. Cows are in fair inquiry. There has been a fair demand for fair-sized work horses. General utility horses and matched teams find ready sale at prices ranging from $150 to $300 for the first and $500 to $1000 a span for the latter.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4½@4¾c ₩ lb; dressed, 7@8c ₩ lb.; heavy, 4@4¼c ₩ lb.; dressed, 6½@7½c ₩ lb. Stock hogs, 3@3½c ₩ lb.

BEEF—Stall fed, 6¼@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¼@5¾c ₩ lb.; second quality 4¾@5c ₩ lb.; third quality, 4c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 8@9c ₩ lb.; large, 6@7½c.

MUTTON—Wethers, 7c ₩ lb.; ewes, 6½c ₩ lb.; lamb, spring, 8@9c.

Miscellaneous.

From the *Commercial News* of Dec. 2d the following summary of tonnage movement is compiled:

	1890.	1889.
On the way to this port	291,525	209,747
On the way to neighboring ports	15,632	9,854
In port, disengaged	11,655	23,009
In port, engaged for wheat	50,040	74,772
Totals	368,852	317,382

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Nov. 25, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	4,521,867	4,893,126
Flour, bbls	470,988	456,357
Barley	165,626	790,844

Poultry has ruled in buyers' favor, although toward the close a steadier tone has set in under lighter receipts.

Hops are firm, although buyers are offish. The small stocks are in favor of holders.

Honey is wanted at an advance. This year's small crop at the East favors California honey. Eastern advices indicate a good crop next year.

Beans are steady at unchanged quotations.

Wool is more or less neglected. The lateness of the season and last month's disturbed money market are against holders. Dealers appear to have confidence in better prices after the turn of the year.

Rains, it is said, will stimulate the demand for grass seed.

Nuts continue to go off fairly free for the holiday trade. Prices are about the same as heretofore reported.

Exports by sea the past week aggregate as follows: Wheat, ctls, Dunkirk, 232,252; Waterford, 37,799; Liverpool, 15,934; Cork, 60,446. Flour, bbls, Liverpool, 5000; China, 11,888; Japan, 1627. Beans, lbs, Victoria, 7298; China, 19,937. Raisins, boxes, Victoria, 100. Brandy, gals, Liverpool, 125. Canned fruits, cs, Liverpool, 2432. Dried fruits, lbs, China, 985; Japan, 2400. Wine, gals, Japan, 1973.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Dec. 3, 1890.

BEANS AND PEAS.			
Bayo, ctl	4 00	@	4 15
Butter	2 90	@	3 05
Pea	2 50	@	3 00
Red	2 75	@	3 00
Pink	2 00	@	2 25
Small White	2 50	@	2 80
Lima	3 50	@	3 80
Fld Peas, blk eye	1 50	@	1 70
do green	2 50	@	2 75
do Nies	1 35	@	1 55
Split	6	@	—
BROOM CORN.			
Choice to Extra	60 00	@	75 00
Fair to Good	45 00	@	55 00
Poor	40 00	@	—
CHICORY.			
California	5½	@	6
German	6	@	6¾
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair, lb	15	@	22½
do good to choice	27½	@	32½
do Giltedged	36	@	37½
do pickled	27½	@	32½
do in kegs	20	@	25
do Creamery in rolls	37½	@	38½
Eastern do	—	@	—
do do, in tubs	30	@	—
CHEESE.			
Cal, choice mild	12	@	13
do fair to good	10	@	11½
do gilt edged	13	@	14
Young America	13	@	15
N. York Cream	13	@	15
Western	11	@	13
EGGS.			
Cal. ranch, doz	37½	@	40
do do sel'cted	42½	@	—
do. store	30	@	35
Est'rn, cld st'rage	—	@	—
do fresh	25	@	30
do selected	32½	@	—
FEED.			
Bran, ton	20 00	@	21 50
Feedmeal	28 00	@	30 00
Gr'd Barley	30 00	@	31 50
Middlings	24 00	@	26 00
Oil Cake Meal	25 00	@	27 00
Manhattan Food Per 100 lbs	7 50	@	—
HAY.			
Compressed	13 00	@	18 00
Wheat, per ton	12 00	@	17 00
do choice	18 00	@	—
Wheat and Oats	12 00	@	15 50
Wild Oats	12 00	@	15 00
Tame do	12 00	@	15 00
Barley	9 00	@	13 00
Barley and Oats	10 00	@	14 00
Alfalfa	12 00	@	13 00
Straw bale	70	@	80
FLOUR.			
Extra, City Mills	4 10	@	4 25
do Co'try Mills	4 00	@	4 25
Superfine	3 00	@	3 50
GRAIN, ETC.			
Barley, feed, ctl	1 40	@	1 45
do Choice	1 47½	@	—
do Brewing	1 52½	@	—
do do Choice	1 55	@	—
do do giltedg'd	1 60	@	—
Chevalier choice	1 55	@	1 60
do com to good	1 40	@	1 50
Buckwheat	2 00	@	—
Corn, White	1 30	@	1 35
Yellow, large	1 30	@	1 35
do, small	1 30	@	1 35
Oats, milling	2 00	@	2 05
Surprise	1 95	@	2 10
Choice feed, ch'c	1 95	@	—
do good	1 80	@	1 90
do fair	1 70	@	1 77½
do Gray	1 75	@	1 80
do Black	1 70	@	1 90
do do for seed	2 00	@	2 05
Rye	1 32½	@	1 38½
Wheat, milling.			
Gilt edged	1 41½	@	—
do Choice	1 38½	@	—
do fair to good	1 33½	@	—
Shipping, cho'ce	1 33½	@	—
do good	1 31½	@	—
do fair	1 28½	@	—
Sonora	1 27½	@	1 31½
HIDES.			
Dry Ight to h'vy	10	@	11
Salted	5	@	8½
HOPS.			
Oregon, 1890	32½	@	40
Cal 1890 Choice	37½	@	40
do Fair to G'd	32½	@	35
NUTS—JOBBING.			
Walnuts, Cal. lb	8	@	9
do Or'ce	9	@	11
Almonds, hd shl.	6	@	7
Softshell	14	@	15
Paper shell	15	@	16
Brazil	19	@	20
Pecans mall	11	@	14
do large	17	@	18
Peanuts	4½	@	5½
Filberts	11	@	13
Hickory	6	@	8
Chestnuts	12	@	15
Pine nuts	7	@	8
ONIONS.			
Silver Skin	2 50	@	3 25
POTATOES.			
Early Rose, sks	70	@	90
Chile	95	@	1 10
Peerless	75	@	1 00
do Salinas	1 05	@	1 15
River Reds	1 00	@	1 20
Humboldt	—	@	—
Burbanks	80	@	90
do Salinas	1 00	@	1 35
Sweet sks	1 50	@	2 00
POULTRY AND GAME.			
Hens, doz	4 00	@	5 50
Roosters, old	4 00	@	5 00
do young	4 50	@	5 50
Broilers, small	3 50	@	4 00
do large	4 00	@	4 50
Fryers	4 00	@	4 50
Ducks, tame	4 00	@	5 50
do large	6 00	@	7 00
Geese, pair	1 50	@	2 00
Turkeys, Gobbl'r	15	@	17
Turkeys, Hens	15	@	17
do dressed	17	@	19
Pigeons	1 75	@	2 50
Rabbits, doz	1 25	@	1 50
Hare	1 50	@	1 75
Dove	—	@	—
Quail	75	@	1 00
Snipe, English	1 50	@	1 75
do Jack	65	@	75
Ducks, Mallard	4 00	@	5 00
do Canv'sback	5 00	@	6 00
do Sprigs	2 00	@	2 50
do Teal	1 00	@	1 25
do Widgeon	1 25	@	1 50
do Small	1 00	@	1 25
Geese, Gray	2 50	@	3 00
do white	1 25	@	1 50
Brant	1 25	@	1 75
Honkers	4 00	@	5 00
EGG FOOD.			
Manhattan, ₩ lb	12	@	—
PROVISIONS.			
Cal. Bacon.			
Heavy, lb	10½	@	11
Medium	12	@	—
Light	13	@	—
Lard	9	@	10½
Cal. Sm'k'd Beef	11	@	12
Hams, Cal	12½	@	13
do Eastern	13½	@	14
SEEDS.			
Alfalfa	8	@	8½
Canary	3½	@	4
Clover, Red	10½	@	11½
White	17½	@	20
Cotton	30	@	—
Flaxseed	2	@	3
Hemp	4	@	5
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German	5	@	6½
do Common	5	@	6
Mustard, yellow	1 90	@	2 25
do Brown	2½	@	3
Rape	1½	@	2½
Ky. Blue Grass	14	@	16
2d quality	13	@	14
Sweet V. Grass	75	@	—
Orchard	12	@	14
Hungarian	7½	@	8
Lawn	37½	@	40
Mesquit	6	@	7
Timothy	6	@	7
TALLOW.			
Crude, lb	3	@	5
Refined	6	@	
WOOL, ETC.			
SPRING—1890.			
Humboldt and Mendocino	19	@	24
Sac'to valley	15	@	22
Free Mountain	18	@	24
S Joaquin valley	12½	@	17
do mountain	17	@	22
Calav & F'th'll	15	@	24
Oregon Eastern	13	@	22
do valley	20	@	25
So'n Coast, def	10	@	14
So'n Coast, free	12½	@	19
FALL—1890.			
North'n, choice	16	@	18½
do defective	14	@	16
Mountain Free	13	@	15½
San Joaquin defective	9	@	11½
Southern do	9	@	11½

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Dec. 3, 1890.

Bananas, bunch	2 50	@	3 50
Cranberries	10 00	@	11 50
Limes, Mex	4 00	@	5 00
Lemons, Cal., bx	2 00	@	5 00
do Sicily, bx	7 00	@	8 50
do Malaga	7 00	@	8 50
Oranges.			
do Navels	3 00	@	3 50
do Vacaville	1 25	@	1 50
Pineapples, doz	3 00	@	5 00
Strawberries chest	5 00	@	12 00
Pears, bx	50	@	75
do Winter Nelis	1 50	@	2 00
Apples com box	25	@	60
do good	90	@	1 15
do choice	1 25	@	1 50
do Mount'n bbl	5 00	@	7 00
do Red bx	1 50	@	2 00
Grapes, box	30	@	75
Lady apples, box	1 50	@	2 00
Quinces, box	75	@	1 00
VEGETABLES.			
Okra, dry, lb	6	@	10
do green bx	1 00	@	1 25
Parsnips, ctl	1 25	@	—
Peppers, dry, lb	12	@	—
do green, bx	40	@	50
Turnips, ctl	75	@	—
Beets, sk	—	@	1 00
Cabbage, 100 lbs	50	@	60
Carrots, sk	30	@	45
Marrowfat, ton	12 00	@	15 00
Garlic, lb	8	@	10
Egg Plant, bx	50	@	65
Cauliflower doz	50	@	75
Green corn, doz	25	@	30

Rope.

Baling, Duplex, lb	11
" Manilla, lb	14
Twine, for hops, balls, tarred, lb, Manilla	15
" " grape vine, balls, lb "	15½
" " " coils, lb "	15½
" spring, lb	1
" binder (650 ft. to lb), lb	15

Duplex twine 3c per lb less.

BACK FILES of the PACIFIC RURAL PRESS (unbound) can be had for $2.50 per volume of six months. Per year (two volumes) $4. Inserted in Dewey's patent binder, 50 cents additional per volume.

Dried Fruits, Etc.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations.

Prices named, unless otherwise specified, are for fruit in sacks. Add for 50-lb. boxes ¼c per lb., and for 25-lb boxes ½c to 1c per lb.

Apples, sun-dried, quarters, common	6½@ —
" " " prime	7 @ —
" " " choice	8 @ —
" " sliced, common	7½@ —
" " " prime	8 @ —
" " " choice	8½@ —
" Evap. bleached, ring 50-lb boxes	10½@ 11½
Apricots, sun-dried, unbleached, common	10½@ —
" " " prime	12½@ —
" " " choice	13½@ —
" " bleached, prime	16 @ —
" " " choice	17 @ —
" " " fancy	18 @ —
" Evap. choice, in boxes	18 @ —
" " fancy, "	19 @ —
Figs, sun-dried, black	2½@ 3
" " white	— @ —
" " " washed	@ —
" " " fancy	8 @ 10
" " " pressed	4 @ 6
" " " unpressed	2½@ 3
" Smyrna boxes	12 @ 14
" do sacks	10 @ 12½
Grapes, sun-dried, stemless	3½@ 4
" " unstemmed	2 @ 3½
Nectarines, Red, sun-dried	10 @ 13
" evaporated, in boxes	13½@ 14
" white, sun-dried	12 @ 15
" evaporated	17 @ 19
Peaches, sun-dried, unpeeled, common, bleached	8 @ 9
" " " prime, "	10 @ —
" " " choice, "	13 @ —
" " " fancy	14 @ —
" evaporated " choice	15 @ —
" " " fancy	16 @ —
" sun-dried, peeled, prime, bleached	19 @ —
" " " choice	22 @ —
" " " fancy	23 @ —
" evaporated, " in boxes, choice	24½@ —
" " " fancy	26½@ —
Pears, sun-dried, quarters	7 @ 9
" " sliced	9 @ 10
" evaporated, " in boxes	10 @ 11½
" " ring "	12 @ 13
Plums, pitted, sun-dried	9½@ 11
" " evap. in boxes, choice	11 @ 12
" " " fancy	13 @ 14
" unpitted	5 @ 8
Prunes, Cal. French, ungraded sizes	9 @ 10
" " " graded " 90 to 100	8½@ —
" " " " " 80 to 90	9 @ —
" " " " " 70 to 80	9½@ —
" " " " " 60 to 70	9¾@ —
" " " " " 50 to 60	10½@ —
" " " " " 40 to 50	11½@ —

Fancy sell for more money.

RAISINS.

Halves, quarters and eighths, 25, 50 and 75 cents higher respectively than whole box prices.

London Layers, choice ₰ bx	$1 85 @ 2 10
" fancy, "	2 25 @ 2 50
Layers, ₰ bx	1 50 @ 2 00
Loose Muscatels, common, ₰ bx	1 15 @ 1 35
" choice, "	1 50 @ 1 75
" fancy, "	1 80 @ 1 90
Unstemmed " in sacks, ₰ lb	4 @ 6
Stemmed " " "	4 @ 7
Seedless " " "	6 @ 7
" ₰ 20-lb bx	1 15 @ 1 25
" Sultanas, unbleached, in bxs	1 15 @ 1 25
" " bleached "	1 25 @ 1 30

CALIFORNIA HONEY.

Comb, dark, 2-lb. frames, 60-lb. cases, ₰ lb	5 @ 6
" amber, " " cs. new "	7 @ 8
" white " " " "	11 @ 13
" " 1lb " " "	13½@ 15
Extracted, dark, 5-gal. cans, 2 cans to case, ₰ lb.	4½@ 5
" amber, " " "	5½@ 6½
" white, " " "	6½@ 7
Comb, 2-tins, 2 doz. to case, ₰ doz	— @ —
Extracted, " " "	— @ —
" 4-lb. tins, 1 doz. "	— @ —
Beeswax, per pound	22½@ 25

GEN. BIDWELL'S REMINISCENCES.—**The leading article of the December *Overland* will be a paper by General Bidwell, containing his estimate of the situation of affairs in California at the outbreak of hostilities under Fremont and reminiscences of the Bear Flag episode. This paper was written many years ago to assist a friend in the historical study of the period, and as it antedates all the standard histories, has the value of an original document, being his first fresh and entirely independent understanding of the matters treated, unaffected by later developments. It has never before been in print.**

Indorsement by San Francisco Draymen.

SAN FRANCISCO, Cal., Oct. 29, 1890.

Messrs. Lawrence Williams & Co. Cleveland, Ohio—GENTLEMEN: Having recognized the value of your Gombault's Caustic Balsam from a sample which we procured some months ago, we beg leave to tender you our earnest recommendation of your goods.

The Balsam gave so much satisfaction in the treatment of our horses that we have several times endeavored to purchase it for troubles which it so easily remedies, but we found that it was not established in our market, so were compelled to content ourselves with less satisfactory medicine. Truly yours, C. B. RODE & Co.

All wholesale druggists, also J. O'Kane, keep it in stock.

THE Crosby Steam Gauge and Valve Company of Boston manufacture a chime whistle, which is musical and a great improvement over the harsh and noisy things in use at the present time by many firms.

HORSE-COLLAR TRUST—A BIG HOLE MADE IN IT. No Collar Trust! No Leather Trust! No Labor Trust! Competition is the life of trade, and Trusts kill competition. A business house which becomes fossilized to the point of requiring a Pool or Trust to hold it up, should be left severely alone, and those not leaning on Pools or Trusts be preferred. What chance has the rising generation for a fair share of this world's goods if they are hampered and shut out from many undertakings by Trusts? To all persons interested in Harness Goods: Please take notice that the firm of W. Davis & Son withdrew from the Collar Trust on September 13, 1890, and can, therefore, furnish Horse Collars at a Big Reduction on the Trust Prices, as we are the only Wholesale Saddlery House in San Francisco not tied up with High Prices. W. DAVIS & SON, 410 Market St., S. F.

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by officer in charge of branch Signal office, Division of the Pacific.]

Nov. 26–Dec. 2. DATE.	Olympia. Rain	Temp.	Wind.	Weather.	Portland. Rain	Temp.	Wind.	Weather.	Eureka. Rain	Temp.	Wind.	Weather.	Red Bluff. Rain	Temp.	Wind.	Weather.	Sacramento. Rain	Temp.	Wind	Weather.	S. Francisco. Rain	Temp.	Wind.	Weather.	Fresno. Rain	Temp.	Wind	Weather.	Keeler. Rain	Temp.	Wind	Weather.	Los Angeles. Rain	Temp.	Wind	Weather.	San Diego. Rain	Temp.	Wind	Weather.
W.	.00	54	S	P C	.00	54	SW	P C	....	....	....	....	.00	66	S E	P C	.00	62	N E	P C	.00	62	N	P C	.00	64	0	P C	.00	52	0	Cl.	.00	74	Nw	Cl.	.00	84	Nw	P C
T.	.00	52	S	Cy.	.00	54	SW	Cl.	....	....	....	....	.00	68	Nw	Cl.	.00	64	Nw	Cl.	.00	64	0	Cl	.00	68	Nw	Cl.	.00	54	N E	Cl	00	76	Nw	Cl.	.00	78	Nw	Cl.
F.	.00	56	S E	Cl	.00	54	0	Cl.	.00	54	N E	Cl.	.00	64	S E	Cl.	.00	62	S E	Cl.	.00	66	0	Cl.	.00	66	0	Cl.	.00	54	S	Cl.	00	74	Nw	Cl.	00	76	Nw	Cl.
S.	.00	50	N	Cl.	.00	42	S	Cl.	.90	54	Nw	Cl.	.00	68	S E	Cl.	.00	66	0	Cl.	.00	66	0	Cl.	.00	66	0	Cl.	.00	60	S E	Cl	.00	68	Nw	Cl.	00	72	0	Cl.
S.	.00	50	S W	P C	.00	40	S	Cy.	.00	50	S W	Fy.	.00	60	S E	Cl.	.00	62	N	Cl.	.00	54	W	Cl.	.00	68	Nw	Cl.	.00	54	E	Cl.	.00	68	Nw	Cl	.00	72	Nw	Cl
M.	.08	48	S W	Cy.	.02	50	S W	....	.00	52	N	Cy.	.00	58	W	Cy.	.00	58	N	Cy.	.00	54	W	Cy.	.00	62	W	P C	.00	52	N E	Cy.	.00	62	W	Cl.	00	60	0	Cl.
T.	.01	46	S	Rn.	.08	46	E	Cy.	....	....	....	....	.04	54	S E	Cy.	.00	58	Nw	Cl.	.00	58	S W	Cy.	.00	56	S E	Cy.	....	....	....	....	.00	58	S W	Cy.	.00	60	S W	Cy.
	.09	...	...	....	.10	...	...	....	.00	...	...	....	.04	...	....	....	00	..	...	...	.00	...	....	....	.00	....	...	....	.00	....		....	00	...	..	...	.00	...	...	...

EXPLANATION. Cl. for clear; Cy., cloudy; Fr., fair; Cm., calm; — indicates too small to measure. Temperature wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall. P C, partly cloudy. Rn., rain.

NEWSPAPER AGENTS WANTED.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to soliciting subscriptions and advertisements for this journal and other first-class popular newspapers. Apply soon, or address this office, giving address, age, experience and reference. Special inducements to old agents.

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Located seven miles southwest of Tulare City and three miles from Tokay Switch on the Southern Pacific Railroad. It is centrally located in the artesian belt of Tulare county, and has one flowing well, capable of irrigating 100 acres, the depth to the main flow being only 308 feet. The water is soft for washing, healthful to drink, and contains no substance injurious to vegetation. A reservoir of one acre, surrounded with handsome trees, receives the water from the well. Several ditches carry it in different directions on to the land.

The whole 160 acres (quarter-section) is unusually level, is entirely enclosed with fencing, and cross-fences partition the land into several enclosures for pasturage pur oses.

The improvements consist of a modern style, two-story, hard finished house, containing seven rooms, with walled cellar, kitchen and porches additional, surrounded with elegant shade trees, etc.; a large barn, storehouse, blacksmith shop, windmill, sheds, stables, etc.

In front of the place is a row of about 40 well-grown elm and Carolina trees. There are eight acres of orchard and vineyard, mostly in bearing, 30 acres of alfalfa, several miles of ditches and 40 acres of land checked and leveled.

The soil is dark Tulare lake bottom land, very productive, grows all kinds of tropical and semi-tropical fruits, except apples, and is especially adapted to the growth of alfalfa and for stock range. Water of good quality is found at ten feet from the surface. There are three surface wells on the place.

The climate is as healthful as any part of the Sacramento or San Joaquin valleys Adjoining lands aresupplied with water for irrigation from Elk Bayou, a never-dry stream, lying one mile from these lands, and wate can be had on the land from the same source.

The simple fact that abundance of artesian water can be had so cheaply on this land will soon make the water alone worth more than the land is now offered for.

The owner (not being a farmer) is determined to sell at the best price offered soon The land is under cultivation, except necessary pastures. Terms easy.

Three hundred and twenty acres of improved land adjoining will also be sold cheap and on easy terms, in tracts of 40 acres or upward, to suit.

Also 160 acres just outside of Tulare City limits, surveyed out in five-acre lots. The whole will be sold for cash for much less than its real value if applied for soon.

Call on or address E. M. DEWEY, Porterville, or A. T. DEWEY, 220 Market Street, San Francisco.

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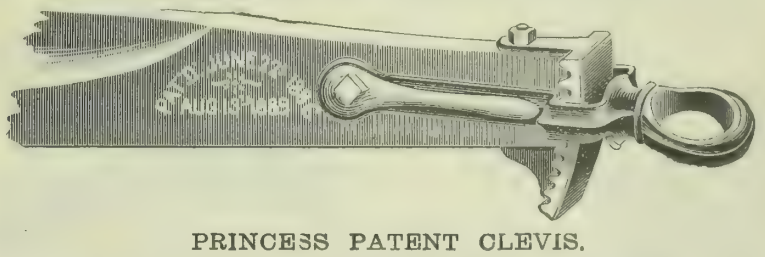
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"GENERAL PURPOSE."



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No. 0,	Vineyard Plow,	One-horse,	cuts furrow	9	inches	wide—weight,	62	pounds	$10 00
" 73,	without shin-piece,	One-horse	General Plow,	cuts furrow	8	inches	wide—weight,	60	pounds	7 00
" 79,	"	"	"	"	"	"	10	"	"	"	76	"	9 00
" 85,	with	"	Two-horse	"	"	"	12	"	"	"	85	"	11 00
" 91,	"	"	"	"	"	"	13	"	"	"	117	"	13 00
" 103,	"	"	Two or Three,	"	"	"	14	"	"	"	118	"	13 50



PRINCESS PATENT CLEVIS.

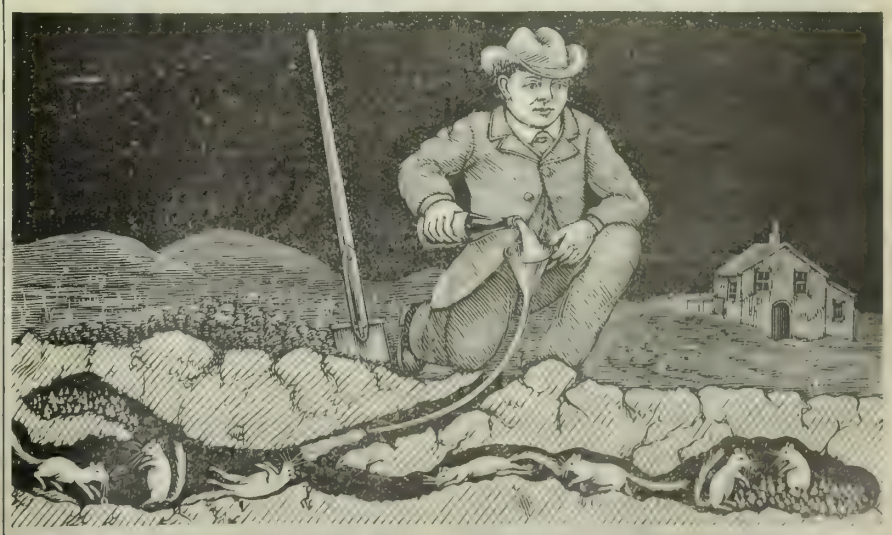
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DIVISION OF ECONOMIC ORNITHOLOGY AND MAMMALOGY.

WASHINGTON, D. C., April 22, 1889.

MR. J. R. LOCKE, Bleudon, Davison Co., Dakota—DEAR SIR: Your postal card addressed to the Entomological Division of this Department has been handed me for reply. The best remedy we know for the destruction of Pocket Gophers is bisulphide of carbon. You can obtain important information in regard to the use and cost of this article by applying to J. H. Wheeler, Melrose, Alameda Co., Cal.

Respectfully, [Signed] C. HART MERRIAM, Ornithologist.

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Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

HOSE REEL.—Rockwell S. Chapman, S. F. No. 440,838. Dated Nov. 18, 1890. This reel belongs to that class adapted to be permanently secured to the walls of buildings in convenient positions whereby the hose wound thereon can be drawn off for use in case of emergency. The invention consists in the novel rotary joint by which the water connection is effected, and also in the guiding device on the front of the reel for directing the hose properly in any direction when being drawn off. The joint is a simple and effective one, admitting of the rotation of the hose reel, and is self-tightening. The guides are rollers neatly and serviceably placed, to direct the hose without friction.

TRAVELING THRASHER AND CLEANER.—George W. Haines, Stockton, Cal. No. 440,843. Dated Nov. 18, 1890. The object of this invention is to improve the cleaning mechanism of traveling harvesters or other thrashers and cleaners by a peculiar construction and operation of the shoe which carries the sieves, and a means for changing the motion from a plain end shake to a combined end shake and vertical tossing motion, the amount of this motion being regulated to suit the quality of the grain while the machine is running. It also relates to an improved construction of chain driving and sprockets, by which the power is transmitted from the main driver by a single chain and distributed from this to the thrashing and the separating and cleaning parts of the apparatus.

SICKLE GRINDER.—Henry Thibault, San Francisco, Cal. No. 440,337. Dated Nov. 11, 1890. This machine consists of a support for the sickle, a means for fixing said support upon one of the wheels of the mowing or reaping machine, an adjustable standard, with a grinding disk mounted upon a shaft thereon, and means for adjusting said disk to the teeth of the sickle and for rotating the disk to grind the teeth.

WATER-WHEEL.—William H. Gunsolus, Sutter Creek, Cal. No. 440,353. Dated Nov. 11, 1890. This wheel is of the "burdy-gurdy" type. The novelty rests in the bucket, which is made heart-shaped, each bucket having a divisional rib formed by the rim of the wheel plate or disk extending from the back of one bucket into the wide end of an adjacent bucket. The object is to receive the impact of the water to the best advantage and to discharge it equally on each side, avoiding splashing and consequent interference of the discharging water with succeeding buckets.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

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Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

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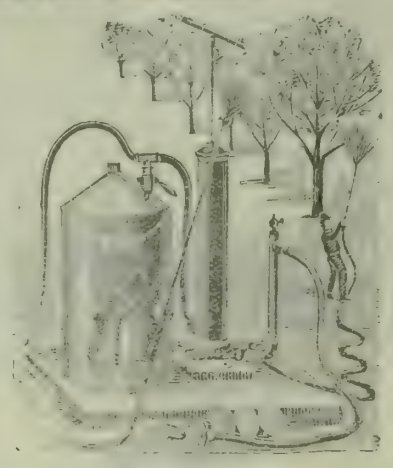
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AND WHITEWASHING MACHINES.

SIX CASH PRIZES, SILVER MEDAL AND A DIPLOMA at the late State Fair for the best Spray Nozzles and Spraying Apparatus. Complete outfits, prices from $8 to $90. Send for Circular and Price List. **No. 10 Hayes Street, San Francisco.**



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This is a strong, light bucket pump, and is just what has been needed by small Orchardists, Farmers, Stock and Poultry Raisers. This pump will stand a pressure of from 50 to 75 lbs. to the square inch. When charged it will keep up a continuous spray from 5 to 15 minutes, without pumping, according to the amount of air in the reservoir.

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Spray Rods made to spray, from the ground, from 1 foot to 30 feet high and at any angle.

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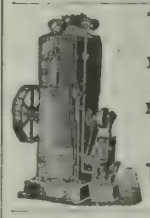
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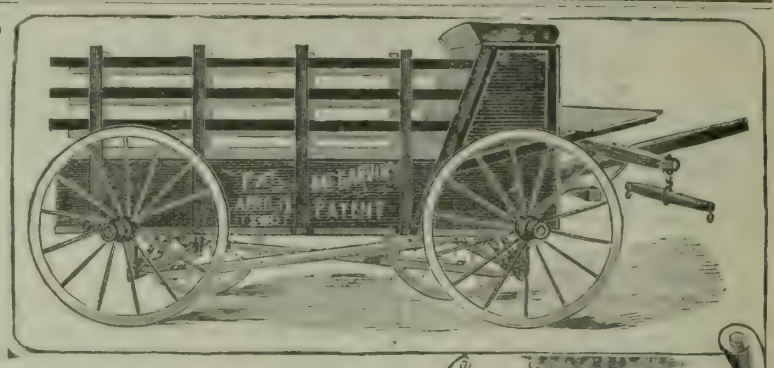
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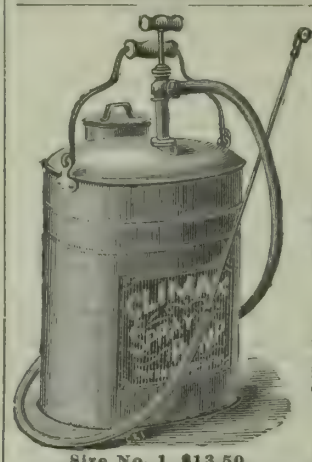
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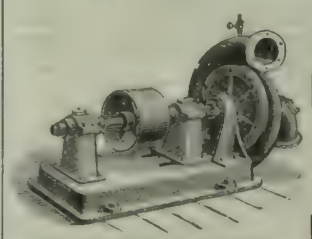
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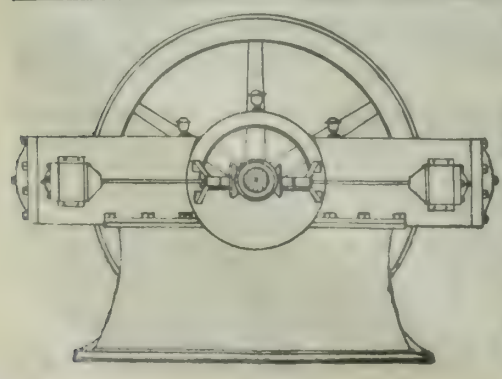
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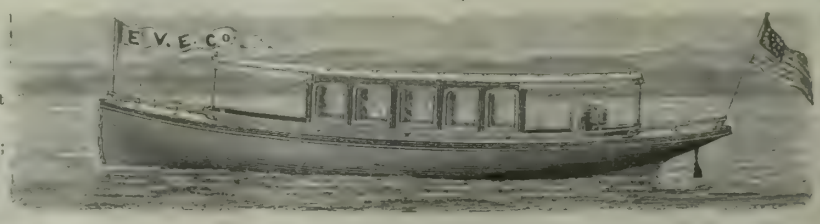


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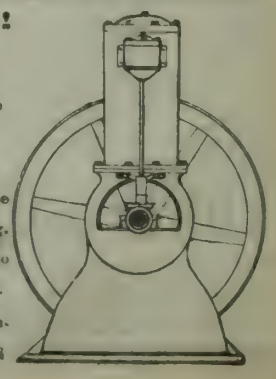
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We offer for the coming planting season a large and healthy stock of

Fruit and Ornamental Trees,
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25,000 Sweet Seedling Orange Trees, one and two years,
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Price on application. Address

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400,000 OLIVES, 18 VARIETIES.

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BY PLANTING QUITE A NUMBER OF THE LEADing varieties of Strawberry together for five years, I have produced a variety unlike any of the former. I have picked the fruit daily since April 20th to the present time, October 18th, and the vines are still full of bloom and berries. Roots are long and stand the drouth well. The berries are large, fine flavor and high color, and resemble the Jessie in shape somewhat. I am prepared to furnish them in small lots at $1.50 per doz., postpaid. R. E. FARRINGTON, General Nurseryman, Phœnix, Arizona.

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The Knights Ferry White Adriatic is conceded by all be the best Fig produced in America.

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200 SACKS FRESH
PEACH PITS.
Call on or address
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A CHOICE LOT OF TWO AND THREE-YEAR-OLD Picholine Olive Trees in open ground. Low prices. MRS. C. W. CRANE, 1117 Nineteenth St., Oakland, Alameda Co., Cal., or O. J. BACKUS, 614 Battery St., S. F.

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SEEDLESS GRAPE ROOTS.

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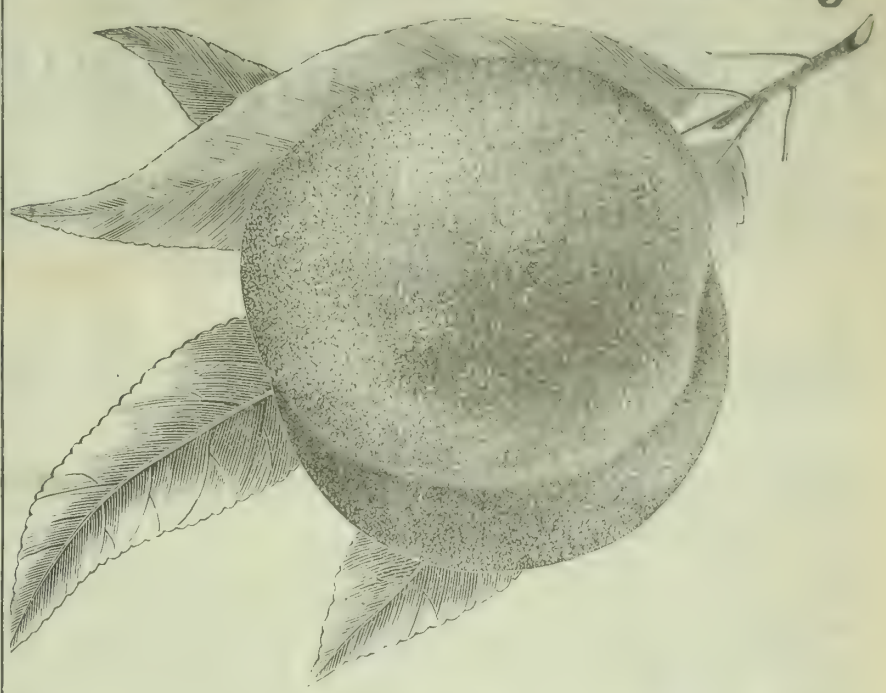
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ONE AND THREE-FOURTHS MILLIONS.

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FREE FROM INSECT PESTS.

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MOUNTAIN NURSERY.

Fine Budded Orange and Lemon Trees.

First Class, 4½ to 6 feet; Second Class, 3½ to 4½ feet.

SEEDLING TREES,
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HARDY NORTHERN GROWN
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GRASS, FIELD, GARDEN AND FLOWER.
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All the Leading Varieties of APPLE, PEAR, CHERRY, PLUM, PRUNE, APRICOT, NECTARINE and ALMOND.

Fine Stock of ORANGES, LEMONS, OLIVES, NUT TREES and FIGS.

The Only Stock of PERSIAN WALNUTS (Kaghazi) on the Pacific Coast.

300,000 GRAPE VINES (Strong Roots). Small Fruits, Berry Bushes, Etc., Etc., in Large Quantities.

ORNAMENTAL and SHADE TREES, Roses, Standard Roses, Clematis, Trailing Vines, Plants, Etc., Etc., in Great Variety.

Packing Grounds at Niles, Cal., Unsurpassed Facilities for Shipping. Correspondence solicited.

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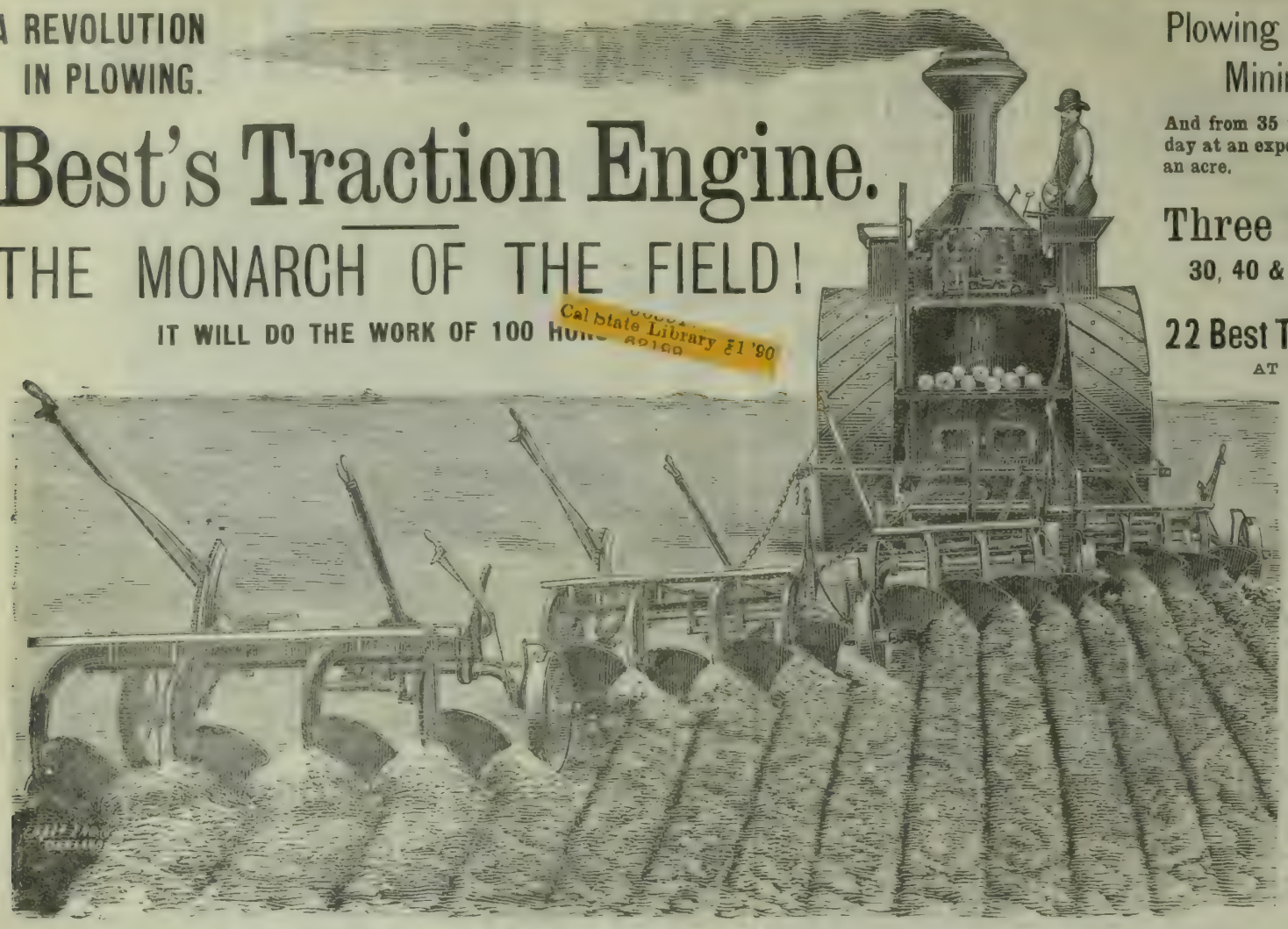
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Best's Traction Engine.

THE MONARCH OF THE FIELD!

IT WILL DO THE WORK OF 100 HORSES



Plowing Reduced to a Minimum Cost,

And from 35 to 45 acres plowed each day at an expense of 50 cts. to 60 cts. an acre.

Three Sizes Built,

30, 40 & 50-Horse Power,

—AND—

22 Best Traction Engines

AT WORK NOW.

A Fifty-Foot Harrow is Used,

With which from 100 to 125 acres are harrowed each day, doing the work much better than horses.

Messrs. Reed & Frisbie of Kings City are pulling a gang of 25 ten-inch plows, moving at the rate of three miles an hour and plowing eight acres an hour with a Best's Traction Engine.

Plowing by Sunlight by Day and Headlight by Night.

GOLD MEDAL

Awarded the Best Traction Engine by

The State Agricultural Society

At Sacramento, 1890.

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TREES! TREES!

NURSERY STOCK

OF EVERY DESCRIPTION.

SEEDS,

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VEGETABLE,

FLOWER, TREE,

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PRUNES, PEACHES, APRICOTS, APPLES, ALMONDS, CHERRY, PLUMS, PEARS, NECTARINES, ETC.

155,000

ORANGE AND LEMON TREES.

530 ACRES OF NURSERY GROUNDS.

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MOST COMPLETE LINE OF SEEDS AND BULBS ON THE COAST.

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NOW READY. SEND FOR IT. FREE

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CORRESPONDENCE SOLICITED.

All Orders will Receive Prompt Attention.

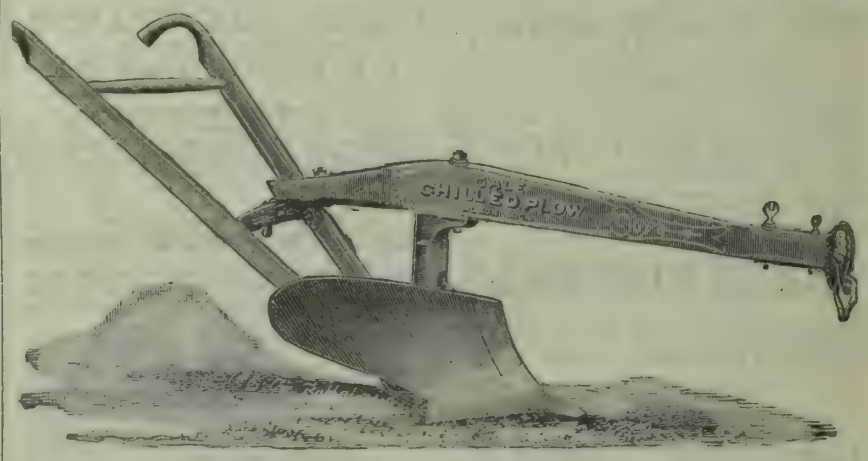
SEE OUR STOCK OF TREES, PLANTS, SEEDS, ETC., AND GET OUR PRICES BEFORE PURCHASING ELSEWHERE.

SATISFACTION GUARANTEED.

W. R. STRONG CO., SACRAMENTO, CAL.

THE

Gale Chilled Plows.



No. 25A,	One Horse,	Garden Plow,	cuts furrow 4½	x	9	inches—Weight 50 pounds				$ 5 50
" 31,	Two "	Light, General Plow,	cuts furrow 6	x	12	inches—Weight 105 pounds				10 50
" 32,	" "	" " "	" "	x	12	" " 94	"			10 00
" 34,	Three "	Stubble "	" "	x	16	" " 130	"			11 00
" 35,	One "	Garden "	" "	x	8	" " 50	"			5 00
" 33,	" "	" "	" "	x	11	" " 65	"			8 00
" 37,	Two "	General	" "	x	13	" " 108	"			10 50
" 38,	One "	Vineyard	" "	x	11	" " 63	"			8 00

No. 38 Plow is made especially for our California Vineyards.

SOLD BY US FOR YEARS!

HAVE GIVEN GREAT SATISFACTION.

We Carry Nothing But the Best. We Carry Every Implement a Farmer Needs. We Sell at the Lowest Cash Prices.

WE ARE THE LARGEST IMPLEMENT HOUSE ON THE COAST.

BAKER & HAMILTON,

SAN FRANCISCO AND SACRAMENTO.

PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Vol. XL.—No. 24. SAN FRANCISCO, SATURDAY, DECEMBER 13, 1890. { DEWEY & CO., Publishers, Office, 220 Market St.



GROUP OF HEREFORDS OF WILD FLOWER STOCK FARM, OWNED BY A. HEILBRON & BRO., SACRAMENTO.

Heilbrons' Herefords.

In our State Fair issue in September last we gave a group of Shorthorns, owned by A. Heilbron & Bro. of Sacramento, who won a fine string of premiums for this breed. Heilbrons have also on their fine Wild Flower Stock Farm in Fresno county, a splendid band of about 35 Herefords, representatives of which were shown at the State Fair and captured all the awards made in the Hereford class. Owing to this record and to the greater recognition being constantly gained on this coast by the Herefords as a beef breed, we give on this page a handsome group of the "White Faces" from the Wild Flower herd.

The group does not include Howard 31772, which stands at the head of Heilbrons' herd. He was probably too busy to have his picture taken. He is, however, entitled to mention as descending from Grove 3d, one of the most noted Herefords in the United States, having sold for $7000. The lord of the picture in Howard's absence is Sir Stanley 27796, bred by the famous pioneer Hereford breeder, T. L. Miller of Beecher, Ill., calved in March, 1886, consequently coming five years old and in his prime. He is a splendid animal in all respects.

The cow in the background of the picture is Jessie M., an imported cow bred by T. Mydolliton of England and now coming ten years old. Her weight is 1800 pounds and she is massive, shapely and carries her years well. The cow in the foreground is Mabel 17417, bred in Ohio and coming seven years old next May. Her lines are faultless and bespeak an animal rich in best cuts. The Heilbrons' experience with the Herefords is a reaffirmation of the characteristics of this breed. The prepotency of the thoroughbred Hereford sire is marvelous. He puts the White Face on almost all his offspring, whatever may be the blood of the dam; and not only that, but when crossed upon the common cows of the country, he endows the progeny well with the form as well as the markings of the Herefords; consequently the direct value of this breed in improving stock where the improvement is desired in the line of beef, form, size, early maturity, hardiness, seem to be all secured by the use of the Herefords upon common cows, and it is a question whether any of the breeds used for crossing can approach the historic White Face in these directions.

A NEW FREIGHT SCHEDULE.—Produce shippers will be interested in the announcement that a new schedule of overland freight rates is to go into effect about February 1st. The Southern Pacific authorities give the assurance that "the changes in freight rates will not materially affect the shipper or consumer, and have been made in accordance with advances on lines all over the country. In some instances the advance is even more than ten per cent, in most cases it is below, while for wool, green fruit and certain classes of dried fruit there has been no change made." We shall have to wait awhile before it can be told just whose ox is gored.

THE great money lottery of the city of Hamburg, Germany, is bidding to be the successor in this country of the great Louisiana Lottery.

Poultry Yard.

Seasonable Poultry Talk.

Editors Press:—About this time of the year people seem to need reminding that poultry must be taken care of or sickness, loss of life, or at least non-production of eggs, when eggs are high, will be the result. People must be reminded that instead of losses by disease and non-production, they could have poultry in good condition and productive by exerting care when the fowls most need it.

The time of molting and change of season from the mild, even temperature of summer to the colder and more boisterous weather of late fall and winter is a trying season, and not only do the fowls need at this time extra care in food and drink, but hen-houses must be looked to and put in condition to exclude all drafts through cracks and holes directly on the fowls. All places in the roofs where rain may enter should be repaired and the houses thoroughly overhauled as to proper ventilation both above the fowls and below them, for, although cold, damp winds blowing directly on the fowls are productive of diseases of various kinds, yet they absolutely need such ventilation as will effectually carry away from the house all effluvia arising from their droppings. This may be done by raising the house a few inches at the bottom and putting blocks or bricks under the corners, or, if the houses are large enough to make it necessary, by putting them along the sides and ends in sufficient number to form a proper support to the house and make it steady, or by leaving a long opening just above the sill on the sides and ends sufficient to insure a draft of air directly through the house along the floor or ground which will carry away the objectionable atmosphere. As for that which may arise from the breath of the fowls or their bodies, it will rise because of its warmth and pass off above, thus insuring to the fowls a pure atmosphere which, in the case of young and growing fowls, is very necessary to insure health and condition.

Then in the matter of the various parasites that infest the houses and live upon the fowls, to their great discomfort and loss of life even, much may be necessary to be done, as even where considerable care has been exercised to keep everything neat, these pests will sometimes make their presence manifest, and a thorough scalding of roost-houses and nest-boxes with hot water and carbolic acid mixture is pretty sure to eradicate them. For the fowls themselves one can by the help of a dust bath of dust and sulphur and carbolic powder—say one part carbolic powder and sulphur in equal quantities and four parts dust—cleanse them also. Smearing the roosts with a mixture of sulphur and grease of any kind will operate as a preventive, and I have seen it somewhere stated not long since that small open-mouthed bottles or jars containing bisulphide of carbon renewed occasionally was effectual in driving away these pests. Whitewashing with hot whitewash in which carbolic acid has been mixed is also excellent as a preventive, and serves also to coat over and fill up all crevices or small places where lice could harbor.

Fowls infested with lice not only will not lay but as a result of low condition take on disease more readily, will become roupy, with swelled heads and putrid eyes, choked up with diphtheria, lame and helpless with rheumatism, drooping and sickly, finally dying from these causes, and many others not as yet well known, but which are becoming better understood as the importance of the industry is more and more recognized.

For roup I do not know any cure after it becomes roup, but in the incipient stages of the disease, before it gets to be confirmed roup, it may be treated successfully mainly by keeping the fowl in warm, clean quarters, and getting it into good condition, using also some disinfectant carbolic acid sprinkled on the walls and floor, or hung in a wide-mouthed bottle below the roosts where it will impregnate the atmosphere to be breathed by the fowl. Always separate the sick ones from the well ones, but give all the same treatment.

Deadly Diseases.

When once a fowl is decidedly and unmistakably roupy, there is, so far as my experience goes, no remedy but the hatchet and burying the diseased body off the range deeply in the ground. I have not found roup to be contagious, and have tested it fairly, I think, having kept fowls in all stages of it, some even which were dying from it, in confinement in hospital (a close house) with well ones all eating and drinking from the same dishes and breathing the same atmosphere, and the well ones were not affected in any way that I could see, and this continued for between three and four months. Still, as a precautionary measure, it is safe and in all ways better to separate the infected ones from the well ones, if only to give them the greater care, but where roup has made its appearance all are liable to it, for what causes it in one may cause it in another, and prevention is always better than attempts to cure, so extra care and treatment is necessary for all. Fowls in good condition and properly housed are not very liable to take on disease.

For diphtheria, a deadly disease also, but more amenable to treatment than roup, unless in its last stages, much the same treatment should be observed, separating always the sick ones as fast as they show any indication of disease, giving them sulphate of potash in their drinking water, and allowing them no other, or at any rate, seeing that they drink plentifully of it before changing it for fresh. Lime in the water may do as well where it has not become very serious. Do not omit the thorough disinfecting of their quarters, which, while warm and free from all drafts in them, should be sufficiently ventilated to insure pure air.

A great many inquiries come to me at this time of year, such as "Can you tell me what is the matter with my fowls; their heads swell up and their eyes get sore, and finally the ball turns white and becomes solid," or "My fowls go around choking and opening their bills, and finally choke to death," or "They go about limping and finally droop and die." The first is one and the most common form of roup, and in that state is already incurable, and the only thing to be done with a fowl in that condition is to kill and bury or burn it. The first indication of sore eyes is the commencement of roup, and should be attended to at once. Frequently bathing the eyes with coal oil or alum and water or salt and water will correct it, but the other remedies spoken of above must not be neglected, for causes are operating to produce roup and should be combated.

The lameness may indicate rheumatism or disease of the liver and is more difficult to treat, but not more incurable than it is in the human animal and requires about the same treatment. I have several times advocated the advisability of adding to the knowledge of the veterinary surgeon, the old-time horse and cow doctor, the ability to diagnose the diseases of poultry and treat them. How many hens, particularly of the finer breeds, would it take to amount to the value of a horse or cow? To save them, the owner would at once call in the services of a "Vet," and yet how often will one lose in poultry by disease three or four, and even 10 or 20 times the value of such horse or cow because no one can tell him what he ought to do to check it and he himself has not the requisite knowledge. I think that poultry journals should interest themselves in this matter. Now the usual course among sufferers is to inquire of each other of or some one recognized as a poultry keeper, "What is the matter with my fowls and what must I do to keep from losing them all?"

One difficulty with people having poultry is as a general thing that they don't take any poultry journal or any agricultural paper that gives poultry literature, and so don't benefit by what they might read therein. Often one finds in a paper of that kind just the information that he needs to help him through his difficulty, and which has been worth to him many times the price of the paper.

The statistical records of our country for 1882 show that the value of cotton raised was $410 000.000; hay, $436,000.000; dairy products, $254,000,000; wheat, $484,000.000; poultry and poultry products, $560,000,000, which goes to show that even in those days the poultry interest was of some importance, as you will see by comparing figures; and now I venture to say that it has increased in importance more than any other one interest, and represents a larger value in dollars and cents. In 1885 the egg production of the Atlantic States was set down at 1,820,000 dozen, at an average value of 12 cents per dozen, which I think was far below the mark. This was, however, a mere estimate and not a part of the statistical record.

Hints on Feeding.

At this time of year, corn and coarsely ground meal may be fed somewhat more freely to laying hens; the first dry and the latter mixed with middlings and made into a stiff mush with scalding water, or better yet, scalding milk, and fed as warm as the fowls can eat it with safety and as early in the morning as they can see to eat it, as well as at noon, substituting, say twice a week, meat scraps with the hot broth, putting in cayenne pepper, say a tablespoonful to 20 fowls. Take what vegetables you like, such as onions, beets, carrots or potatoes, to boil up with the meat scraps, and it makes a rich, nutritious food much relished by the fowls, and it never fails to set them singing, and so, of course, to think about laying.

With all this, do not fail to keep their houses and yards, where yarded, thoroughly clean, and see that they have water in the morning fresh from the well, and not water of the day before in their vessels with ice in it, or at least cold enough to counteract the benefit to them of the warm mush which you give them. It is better to throw the water out of their drinking vessels at night and give them water with the chill off if you care for eggs; if you do not, perhaps this would not be necessary. In this connection, perhaps it would not be considered out of place to say

A Few Words About Eggs.

As a general thing, the average poultry keeper outside of well-conducted poultry ranches realizes more from his fowls in eggs when they are from 15 to 20 cents per dozen than he does when they are worth in market from 40 to 60 cents at retail, and very evidently the reason for this is to be found in the fact that the time of high prices in eggs is the time when only those fowls which have been kept in good condition and are receiving the best of care are the ones, comparatively speaking, that are producing eggs, and during this difficult season of the year, at least paying their way, or, perhaps even better, while others which do not receive this care are getting through the difficulties of molting and the discomfort caused by the change in the season as best they can, are apparently satisfied to barely live through it without the added care and exhaustion of laying eggs which they decide to put off until the weather changes and they feel better.

As to which breed of fowls is the best egg-producer throughout the year, opinions differ somewhat, and no doubt locality, difference in soil and climate, has a great deal to do with this difference of opinion. While true that one breed shows best results under one form of treatment which would not do at all with fowls of another breed, it is equally true that the same treatment will not answer for all localities and climates, even for the same breed, and so while one may adopt general rules for his guidance in the care of his stock, yet it must be with such modifications and changes as the intelligent and earnest poultry-raiser may find to be necessary in his locality.

The successful poultryman is never the man who takes things easy and does not care to profit through the knowledge of and the practice of the best methods known, but the one who, by all means in his power, thoroughly informs himself and industriously puts in practice the best known means of rendering his business profitable and satisfactory—attending strictly and untiringly to the comfort and well-being of his fowls, which in such cases will not fail to make him grateful returns.

I can't see why there should be any conflict between Eastern or imported eggs of the best grade even and choice fresh-laid ranch eggs, as there is certainly no comparison that can be made between them that will not result, with those who have a true appreciation of the qualities of a fresh-laid egg, in favor of our home eggs, those I mean which are the product of properly-kept fowls and not of those which are expected to forage for themselves and live as best they can. The produce of such fowls is known as "store eggs." They are gathered once or twice a week and taken to market in a jolting wagon packed in bran. Eggs that are gathered twice a day (not the same egg twice, however), carefully handled and put in market within a few hours with all care, must be easily distinguished by all who have a true knowledge of the egg from those that are gathered and marketed, as the greater part, if not all, of the Eastern eggs are, and then packed into a jolting rail car, the first and last stages of their journey in a sweltering atmosphere and the middle or mountain portion exposed to an extreme of cold, and constantly shaken and jolted as they are by the motion of the car, cannot fail to have their character entirely changed. The Eastern egg can in no way compare and should never be allowed to compete with our choice ranch eggs in price, neither do they yet in full measure, although many dealers endeavor to induce their patrons to think them at least an equally good egg, but they never can be. Should they, however, in the distant future reduce the price of our home production to a non-paying basis, then I suppose our only hope for aid and comfort rests in the McKinley bill.

Lodi. T. B. Geffroy.

The Rustler Breed.

Editors Press:—We have a queer breed of chickens here, which is a natural production of this vicinity, having first appeared on several ranches here in the spring of 1889. The chickens do not have feathers, but instead are covered with a long, hairy-like down. They are fine layers and we call them "Rustlers" from the fact that they are very industrious and hardy and wander farther in search of food than other chickens. They cannot fly and are very desirable on that account. It would be well for some one to collect them and experiment with them, as I believe that they are the "boss." I think that they would furnish excellent down for pillows, bedding, etc. They seem to have sprung from crossing the Plymouth Rock with other breeds of chickens; or has one ever heard of such chickens in other localities? They are new here. T. B L.

Briceland, Cal.

Clover for Poultry.

Editors Press:—Is burr clover good for poultry? Can any one tell me where to apply for *genuine* clover—if, indeed, it is raised on the coast? C. P. N.

Hayward's, Cal.

[We hardly know what our correspondent means by "genuine clover." If he means "red" and "white" clover as grown at the East, he can get the seed of any seedsman and can grow either kind successfully in the bay region with a moderate amount of watering.—Eds. Press.]

The Field.

A Great Potato Crop.

Nearly 1000 bushels of potatoes, or to be exact, 974 bushels and 48 pounds, have been grown on one acre of land in Johnson county, Wyoming, the past season. This crop wins the first prize of several hundred dollars offered by the *American Agriculturist* for the largest yield of potatoes on one exact acre. It was grown on virgin soil, without manure or fertilizer, but the land was rich in potash, and the copious irrigation was of water also rich in saline material. There were 22,800 hills on one acre, and 1560 pounds of sets, containing one, two and three eyes were planted of the Early Vermont and Manhattan varieties. The profit on the crop on this first prize acre was $714 exclusive of $500 in prizes. Another large crop was that of R. A. Chisholm of Del Norte, Colo., of 847½ bushels on 1000 pounds of fertilizer. There was great interest in the competition in the famous potato-growing county of Aroostook, Northern Maine, where the crops secured ranged from 450 to 746 bushels per acre. These crops largely exceed those grown in a similar competition last year, when 738½ bushels of potatoes in Aroostook county took the grand prize of $1100. Other prize crops last year were—135 bushels of oats on one acre, 80 bushels of wheat and 255 bushels of shelled corn. It appears from the forthcoming issue of the *American Agriculturist*, in which the results of the contest are to appear, that the average Western potato crop on virgin soil is hardly up to that under ordinary culture in the East, while intelligent fertilization seems equally profitable in both sections. The wonderful operation of the mysterious laboratory of the soil is emphasized by the evidence in this competition that crops were increased 50 or 100 per cent by the application of actually pure plant food at the rate of only one pound to 100 or 200 square feet of land. The superiority of fertilizers or chemical manures over stable manure for potatoes is also emphasized by the two years' contest.

The Vineyard.

The Fresno Raisin Interest.

Through the kindness of Mr. George W. Smith, and at no little expense and time and work, the *Expositor* is enabled to furnish its readers to-day with exact information on this subject which was never before published. Mr. Smith is compiling a directory for the Viticultural Commission and has been appointed to canvass Fresno, Merced, Tulare and Mariposa counties. He began his work on the first day of last August and has now completed a list of Fresno and Merced counties.

Heretofore the Viticultural Commission was content with the names of vineyardists; in the present list, however, is included the postoffice address of each owner, the name of the vineyard, the total number of acres in grapes; whether they are wine grapes, raisin grapes or table grapes; also the number of acres in bearing, and whether the owner of the vineyard is a wine-maker.

This new departure was made at the suggestion of George West, Commissioner of Viticulture for the San Joaquin valley district, who deserves great credit for it, as the list, when entirely complete, will be most valuable.

It will surprise even the knowing to learn that there are 1600 vineyardists in this county, that the total acreage of grapes is 49,086, that the acreage in bearing is 22,280, and the acreage in wine grapes, 5908. The increase in the acreage during the season of '89–'90 has been particularly heavy, the planting to vines of tracts of from 250 to 1000 acres being quite a frequent occurrence.

What is especially interesting to the home-seeker in connection with this information is the fact that every one of these vineyardists is prosperous. No other horticultural industry is so profitable as the culture of the raisin grape, in no other is the work so pleasant and no other yields a return so quickly.

An acre of Muscat vines in full bearing will yield from two to three tons of grapes on good heavy soil; at 5½ cents a pound in the sweatbox, this means from $225 to $325 per acre, gross. Numerous instances are known; however, where the yield of an acre of Muscats amounted to as much as $450, this being the result of careful cultivation and favorable circumstances. Some grapes are borne on the vines when they are one year old, while two-year-olds have been known to bear a crop. At three years the vines pay the expenses and interest on the money invested, and at four years from planting they bring the first large paying crop.

An acre of wine grapes will yield from seven to nine tons. These may be sold either wet or dried. The former will sell at about $12 a ton, or from $85 to $100 for the yield of an acre. Dried, the yield will shrink to from one and one-half to two tons, which will bring $60 a ton. These figures are for land that is of fair quality and which has received intelligent cultivation. Some vineyards yield less and others more, so the figures given are a fair average.

Multiplying the yield of an acre of grapes by the total number of acres in bearing, the value of its vineyards to Fresno county at once becomes apparent. There is a difficulty, however, in striking an average for an acre of grapes for the purpose of making this calculation, for the bearing vines are of all ages, and the differences in soil and methods of cultivation also cut an important figure. Of the 28 000 acres in bearing, the vines on about 20,000 must have attained their full growth by this time. A very moderate estimate of the amount of money to be gained from an acre of grapes is $200; this would bring the total for the 20,000 acres to $4,000,000.

In about four years more, the total acreage now in grapes, 49,086, will be in full bearing; multiplying this by $200 the value of one acre, the immense total of $9,817,200 is reached for the entire grape crop of 1894 off of the vines now

planted. What a grand source of wealth to Fresno county!

Of the 5,600,000 acres of land comprising this county, at least a fourth may be classed as agricultural land. Owing to the absence of water in sufficient quantities, however, only one-third of this amount, or about 400,000 acres, is suitable for the culture of the grape. But these 400,000 acres are here awaiting the coming of the enterprising capitalist, the industrious home-seeker. What has been and is being done in raisin-growing may still be done, and the careful perusal of the list that follows must convince the most skeptical of the great importance of this industry.

The statement which is put forward now and then that the raisin industry is being overdone has no foundation in fact. Though the increase in this year's crop is considerable, there will not be enough to meet the demand. The importations from Southern Europe seem to be on the decrease, while the demand here is rapidly increasing. Fresno raisins are already driving the imported from some of the Eastern markets, and the time will soon be here when part of this county's product will find its way to foreign markets.—*Fresno Expositor.*

HORTICULTURE.

The Fruit-Growers' Convention at Santa Cruz.

Culture of Citrus Fruits in Northern California.

At the recent convention of fruit-growers at Santa Cruz, under the auspices of the State Board of Horticulture, the following essay was read by S. S. Boynton of Oroville:

The culture of citrus fruits in Northern California is no longer theoretical or experimental, no longer a conceit, a supposition or a belief, but is a solid, enduring, self-evident and living fact. The orange and lemon are there not door-yard ornaments, set as curiosities, placed in sheltered and protected spots, and are not grown under conditions more favorable than are elsewhere in this State awarded to these fruits. The "Northern Citrus Belt" has long been the butt of good-natured ridicule, the subject of jest and laughter by those who had interests to subserve by crying down its merits and deriding its possibilities. The time is, however, near at hand when its true light will burst forth with a vividness and brilliancy little dreamed of by those who have not studied its grand capabilities and its enormous territorial extent.

Within the next few years such a quantity of citrus fruits will be produced and shipped from that region as will forever set at rest any aspersions or reflections upon that land as a citrus-fruit region. The day is by no means distant when its orange and lemon trees will be numbered by millions, and when its annual output of these fruits will amount to thousands of carloads.

We are not talking at random upon this subject nor carried away by enthusiasm. We have given the subject not only months but years of careful study, and know whereof we speak.

For a full score and ten years the historic orange tree at Bidwell Bar, in Butte, 200 miles north of where we now are, has blossomed and borne fruit without the loss of a single crop, and stands to-day a mute but eloquent green and living witness whose testimony is worthy of consideration and belief. While in a hundred spots throughout the counties of Butte, Yuba, Placer and others that might be named, oranges, olives and lemons have been in bearing for the past 20 years, yet citrus culture in its broad and commercial sense is still in its swaddling-clothes.

In September of 1885, in the town of Oroville, the first suggestion was made of holding a citrus fair in Northern California. Then the Sacramento *Bee* caught up the idea and asserted that the citizens of Oroville knew that oranges could be grown there, but what was needed was to convince others of that fact. It urged that a citrus fair held in Sacramento, the capital of the State, ought to and would accomplish this purpose. The residents of Oroville coincided with the statements of the Sacramento journals and those of other towns fell into line. The business men of the capital city made that exhibition a reality, and fruit from 12 different counties was displayed at the first citrus fair of Northern California. That extensive, marvelous, and splendid display of the semi-tropical productions of the northern part of this State, at once, and for the first time, awakened the people of that region to the possibilities of their soil and climate, and was the direct cause of the great planting of citrus trees that has since taken place. The first fair was held in January of 1886, so that the oldest trees, set out since that date, and which comprise more than nine-tenths of the total number of the whole region, are only four years old at the present time.

It will thus be seen that citrus culture on an extended scale is a new industry in Northern California. The first man to be aroused and stimulated to action was Hon. John C. Gray of Oroville, who left the pavilion in which that fair was being held, hurried to his home, had 20 acres of land prepared, went to Santa Clara county and purchased 2000 young olive trees, and while the fair was still fresh in the minds of all, he had these 2000 young trees planted in Butte county soil. He has since continued in the line thus begun and has now 10,000 young and thrifty olive trees, and from several hundred of these he will this year gather fruit. That he made no financial mistake is evident from the fact that he has since been offered $500 an acre for his olive plantation. Other citizens of Oroville were quickened to activity by his example and an organization of the leading business men of that town was speedily effected. Thirty acres of good land were secured; two of the company went to Riverside and purchased 2100 Washington Navel orange trees, and during May and June these were planted on the north bank of Feather river in what is now the colony of Thermalito. The land cost them $100 an acre, the trees were $1.25 each, and to this must be added the cost of transportation, planting and caring for them during the intervening years. It will thus be seen that these gentlemen were not afraid to back their ideas and opinions of citrus culture with their coin. This grove has since been increased and at present numbers 3300 orange trees. They are now loaded with fast ripening fruit and this year will yield a large and abundant crop.

Citrus-fruit planting was by no means confined to Butte, but all the other counties of the Sacramento valley felt the influence. A second citrus fair was held in the capital city in December of 1886, two fairs thus being held in one year, one in January and the other in the following December, and at this last fair fruit from 22 counties was displayed. These fairs, and liberal advertising by newspapers, caused much attention to be paid to citrus culture in Northern California, especially in the Sacramento valley and its adjacent foothills. Trees were planted not only in the sheltering foothills and on high and well-drained land, but in the open valley, and even along the low river bottoms, the very last place where an orange grove should be set. As a result of this movement continued during the past three years we have in the vicinity of Oroville, Thermalito and Palermo in Eastern Butte 98,349 orange, 6812 lemon and 49,600 olive trees, a total of 154,761, or in round numbers about 1500 acres. The number of citrus trees planted in other Northern California counties I am unable to state with exactness, but know that Placer, Sacramento, Colusa, Tehama, have all large numbers, and that Yuba in addition to her smaller tracts has planted one splendid young orchard of 130 acres or 13,000 orange trees in a single body. I believe it would not be unjust to the other counties in that section to estimate that Butte has planted as many citrus trees as all the others combined, which would then make 309,000 trees or 3000 acres devoted to the culture of citrus fruits in that part of the State.

It is unnecessary that I should go into particulars regarding the planting of orange seed, the manner of growing the young trees, budding and grafting and other practical details of that kind. To one point I will, however, call particular attention. Hitherto, all the young trees—orange, lemon and olive—planted in that section have been brought from Florida or from Southern California; now there are vast numbers of young trees being raised, and the future planting will be done with these home-grown trees. In the vicinity of Oroville there are at least half a million young trees from one to four years old, and there are a large number of these trees at Palermo, Wyandotte, Marysville, Chico, Newcastle and other places that will ere long be set out in orchards, and thus will be largely extended citrus culture in that part of California.

Markets.

The market for oranges is considered almost unlimited. On the north lie the great States of Oregon and Washington with a population of 600,000, while to the east lies a vast territory, a portion of which we may with confidence expect to supply with its citrus fruits. With these certain and ever-increasing markets in view, the prospect for growing oranges in Northern California is an alluring one. The profits of those who have bearing trees are such as to encourage others who have planted out young orchards and are now awaiting their coming into bearing. So flattering are these prospects that during the present year a ten-acre tract of two-year-old Washington Navel orange trees at Thermalito sold for $650 an acre. Sales at Palermo have also been extremely flattering.

If the citrus-fruit outlook is now so attractive and brilliant, some may ask why this industry was not pushed ahead long ago, for orange trees have been in bearing in that part of the State for the past 30 years. May we ask in turn, are there no other latent and undeveloped resources left in that and other parts of our grand State? The olive flourished for fourscore years in Southern California ere the manufacture of olive oil by Mr. Cooper and others attracted general attention to that tree. Fig-growing as a commercial enterprise is a comparatively new one, yet it has been known for 40 years that the fig flourished in all our warmer valleys. Fifteen years ago California raisins were a rarity, while now our output is enormous and is rapidly increasing; yet the vine was known to flourish here in great perfection many years ere raisin-making became a business. Cork is worthy of attention here, is adapted to our soil and climate, and in Spain and Northern Africa immense fortunes have been made in cork, yet it is a neglected industry in our State. It is certain that money can be made here in producing camphor, and that tree grows readily in all the warmer parts of California, yet who thinks of planting camphor trees from which to make money? Why is it that we still import rhubarb from Europe when it can be so readily produced here? There is money in licorice, yet that is among the neglected industries of California. Our prune production has grown into a marvelous and gigantic enterprise, yet prune trees bore in this State long ere the fruit in any quantity was put upon the market. Various reasons prevented the earlier planting of citrus fruits in Northern California upon a large scale, and one of these by too many has been overlooked.

The orange and lemon have been most successful along the low foothills, as in Butte, Yuba and Placer. The earth there is mostly a reddish clay soil mixed with gravel, and which requires considerable water to make productive. Nearly all the water for irrigation in those localities was brought from the mountains for mining purposes and was held at a high price. Now, until the general decline in mining, no man could afford to buy water for irrigating purposes, and from this cause more than any other may be traced the lack of planting citrus-fruit trees. When mining declined the price of water was lowered, men saw that they could afford to experiment, and they began to increase the number of their citrus trees. Another reason was in the great expense in caring for an orange grove and bringing it into bearing. If the orange is king of fruits, it requires a royal revenue to pay the great expense during the time it is growing and coming into bearing. If to this we add the lack of knowledge regarding the cultivation of citrus fruits among the residents, and the further fact that many believed they could only be grown in sheltered and protected spots where the conditions were unusually favorable, the reason is fairly explained why citrus culture was not sooner begun upon an extensive scale.

The first citrus fair at Sacramento was the great awakening. When the fruit from 12 grand counties had been gathered and the productions compared, it was seen that citrus culture extended over a far broader area than people had heretofore realized. The moment this fact was fairly impressed upon the minds of the people, an almost instantaneous change was effected. It was like the traveler who emerges from the dark forest into the open sunlight of the broad valley, like the view presented from the top of a noble mountain when the earth grows at once tenfold larger than ever before. Vast and almost unlimited possibilities spread out before the inhabitants of that region, and some of these bright visions they set about converting into living realities. Nearly 300,000 orange, lemon and olive trees now growing as green and thriftily as they do upon Sicily's bright isle attest the faith and belief of the people of Northern California in citrus culture in the northern citrus belt. In the single colony of Thermalito there are 61 orchards, many of which are entirely of citrus fruits. In the colony of Palermo there are 65 orchards, containing 40,348 orange, 5112 lemon and 23,646 olive trees. Arrangements are already made to plant to citrus fruits 500 additional acres in that part of the State.

The essays, papers and discussions before this honorable body have always been of the most practical character. Facts relating to the best varieties of fruits, to the growth of the trees, to the methods of pruning, the various styles of packing and curing fruits, the destruction of insect pests and a hundred other useful points are yearly discussed. In presenting some facts upon citrus-fruit culture in Northern California, I cannot go into these details because this industry is yet immature and undeveloped. The citrus trees are free from scale except in one or two spots, the varieties planted are mostly those that experience in the southern part of the State has shown are most likely to be successful. The young trees in nearly all localities are grown without any kind of protection. But little attention has so far been paid to pruning, and no washes or sprays have been used except in the one or two spots where the trees have scale. There is none so far in Butte county, which is the leading section. In the matter of grading, packing and boxing citrus fruits, no new or novel ideas have been developed. I have only been able to present general facts to you without those practical and useful details that have made the meetings of this honorable body of such great value to all the fruit-growers of California.

That a grand future opens before the northern part of this State as a citrus-fruit region I am fully convinced, and ask your indulgence a moment longer, in presenting some figures that may be of interest. You are all aware that to grow citrus fruits successfully, three climatic conditions are necessary: First, that the annual average must not be too low; second, that the winter average must not be below 40 degrees; and third, that at no time during the winter must the cold be so great as to kill the trees. In order to present the claims of Northern California in a fair and candid manner, we have selected ten places in the citrus regions of Italy, ten in Southern California and ten in Northern California, and given the annual average, the average of winter and the lowest temperature of the winter. For convenience we have arranged these in tables.

LOCALITIES IN ITALY.

	For Year.	For Winter.	Lowest.
Palermo	63°	53	28°
Naples	61	48	23
Rome	60	48	19
Florence	58	44	1
Pisa	60	46	20
San Remo	60	48	25
Genoa	60	44	10
Mentone	60	46	23
Nice	59	46	26
Cannes	60	46	30

The average of these ten places for the winter is 47.7 degrees, for the year 60.2 degrees, and the lowest temperatures run from 10 to 32 degrees.

SOUTHERN CALIFORNIA.

	Av. Winter.	Av. Year.	Lowest.
Colton	52°	64°	20
Daggett	47	65	20
Santa Barbara	51	61	30
Los Angeles	53	60	30
San Diego	54	60	32
Newhall	48	60	18
Riverside	51	60	25
Poway	50	59	21
San Bernardino	49	60	
Spadra	54	64	28

These figures give the average for winter at 50 degrees, for the year at 60.5 degrees, and the lowest temperatures run from 18 to 32 degrees.

NORTHERN CALIFORNIA.

	Av. Winter.	Av. Year.	Lowest.
Auburn	46°	56°	18°
Chico	47	64	26
Oroville	52	65	20
Orland	52	67	26
Williams	48	63	22
Knight's Landing	48	63	20
Sacramento	48	62	19
Redding	48	64	24
Red Bluff	47	62	22
Marysville	50	64	24

A recapitulation shows that the winter average for Europe is 47.7 degrees, for Southern California is 51.2, and for Northern California 48.6. The annual average for Europe is 60.5 degrees, for Southern California is 61.3, and for Northern California is 63.3. The lowest temperatures may be seen by inspecting the table.

These figures are taken from the best authorities and may be considered correct and reliable. Upon the evidence of the figures here presented we see no reason why even the most prejudiced should hesitate in believing that Northern California will become famous in time as a citrus-fruit region. We firmly, honestly and sincerely believe that in years to come its low foothills and extended valleys will become as noted for their fruit as its mountains have for their gold and its wide plains for their grain. It is true the Almighty Creator in His infinite wisdom has wisely withheld from man the ability to foresee the future with certainty and precision. The Elijahs and Jeremiahs of old are no longer with us. That Supreme Being has, however, given us, in thought, fancy and supposition, the power to rend aside the mystic veil that hides the morrow from to-day, and permitted us to picture to ourselves in the roseate hues of hope and anticipation what the coming years will bring to pass; and as we gaze with prophetic eye into the unnumbered cycles of time when the land we have attempted to describe shall be enriched by the labors of ourselves and our children, we behold that vast region teeming with millions of happy, prosperous and progressive people; a country made thrifty and productive by their enterprise and their energy; a land bright with fruits and gay with flowers; its foothill slopes covered with extensive, luxuriant and profitable olive orchards rivaling in extent and richness those of Italy and Greece; its broad and beautiful valleys dotted here and there with splendid groves of that noble tree,

"Laden with fairest fruit,
Blossoms and fruit at once of golden hue;"

Its warm and sheltered nooks adorned with the continual blooming and ever-bearing lemon; far-spreading vineyards laden with grapes so large, sweet and delicious that none but California soil could have produced them. Magnificent fig trees lift their gigantic tops, filled with rich and luscious fruit. Lofty and towering date palms, of which the poet says:

"To man the palm is a gift divine,
Wherein all uses of life combine—
House and raiment and food and wine,"

Ornament the pleasing and fruitful landscape; and as we note the hill-slopes adorned with noble forests of chestnuts and walnuts, and the valleys green with vineyards and fair orchards—orchards of prune, pear, apricot and almond—orchards where

"Peaches glow 'neath sunny skies,
Like maidens' cheeks when blushes rise"—

Orchards where

"Pomegranates, rich and sweet,
Show the print of the sunbeams' feet"—

Orchards where

"On the grass land on the fallow
Drop the apples red and yellow'—

May we not apply the thought if not the exact words of the poet and say,

"This is the land of the orange and vine,
Where the flowers ever blossom, the beams ever shine"—

A land so rich, bountiful and prolific in the most favored fruit for man's use that all within the borders of our grand and noble State will be proud of it; a region so promising, so hopeful, so assuring, and one in which we have such unbounded faith and confidence, that I would the power were given to us for a moment to sweep aside the dim, opaque and mysterious curtain that hides futurity and permit us to see Northern California in all her splendid and crowning glories as she is destined in reality to become.

S. S. BOYNTON.

Oroville.

PATRONS OF HUSBANDRY

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

San Jose Grange.

Past Master Flint to Visit the Garden City, December 13th.

EDITORS PRESS:—San Jose Grange held its regular weekly meeting yesterday and although the weather looked threatening in the morning, the attendance was quite liberal. After electing three candidates and filing an application from one and attending to some routine business, we took up the order of the day and proceeded with the election of officers. [See list published elsewhere.] The election passed off very quietly. There was very little if any trading done. There was no "whooping up" of candidates, no transcendent oratory and no appearance of heartburning or jealousy on the part of disappointed aspirants. Defeats were accepted with resignation and the officers-elect accepted congratulations without any appearance of exultation. Installation will take place the first meeting in January, 1891.

A letter from Bro. Flint of Sacramento was read by Bro. Jones, accepting an invitation to attend our next meeting, December 13th, and confer the third and fourth degree on a class of four, and also assist at the Harvest Feast which follows. You who know Bro. Flint can appreciate the pleasure we anticipate on this occasion. By the way, in your last issue you stated that this meeting would take place on the 20th inst. The THIRTEENTH inst. is the correct date. Open meeting at 2 P. M., to which all interested in agriculture are cordially invited. Yours fraternally, F. DUNN.

[Bro. Past Master Dunn has written us so good a report we hope he will be elected regular correspondent for 1891.—EDS.]

Pescadero Grange.

EDITORS PRESS:—This Grange held its regular monthly meeting Dec. 6, and initiated a class in the third and fourth degrees in the forenoon, followed by the usual Harvest Feast, a nice musical entertainment and a real good social time. It looked like rain in the morning and some were deterred from attendance, but the meeting was the largest we have enjoyed for years.

Bro. and Sister Roache and our Grange baby had been invited to be with us on the occasion, but were prevented by duties at Watsonville Grange.

Charity begins at home. I hope it will not always stay there. There is a magic in those names that inspires Grange enthusiasm, and we wait with fond anticipation the realization of their promised visit. In the meantime we have a picture of Bro. Cressey with his fragrant blooming lyre at his side and our beautiful Grange baby on his knee—a touching memento of the late State Grange meeting at Watsonville, constantly awakening pleasant recollections.

At 2 P. M. the Grange was again called to order and a full set of officers elected. With satisfaction I am able to say that the gloom that enveloped Pescadero Grange in January has given place to the light and warmth of prosperity in December.

Patrons laboring under discouragements, remember that there is always light beyond the clouds. Don't yield to discouragements; changes are constantly occurring; new material and new conditions will surely offer opportunities that only need diligence and wisdom to mold into success. I. C. STEELE.

Santa Rosa.

EDITORS PRESS:—Santa Rosa Grange celebrated the anniversary day very pleasantly on Thursday, Dec. 4th.

Although the day was cloudy and rather disagreeable, there was quite a large number in attendance. Especially were we glad to see so many of the brothers and sisters from Bennett Valley and Sebastopol Granges.

A short closed session was held in the morning, adjourning at noon for the Harvest Feast.

In the afternoon there was an open meeting.

Bro. S. T. Coulter opened the meeting with a few introductory remarks, followed by a song of welcome by the Grange; reading of the Declaration of Purposes, by Bro. J. Talbot; recitation, "The Church Choir," Miss Bessie Murphy; instrumental solo, Miss Margaret Smith; recitation, Miss Ella Sutherland; instrumental solo, Miss Ella Murdock; reading, Don Mills; song, Bro. Harris; recitation, Miss Alice Bumbaugh; instrumental solo, Miss Smith; select reading, Miss Sutherland.

Instructive and interesting speeches were made by J. M. Talbot, Dr. R. P. Smith, Martin Litchfield, W. P. Crane, E. A. Rogers and others.

The next session of the Grange will be held Saturday, at half-past 1, the 13th inst., at which we will elect officers for the ensuing year. Fraternally, F. L. GAMBLE, Sec'y.

Santa Rosa, Dec. 8, '90.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

Now is the seed-time. Sow for the Grange as well as for the wheat-field and the garden.

The Natal Day of the Order for 1890 is past. December 4th was duly observed by several Granges in California.

Install your officers as early as possible in January, so that your Grange may get the annual word for 1891, and also so that the work of the new year may be begun in season.

The Legislature will soon be in session. Keep an eye on your Senator and on your Assemblyman! See that they work and vote for measures that will help agriculture—that means prosperity for all. E. W. D.

Worthy Master Davis' Return.

Worthy Master Davis returned from the National Grange last week and gladdened our office with his presence for an hour or so, telling us of the stanch manner in which the old leaders of our Order stand by their principles and show their determination to work more vigorously than ever for the grand old Order of Patrons of Husbandry.

He pronounced the speech of Bro. J. W. A. Wright before the National Grange one of the best heard during the session. It was ordered published in the proceedings and will no doubt be read with interest by his old friends and Patrons in this State. The debate on the Stanford Land Loan bill (endorsed in modified form), was one of the most animated discussions of the session. Although there was a diversity of opinions on the subject, the decision of the majority was duly respected. The weather was excellent and the session very much enjoyed, the hotel accommodations being very good after the close of a political meeting being held in Atlanta. The next session is to be held in Springfield, Ohio.

The Worthy Master is anxious that every Grange should elect and install its officers promptly and give official notice to the Secretary of the State Grange, so that the "A. W." can be dispatched in due season. We are happy to see Bro. Davis return looking so well, and hope he will continue to improve. The Patrons of California have important work to do. The prospects for the year are excellent. We hope and expect a good harvest of new Granges and increased numbers will result before our next annual meeting at Haywards.

Pure-Food Bills.

WASHINGTON, D. C., Nov. 28.

Worthy Masters California, Oregon and Washington State Granges: Kindly call the attention of your State Grange and all the Pomona and subordinate Granges in your jurisdiction to the fact that the National Grange has again indorsed the Conger "Lard Bill" and "The Pure-Food Bill."

That our National Legislative Committee in their report earnestly urge the prompt passage of the Conger Lard bill. Please have resolutions drafted and passed by your Grange, also petitions and resolutions sent in by all Granges in your jurisdiction, if possible, before January 1st.

Send such resolutions and petitions to each of your Senators and one to me.

Personal letters to each Senator will do much to aid this work.

Personal letters should also be sent to Senator A. S. Paddock, Chairman of the Agricultural Committee of the Senate, and to such other members of that committee as you can spare time to write to.

The committee is composed of Senators Paddock, Blair, Plumb, Higgins, McMillan, George, Bate, Jones and Gibson.

Trusting you will aid in completing this grand work pushed so successfully through the House of Representatives by Grange work. Yours fraternally, ALEX. J. WEDDERBURN.
Chairman Com. State Grange of Virginia.

Worthy Master Hayes Coming.

We learn from Bro. Davis that Bro. Hayes is expected within a few days in California on his return from the National Grange; also, that he will answer calls for visitation from Granges not too far out of his way in returning North. We hope he will stop at Tulare and assist the brothers in securing new Granges at Visalia, Portersville, Kings River and some other places in Tulare and Fresno counties. Should this meet his eye while in Los Angeles county, we hope he will telegraph us what time he will be in Tulare. Bro. Hayes will have much of special interest to Patrons to say about the late session of the National Grange, and to the whole farming public concerning his observations and experiences on the other side of the continent. California should give Oregon's noble Master a hearty welcome.

Sixth-Degree Certificates.

We wish to announce that we have forwarded to the different Secretaries of the Grange the sixth-degree certificates for distribution, among their members who received the degree of Flora at Watsonville. They were received from the Secretary of the National Grange just after Bro. Davis started for Atlanta, and had to await his return for his signature. If any sixth degree members fail to get their certificates within a week or two, they should notify us at once, and not delay a month or two.

The Secretaries are also notified that we have on hand delinquent notices which can be had upon application. These blanks are for notifying delinquent members to pay up. Price, 1 cent each.

Woman's Work in the Grange.

On the first day session of the National Grange, Mrs. Hiram Hawkins of Alabama, Chairman of the Committee on Woman's Work, submitted a very excellent report, full and complete, showing what the women are doing in the various States. Mrs. Hawkins is a hard worker, an educated lady, and one whose report shows her to fully comprehend the great work of woman in the Grange.

Worthy Master. The Committee on Woman's Work during the past year has been diligent in carrying out a systematic plan of work for the Good of the Order. The general supervision of the States having been divided between three, each one of us has tried to do our part.

We have sent out upward of 30,000 circular letters of instructions, besides several hundred written communications in answer to special inquiry.

We have felt the need of juvenile rituals in many places, and have found it hard to satisfy the repeated calls for something of the kind.

Many of the State Committees have sent out circulars and Grange literature suitable for their local needs. And while some few of the States have not sent in their reports, I feel confident that all have done their part in this important work.

From the reports from the different States, the following points were suggested:

First, that the 4th of July be kept by all the Granges as an open meeting.

Second, Juvenile Granges.

Third, Masters' wives to be made chairmen of State committees.

From the chairman of the Woman's Work of the Colorado Grange, we extract the following: I see no use for a separate committtee on Woman's Work in her State, as her women go hand in hand in all work pertaining to the Good of the Order. Organizing and reviving Granges; planning programs for literary and social entertainment; preparing for children's days; helping to raise money; dispensing charity; looking after the sick and absent members, and in all things working for the Good of the Order.

For completeness, correctness and excellence, we commend the report to our readers, and only our want of space prevents us from printing it entire.

Good Work.

West San Joaquin Grange.

EDITORS PRESS:—Had you boarded the six o'clock train as it pulled out from Stockton depot last Monday morning, you would have been surprised, and we hope pleased, to have stumbled upon various Patrons on their way to complete the good work begun at Tracy a few days before.

Bro. Overhiser was there of course, delighted with the zeal of Patrons who would start out on a labor of love so early in the morning. Waterloo Grange furnished Bros. Bert Dowd, George Light, C. A. Merrill; Sisters Jennie Holbrook, Myrtle Macomber and Hattie Nason. Lodi was represented by Bro. J. D Huffman, and Stockton Grange sent Worthy Master McIntosh, Sister M. F. Merrill and Bro. Kellogg.

Soon after our arrival at Tracy, we proceeded to the Grange hall, where Bro. Overhiser conferred the first and second degrees upon eight candidates. The meeting was then closed, and we were conducted to the Tracy hotel and treated to a good, substantial dinner, to which we all did ample justice. (N. B.—In a pie-eating contest between Bro. Overhiser and Sister Jennie Holbrook of Waterloo Grange, Stockton Grange was forced to acknowledge her champion defeated.)

At 2 o'clock the Grange was called to order and Bro. Overhiser proceeded to confer the third and fourth degrees upon a magnificent class of 36. Our members had been reinforced by the arrival of Bro. McConnell of Elk Grove and Sister Alling of Stockton Grange. Sisters Alling and Holbrook added greatly to the enjoyment of the occasion by the efficient manner in which they took charge of the music.

After the degrees had been conferred, Bro. McConnell, Bro. Stockings of West San Joaquin Grange, Bro. Huffman, Bro. McIntosh and Sister Merrill each made a few remarks to the newly-fledged Patrons.

Early twilight had by this time filled the hall with gloom, so the Grange was closed and we proceeded again to the hotel, where supper was served. Soon after the 7:30 train rolled in and we said good-by to our new brothers and sisters with many expressions of good-will and affection.

May the future conduct of this resurrected Grange prove as laudable as the beginning is promising. Yours in F., H. and C.,

Stockton, Dec. 6, 1890. M. T. M.

Temescal Grange.

EDITORS PRESS:—The year 1890 is fast drawing to a close. There is a feeling of winter in the air, but it could not lessen the fraternal warmth with which the members of Temescal Grange greeted one another on Saturday, December 6th, when the usual goodly number of Patrons met in Odd Fellows' hall, Oakland. They came together to hold their annual election and to participate in ceremonies designed to keep green in their memories the birthday of the Order.

The fall of the Master's gavel called the Grange to order promptly at eight o'clock After the usual routine of business, the Master announced the election of officers in order and the members proceeded to decide who should preside over the destinies of the Grange for the ensuing year. [See "Grange elections."]

When the battle of the ballots had ceased, on motion of Bro. Dewey, a resolution, thanking Worthy Master Goodenough for the faithful and efficient manner in which he has performed the arduous duties of his office during his three years of service, was unanimously adopted. According to previous announcement, the larger portion of the evening was devoted to commemorating the birthday of the Order. Nearly every one present responded to some excellent remarks and sentiments appropriate to the occasion.

The Worthy Master called attention to the great work which the Grange has accomplished and is still doing. He then alluded briefly to the kindred organization, the Alliance. He saw no reason for a conflict between the two fraternities. They both aimed to accomplish the same thing. The Alliance was going ahead with a rush, just as the Grange did at first. It would take great foresight and caution on the part of its leaders to steer it safely past the rocks.

Bro. Gibson gave the Grange one of his interesting and instructive talks. He drew a picture of the contrast between home life in the country and in the city. He told of how the family gathered around the fireside in the evening in the country. They were all there reading or playing games. They had no other distractions, while in the city, the family were seldom all together in the evening. The father would be at his Lodge, the son, perhaps, at a dance, and the daughter at the theater. He drew the inference that the home ties are stronger in the country.

Sister Nellie Webster of Creston Grange, being called upon, recited "The District School," which was well received.

Sister Payne read an extract containing excellent thoughts and suggestions relating to woman's influence in the Grange.

Bro. Dewey spoke in glowing terms of the noble band of brothers who organized the Grange. He alluded to the early growth and the succeeding period of depression and disappointment. Speaking of the Farmers' Alliance, he said that it was the existence and work of the Grange that made such organizations possible to-day, so that whatever the Alliance accomplished, the Grange was entitled to a share of the credit. In reference to the position of woman in the two organizations, he thought that the policy of the founders of the Grange in setting apart certain offices for her to fill had had the result of making the sisters take a more prominent position in the work of the Order than was the case in the Alliance, where the titles of all officers were adapted to either sex.

The Grange voted to install its officers on the first Saturday in January, and instructed the Secretary to invite Eden Grange to unite in a joint installation and Harvest Feast at that time. Also, to solicit the attendance and assistance of Worthy Master E. W. Davis and others. W. H.

[It is hoped that many visiting Patrons will be present at the installation.—EDS.]

Two Rock Grange.

EDITORS PRESS:—What is the matter with our brother and sister Secretaries, that we do not hear more from their respective Granges? Did they have such a fine time at Watsonville during the session of the State Grange that they have forgotten the RURAL PRESS and their brothers and sisters of other Granges? Now we do not wish to be inquisitive, but we should like to hear from you—but hold on; excuse me; perhaps that is what you are thinking of Two Rock Patrons, who were just located in their new hall before the State Grange meeting, and nothing has ever appeared in the RURAL PRESS as to what we are doing in our new home. Perhaps you think we have ceased our meetings, surrendered our charter, and gave our new hall up to the State Grange? No; not much we haven't. We have special meetings, potato-growers' meeting and our regular meetings with good attendance.

At first we felt as though we were from home, but now we have become reconciled to our new quarters, and all are—well, we will say proud of their new home. The sisters as well as the brothers are more talkative. The afternoons are too short for our meetings. "Old Sol" is almost hid beneath the horizon before the Worthy Master's voice is heard in the closing ceremonies. M.

FARMERS' ALLIANCE.

To Organizers and Secretaries of Subordinate and County Alliances.

I desire that each organizer will send me the name and P. O. address of the President and Secretary of each Alliance organized as soon as possible. Also that the Secretaries of County Alliances will forward a full list of all Sub-Alliances in their county, with the name and P. O. address of the President and Secretary, so that I may be able to prepare a directory for my use and have the list published in the RURAL PRESS for the benefit of all.

As I will have many circulars of information to send out soon, it is very necessary that I have the list immediately.

I am prepared to fill orders in the line of general groceries, and some lines of building material; also some other things now, and will add new lines to the list every week. It will be of advantage to members of the Order to be in communication with me soon, for I must have the P. O. address of Secretaries before I can send price lists, etc.

Address all letters at present to me at No. 433 California St., S. F.

J. M. MOORE, State Bus. Agt.

State Agent Moore Files His Bond.

The following shows that our State Agent has duly filed his $25,000 bond:

This is to certify that Mr. J. M. Moore, State Business Agent of the California State Farmers' Alliance and Industrial Union, has this day filed with me the official bond required by the Executive Board of said Farmers' Alliance and Industrial Union.

Dated at Fresno, California, this third day of December, A. D. 1890. JOHN S. DORE,
Chairman Executive Committee.

National Farmers' Alliance.

(Continued from last week.)

The following information should be read by members of the Order, as well as others, with a good many grains of allowance, and not as report of the proceedings made on good authority of any individual within the doors of the Alliance, but picked up and furnished by the newsgatherers of dailies, somewhat mixed as to their views and relations toward the powerful organization.

Further and more complete details by mail will be awaited with interest, both in regard to the doings of the National Alliance within its doors and the third party believers outside.

SECOND DAY.

On the second day resolutions were adopted condemning the Force bill and calling upon the members of the Senate to defeat it and denouncing the Louisiana Lottery as a blow at American civilization and morals and asking for the submission to the people of an amendment to the Constitution prohibiting the operation of lotteries in any State.

THIRD DAY.

The session was taken up by a visit from the National Colored Alliance. The visit was one of fraternal greetings and introductions.

At the afternoon session a delegation representing the Citizens' Alliance of Kansas was introduced by Colonel Livingston of Georgia, and all the members made addresses, the substance of which were that their organization was deeply interested in the success of the farmers' movement; that both bodies were practically working on the same line, and they saw no reason why merchants, traders, druggists, etc., should not unite in promoting this movement. They asked for a committee of conference to arrange for closer relations between the Citizens' Alliance and the National Alliance. The request was granted and a committee appointed.

FOURTH DAY.

Upon the reconvening of the Alliance, a resolution reciting that the United States census returns with respect to farm mortgages are grossly incorrect, and calling upon all the county and sub-Alliances in all the States to take immediate steps toward securing accurate statistics from the county records, and to make prompt reports thereon. A resolution asking that the World's Fair be closed on Sundays was passed without opposition.

National Secretary Turner submitted his annual report. During the past year 1069 new charters were issued to sub-Alliances, as follows: West Virginia, 252; Colorado, 152; Indiana, 132; Michigan, 106; Virginia, 95; Illinois, 87; South Carolina, 83; Ohio, 61; Pennsylvania, 59; New Jersey, 20; Minnesota, 5; Iowa, 5; Oregon, 1; Oklahoma, 1.

State charters were issued to the following States: Indiana, Illinois, Colorado, Michigan, West Virginia, Oklahoma and North Dakota.

The St. Louis Platform Indorsed.

Some question having been raised as to the unanimous indorsement of the St. Louis platform by the National Alliance last year, Livingston of Georgia moved its adoption by the present body.

Some debate followed, but the motion was adopted, with an amendment so as to demand the Government control of railroads and telegraph lines, and if this shall not result in relief to the masses and in checking or curing the existing evils, the Government shall become the actual owner of such lines.

The annual election of officers was held during the afternoon. President Polk and Vice-President Cover of Kansas were unanimously re-elected. J. H. Turner of Georgia was re-elected Secretary and J. S. Willetts of Kansas the National Lecturer.

FIFTH DAY.

The morning session discussed the amendments to the platform adopted yesterday, looking to restricting the powers of the President in disciplining the editors of Alliance newspapers. A complaint is made that the Government Crop Statistician relied too much upon information furnished by uninformed Congressmen.

The Committee on Agricultural Statistics reported, proposing that a committee of five Alliance Congressmen make arrangements to get statistics, so that the people may not be dependent on reports from the Government Statistician. They are to co-operate with the Alliance Crop Statistician.

Powderly Attacks Machinery.

Grand Master Workman Powderly addressed the Alliance delegates at the Exposition hall this afternoon. He advocated reform in the employment of child labor, insisted that the Government had the right to control railroads, and then made a fiery attack upon the employment of labor-saving machinery as defrauding workmen of the right to work. He was especially bitter against all electric devices, declaring that capitalists, in their greed, had cornered God's wrath and compelled it to do their bidding. He denounced sectionalism and said:

"No matter what politicians may say, we of the two sections are together again, and together we will fight monopoly."

This sentiment brought forth great applause.

During the evening session, President Polk's suggestion for a National Legislative Council was adopted.

SIXTH DAY.

Early in the forenoon session of the Farmers' Alliance, the financial policy of the Order came up for discussion under a report from the Committee on Legislation. It contained the following amended demands:

First—Abolition of national banks; the establishment of sub-treasuries in the several States to loan money direct to the people at a rate of interest not to exceed two per cent per annum, on non-perishable farm products and real estate, with proper limitations on the quantity of land and amount of money, and that the amount of the circulating medium be speedily increased to not less than $50 per capita.

No More Gambling.

Second—Congress shall pass laws to effectually prevent dealing in futures on all agricultural and mechanical productions, preserving a stringent system of procedure in trials to secure the prompt conviction of offenders, and such penalties as shall secure the most perfect compliance with the law.

Third—Condemns the Silver bill recently passed, and demands the free and unlimited coinage of silver.

Fourth—Demands the passage of laws prohibiting the alien ownership of land and that Congress will take prompt action to devise some plan to obtain all the lands now owned by aliens and foreign syndicates, and that all lands held by railroads and other corporations in excess of what are actually used and needed by them, be reclaimed and held for actual settlers only.

No Special Privileges.

Fifth—Believing in the doctrine of equal rights to all and special privileges to none, we demand that our national legislation be so framed in future as not to build up one industry at the expense of another. We further demand the removal of the existing heavy tariff from the necessaries of life that the poor of our land must have. We further demand a just and equitable system of graduating tax on incomes. We believe the money of the country should be kept as much as possible in the hands of the people, and we demand that all national and State revenues be limited to the necessary expenses of the Government, economically and honestly administered.

Sixth—We demand the most rigid, honest and just State and national control and supervision of the means of public communication and transportation, and if this control does not remove abuses now existing, we demand the Government ownership of such means of communication and transportation.

Congressman-elect Simpson of Kansas, Mr. Clark of Texas and others favored the Sub-Treasury plan. An amendment by Mr. Livingstone that the amount of circulation shall not be less than $50 per capita was agreed to. Many other speeches for and against the Sub-Treasury scheme were made, and a vote was finally taken, resulting in the adoption of the demands set forth above by a vote of 99 to 79.

Delegate Carr of North Carolina presented a memorial to Congress heartily approving and asking the passage of the Paddock Pure-Food bill, and emphatically protesting against the passage of what is known as the Conger Lard bill, which he denounced as a measure tending toward more taxation and unjust discrimination against the cotton-seed oil of the South and the beef fat of the West. The memorial was unanimously adopted.

At the evening session a resolution was passed urging the establishment of postal savings banks.

After passing the customary resolutions of thanks, the National Alliance at 1 o'clock Tuesday morning adjourned.

A Farmers' Feast.

We give below a detailed account of the banquet given by the County Alliance at San Jose to the delegates to the State Alliance on Thursday evening, November 21st.

The banquet took place at the popular St. James hotel, and there was a large attendance of ladies and gentlemen and the greatest interest was manifested. The menu was a varied one and was served in good style.

After the guests had given ample proof of their appreciation of the many good things spread before them, the party squared themselves for "a feast of reason and a flow of soul."

J. W. Hines acted as master of ceremonies and proposed the toast of the evening—"The Farmers' Alliance and Industrial Union; the reserve force of the nation, the vanguard of a new Order and the hope of liberty."

This was responded to in a fitting manner by D. G. Wright of Monterey and C. W. Pedlar of Gilroy.

Mr. Pedlar then read a witty poem, "Hayseed is Risin'," which provoked much laughter and applause. It predicted the final triumph of the farmer when hayseed would be the fashion.

Mrs. J. S. Witherill of Stanislaus recited a poem in an effective manner—"The Sale of the Octoroon"—and was highly applauded.

The Speeches.

Deputy District Organizer J. B. Rigdon then addressed the audience. He said:

We are battling for the same principles for which our forefathers fought in the Revolution. It is not against the red-coated British soldier, but against the giant monopoly of money. We are going to grow stronger and stronger. We are going to stand hand in hand until we rejoice in this victory, and then we can afford to smile at the present time when we have just begun to march. But let us not deceive ourselves with the thought that we have already won the victory. We have the hardest part of the fight before us. Let us join together; we can accomplish most by unity, and united the victory will be ours.

J. S. Barbee, National State Organizer, was received with great enthusiasm. He recounted the history of the Alliance in this State from its organization last April to its present standard of 8000 members in this State. Mr. Barbee continued: A great many people say that the farmers will never stick together. They will not accomplish anything. The Farmers' Alliance will fall by the wayside. But without being cast down by their evil forebodings, I have kept on until the organization has reached its present standard in this State.

Mr. J. Nixon of Yolo county said: I have been in California over 28 years, and never in my life have I seen a body of men and women of greater intelligence than those present here to-day and to-night. I believe the time is coming when the Farmers' Alliance will be a power in the land.

J. L. Gilbert said: Fresno county sends greeting to you to-day. There you will find hearts as warm and hands as willing to do battle in the cause of humanity as anywhere else in the State. So far as this Alliance is concerned, we are organized upon several grand principles that are founded in the very elements of manhood. We feel that we have the bone and sinew of the land and we believe in and we stand pledged to the principle that the producer should receive the benefit of his labors. We cannot but feel that our end will be victory and success.

The President.

M. Cannon, temporary President, said: "We have been the producers and distributers of this country and we have not made much by it. The products of our fields have gone to the bins of others and we are now determined to keep some of it at home.

"We are organized not against capital, but against the abuse of it. There is not one of us here but would like to have a little of the filthy lucre. We propose to get it fairly, but if we cannot get fair play we hold the club in our hands and if the other political parties will not grant it we propose to take it by the force of the ballot."

P. S. Deurfy from Los Angeles stated that the people of his county were great boomers and could drive more pegs during a boom than any other county, but since the Farmers' Alliance had come along there a change had come over the spirit of their dreams and they had determined to go to work and do something in legitimate farming.

Mr. J. S. Witherill, from Stanislaus, made an eloquent address, in which he compared the Alliance to a mighty river which would go on increasing until, like another Mississippi, it poured a resistless flood into the mighty ocean.

Senator John Roth of Tulare county said: "Up to the time of the Civil War the farmers were the most happy and contented class of people in the world, but since the advent of the protective policy a class of millionaires had sprung up who dictated to the farmers just what they should pay for their money, and also said what they would give them for their crops. It was the bounden duty of every man to oppose this system, but if the farmers would unite in opposing it they would soon be in a position to demand their rights."

Mrs. M. E. Barker of this city said she was glad to see so many and happy faces. There was only one way in which to right the wrong, and that was to hang together with the other industrial organizations. If they failed to do this, the Farmers' Alliance would be replaced by other names.

T. A. Gallup of Colusa complimented the Alliance upon the appearance and attendance of the members. He spoke highly of San Jose, saying that he had supposed it closed in by the mountains. He was glad to know that such was not the fact.

Mr. Shilling of Santa Barbara was encouraged by the presence of an organization which gave the appearance of carrying them on to victory.

B. F. McClellan of San Jose made one of the stirring anti-monopoly speeches for which he is noted, and was handsomely received.

Mr. Dewey of the RURAL PRESS stated in substance that he rejoiced to belong to an Order (the Grange) that was educated high and liberal enough to permit its members to extend the right hand of fellowship most heartily to other organizations, like the Farmers' Alliance, working for the same great objects heartily. The Grange had driven its stakes firm and to stay. If the Alliance can drive more stakes in the same line of work, well and good.

Master of Ceremonies J. W. Hines responded happily, paying a noble tribute to the pioneer labor and laborers of the Grange, affirming that the Alliance would work shoulder to shoulder with the Grange in the noble work of reform.

The banquet broke up by all standing and singing the national hymn, "America."

Each member spoke plainly and with zeal, and we regret not being able to quote from every one.

The Third Party.

The following telegraphic newspaper statements regarding the national third-party movement are of interest, however imperfect may be the reports. Many will hail the prospects with enthusiastic delight, owing to their belief in the great necessity of immediate and radical reform. Later official reports will no doubt throw much greater and truer light on the important transactions of the National meeting:

DEC. 8.—The third-party movement has been gaining ground rapidly. The presence here of so many representatives of national labor industrial organizations strengthens the opinion that the entire "reform" element of the country will join the new movement. The Western and Northwestern delegates are said to be practically united on indorsing the Rice-Davis call, and it is predicted that they will demand of the Southern Democrats in the Alliance that they join in the movement.

Third-Party Conference.

The call for a third-party conference, signed by Governor Rice and John Davis of Kansas, and about 75 other leaders, reads as follows:

WHEREAS, In unity there is strength; therefore it is desirable that this should be a union of all the variously named industrial organizations that stand on common grounds.

To this end the individuals from various States, whose names are hereto signed, issue this call for a National conference, to be composed of delegates from the following organizations, namely: The Farmers' Alliance, Farmers' Mutual Benefit Association, Citizens' Alliance, Knights of Labor and all other industrial organizations that support the principles of the St. Louis agreement of 1889; each State organization to send one delegate from each Congressional district and two from the State at large; each district organization to send not less than three delegates, and each county delegation not less than one delegate, to be chosen according to the custom of each respective organization during the month of January, 1891.

Also that the editor of each newspaper be hereby invited as a delegate whose paper has advocated the principles of the St. Louis agreement and supported the Alliance candidates nominated in 1890.

These delegates are to meet in the city of Cincinnati, O., on Monday, Feb. 23, 1891, for the purpose of forming a National Union party, based upon the fundamental ideas of finance, transportation, labor and land, in furtherance of the work already begun by those organizations, and preparatory for a united struggle for country and home in the great political conflict now pending that must decide who in this country is sovereign, the citizen or the dollar.

Mr. Davis thought the convention would undoubtedly result in placing a Presidential ticket in the field in 1892. The call will not be presented to the National Alliance, but be circulated for signatures through the 36 Alliance States and perhaps in all the States of the Union.

OCALA, FLA., Dec. 9.—The gentlemen having in charge the call for a third-party convention have received telegrams from Kansas heartily approving of the movement. They succeeded to-day in securing the signatures of 15 out of 16 of the Colored State Alliances now here.

C. W. PEDLAR, Secretary of the State Alliance, was in San Francisco on Thursday of last week, on business connected with his office. As a straightforward, diligent officer, we wish him all success.



Two Lives.

There is a language of the soul,
That mortals feel but cannot see,
Which none can fathom or control
Save those who hold the dual key;
And two may touch unplighted hands
And strive to loose that key in vain,
While two that dwell in wedded bands
In awful solitude remain.

O hungry hearts that search through years
For something missed, but never found!
O lips that smile to hide the tears
Of weary lives in fetters bound
To those who fail them in the hour
When soul and eye and lifted palm
Are pleading for some higher power
To guide them to the isles of calm!

They met when life and hope were new,
As rills beside each other run,
And, gliding on through grass and dew,
Go singing to the golden sun.
They came together in their course
Without a dream of coming times,
When, crossed by Fate's dividing force,
Their paths should lead to separate climes.

They parted on the rocky crest,
No more to meet in faith's embrace;
She drew the cypress to her breast,
And shadows gathered in her face.
He, like the torrent of the hight,
Poured out his life on thirsty lands;
To darkened lives he brought delight,
And gave new strength to tired hands.

The world upon his pathway smiled,
Yet in its crowds he walked alone;
For he was Nature's birthright child,
And she baptized him for her own.
To him her ancient hills were young,
He felt her calms above her storms,
Through him her voiceless wonders sung,
And shapeless things took souls and forms.

The secret of the haunted pine,
The midnight's soft and holy hush,
The distant star, the lowly vine,
The strains of mocking-bird and thrush,
The morning on the mountain slope,
The spirit of the ocean side,
The hidden springs of pain and hope,
Touched by his rhyme, were glorified.

He sang of "home" he never knew,
His bold words made the timid brave,
The rich absorbed his light and dew,
And barely thanked the life that gave.
He lavished all the gifts he had
To cheer his race and make it strong;
And withered joys grew fresh and glad,
Thrilled by the current of his song.

She groped in shade toward the main
Where all the streams of time unite.
He watered many a sunburnt plain,
And blessed the world by day and night;
And, while he wandered, toiled and sang,
With heart of love and voice in tune,
New hopes around his presence sprang,
Like flowers around the feet of June.

They move in lines more wide apart
Than strangers who have never met—
One burdened by a troubled heart,
One haunted by a vain regret.
There stands between their life-ways now
A mountain broad and steep and high;
The drifted snow lies on its brow,
And down its glens the low winds sigh.

And just below the high divide
I read this lesson, cold as fate,
"Who wins the wide world for a bride
Should never woo another mate."
And then I hear an undertone
Come floating from the sunset sea,
"Lo, here each stream shall find its own,
And all be reconciled in me."

But sweet and clear and pure, and far
Above the ocean's changing calls,
And gentle as the morning star,
This message from the mountain falls:
"The life that peace immortal seeks
Must rise o'er passion's ebb and flow;
For none except the loftiest peaks
Retain their shining crowns of snow."

—James G. Clark in Christian Register.

More About Cooking.

[Written for the RURAL PRESS by CLARA S. BROWN.]

Like Maude S. Peaslee, I feel that I must say something in response to Margaret B. Harvey's statements about cooking.

It is quite evident to me that she has never been obliged to look at the matter from the standpoint of people of small means. What she urges so strongly is feasible for the wealthy but utterly impracticable for the great majority who have to eke out the necessities of life from meager incomes. If I am wrong, I ask her to point out the way by which the wives of workingmen may afford to live without doing manual labor themselves.

Coming from generality right down to practicality, I ask her how Mrs. C., whose husband earns perhaps $2.50 a day, out of which a family must be fed and clothed, rent must be paid (or if a home is partly owned, interest, insurance, taxes and repairs are inexorable), fuel and a hundred other expenses must be met—how is this worthy woman to pay for the services of a professional cook while she teaches her children? Good cooks know their value and charge accordingly, while the children may be sent to public schools at almost no expense. *That* is one reason why "the mother does not do the teaching and hire the cooking done." Some women do not bear children. Is it right for them to hire servants while their husbands toil?

It is impossible for a man to keep a servant of any kind unless he earns more than the sum mentioned. Besides the wages, there is the board to consider and the waste. The hired cook who is as economical of her materials as a faithful wife is an exceedingly rare jewel.

Now for question No. 2. Why is it "unwomanly" for Mrs. C. to care for the home in all its details, as her part of the business side of marriage, any more than it is unmanly for her husband to go forth in all weathers, sick or well, to his daily labor, which is to bring in the means of subsistence for them all? Should not the wife be a help-meet?

What is there about cookery under any circumstances that is "unwomanly"? Why is a woman "degrading" herself by cooking, or making of herself "a serf," any more than by the performance of any other task?

It is not unpleasant or unclean work; there is art in it and science, too.

I, for one, boldly confess that I like to cook, and that I never for a moment supposed I was unwomanly in doing so. Rather, I had flattered myself that I was doing my duty in a quite exemplary manner by taking the entire care of my house while my husband gave up all his time to earning the income, especially as my tastes are such that, if single, my life would be spent in a far different manner. I know that a woman may spend much time in the kitchen, and do her work in it well, without being "wedded to pots and kettles," or satisfied with the grosser things of life. She may be intellectual and refined, fond of books, art and music, and in every way the equal of a lady whose white hands never knew labor. Indeed, it is a fact well proven, that the best educated minds are the most careful and hygienic in the details of every-day life.

I suppose no woman will argue that it is not a pleasant and desirable thing to be able to command all one's time and spend it in the improvement of the intellect and the enjoyment of things that refine and ennoble the soul. The weary worker cannot help sighing at times, "Oh for more time to read and think and learn!" The vital question is, "*How* can labor be relegated to professionals when money is scarce? *How* can lectures and lessons be had when every dollar must go another way?" If Margaret B. Harvey will solve that question she will confer a great favor upon me, and, without doubt, upon many others. It should be borne in mind that for one woman of independent means who reads the RURAL PRESS, there are many who are forced to economize in every way in order to live within their incomes. By this I mean strict economy in every direction, not economy as a self-indulgent person of extravagant tastes understands it.

I would like also to be told how a girl—the daughter of hard-working parents—can afford to spend "two years in studying anatomy and physiology," then "two years more in drawing the human figure," etc., in addition to the usual education. How are the bills to be paid? How is the girl to be supported all these years? Don't say you did not have reference to paupers. The average girl has to do something for herself as soon as she is old enough, unless she has parents with plenty of money.

The Princess of Wales taught her daughters dressmaking and had them thoroughly drilled in the care of a yacht—why wasn't that as degrading as cookery? I don't think it is, by any means, a conceded fact that men make better cooks than women, and certainly I do not think it is such appropriate work for men as for women. Their big, strong hands are better employed in some labor that women cannot do than in weighing out "sugar and spice and all that's nice," turning an egg-beater or frosting a cake.

Why inveigh against cooking more than against other housework? I am sure that I am not alone in the opinion that cooking is the pleasantest part of a housekeeper's cares. If I had the means to hire any of my work done, it would be the heaviest tasks that I should release myself from, such as washing, scrubbing floors, cleaning windows, etc. I could then watch the rising of my bread, the browning of my cakes and pies, the roasting and boiling of my meats, the preparation of my vegetables, etc., with increased satisfaction, knowing there would be no weak back or tired feet to prevent me from enjoying some good book in my sitting-room ere the day was done.

True, Margaret, "womanly character does not depend on cookery," neither is it in the least deteriorated or cheapened by it.

THE Holy Synod of the Russian or Greek Church has just issued a decree imposing a religious penance from three to five years in length upon all widows and widowers who are wicked enough to attempt matrimony for the third time; and for all widows of 60 who are found guilty of the second offense a rigid penance of two years' duration is prescribed.

THE DEATH RATE among the Indians who aim to live like white people is three times that of those who continue to live a semi-wild life.

Betsey Snow's Art Trials.

DEAR EDITOR:—I hope your readers have missed me the last year and will be as glad to hear from me again as I am to write. A farmer's wife must not expect to keep house, do all the family sewing, see to the chickens and cows, do literary work and pursue art studies at the same time. I gave up writing for the sake of art, and I want to warn the sisters not to venture to thread its thorny mazes as I have done. My heart is filled with pity for poor old Raphael, although I suppose he had more genius and money to begin with than I had.

I found, by reading, that one cannot be a farmer's wife and be thought much of, or attend strictly to farm duties and be an agreeable companion for such a high-minded, cultured gentleman as Mr. Snow. We do not always want to stand behind our husbands like some heathen women I have heard of, and so we get restless and ambitious as perhaps we ought not to do.

When we read the productions of the gifted, in which they delineate the beauties of the country, they represent the farmer and his wife as ignorant, illiterate, and put bad grammar into their mouths and old-fashioned clothes on their backs. They sometimes, in their romances, allow them to visit the city, where the women appear on the streets, afraid to cross, like lost cats, and at hotels blow out the gas. The farmers lose, by confidence men and women, from six to eighteen hundred dollars, and go home penniless.

So, in order that I might be thought something better than a woman who says "hern" and "yourn" and "right smart" and "I reckon," Mr. Snow thought I had better be an artist like Sybil Stowe. He's a great admirer of Sybil's paintings, though some of our envious neighbors say it is not the painting but the artist he admires. That is very cruel, but Fred is forgiving and told me I might take lessons of her. He said I could attend to my poultry and vegetable garden and make butter while I pursued my art studies. As compensation for my lessons I proposed to do plain sewing for Sybil.

As I had no money to pay for material, Sybil suggested that I should begin on more common subjects than landscapes to develop taste. My first lesson was a toasting-iron. I had one that I seldom used because Fred does not like toasted bread, and I am never so unwifely as to put anything on the table that he does not eat. I gilded it and on one corner tacked a bow of blue ribbon and hung it in a conspicuous place in the parlor. When Mr. Snow came home I took him proudly by the arm and led him up to admire it. He smiled sweetly and asked me if it was a Van Dyke. "Oh, no, dear," I answered, eagerly, "it is a toasting-iron."

Pleased with my success, I next covered a hatchet that was so worn that I could not split kindling with it any longer with blue sateen, a piece of Hephzibah's Sunday dress. This I hung opposite the toasting-iron. Then I covered one of Hephzibah's baby shoes with the same blue and attached a cord to it and suspended it from the looking-glass for a match-safe. Later on, I painted a molasses jug that was no longer serviceable, as it leaked, and a small wooden tray and a pale-blue blotter. Pink roses and blue pansies were my chief decorations, which, with ribbon bows, gave a very artistic look to my sitting-room. Mr. Snow says that drawing-room is much more stylish than parlor or sitting-room, but as Sybil has a "blue-room," we decided, on account of my new ornaments, to call it by that name. So far I had expended only thirty-five cents besides the plain sewing, and I felt well repaid for all my trouble.

The crowning glory of Sybil's artistic work was a linen spinning-wheel. It was bronzed, ribbons tied to the spokes, the distaff a mass of crocheted work, and a dainty, painted gauze throw tied to the wheel. I had no wheel, but instead had two boot-jacks and she had but one. Mine were covered with drab silesia and suspended by garnet ribbons. My grandmother, who died in Connecticut, left me a wheel for spinning woolen yarn, and as I had no use for it, I had left it there. Fred says this is the *renaissance*, and so I thought I would send for the wheel and spoke to Sybil about it. She laughed at my ignorance and said a woolen wheel was too modern. Only a linen one came under the head of art.

A new idea occurred to me. Why not save pieces of old furniture or kitchen utensils for Hephzibah to decorate for her own house when she marries, as I hope she will? They will be pretty old by that time. We have decided not to let her learn to cook, as we have read lately that cooking is degrading to women; they should be artists. As I am obliged to cook, I think I shall make no change, and Mr. Snow says Hephzibah may wash the potatoes and peel the turnips, but must go no farther.

While happy at the thought that I had acquired that culture that the world would respect, and though I am a farmer's wife, I hoped to be recognized as a leader of society, my hopes and aspirations were suddenly blasted. On Mr. Snow's return from San Francisco, he told me that during his stay in that highly cultured city he never saw a bread-waster, hatchet, wooden tray or hardly a painted jug!

It was a severe blow, but I smiled on the hearth as my husband took from the walls the product of my artistic labor and put them in the kitchen cupboard. BETSEY SNOW.

[We are glad that Betsey still survives her struggles for progress and still hangs on to the heart-strings of Mr. Snow. That during the pursuit of such aspirations and ambitions she does not forget the readers of the RURAL is also very gratifying.—EDS. PRESS.]

The Coming of the Rain.

The sky is low as it would fall,
And to the south the vane;
The robins in the orchard call,
Impatient for the rain;
I hear them through my windows wide,
And feel myself to them allied.

"The dooryard flock their feathers trim;"
I hear my farmer say,
Who have not been more pleased with him,
"It argues rain to-day."
Say what we will, old saws we heed
That promise what we wish or need.

The day is dark, the air is soft,
The rain must soon be here;
And hill, and wood, and field, and croft
Seem conscious it is near.
And to the grass, it seems to me,
The wind has told the change to be.

It is the wind that blows the bait
Into the fish's mouth,
That comes so welcome though so late,
All tepid with the south.
Hark! what is that that warns my ear?
It comes! it comes! the rain is here!

Is here, by lightest patter known—
A green and quiet rain.
Now let us thank it! let us own
Ourselves, for days of pain,
More thankful that at last it comes,
Like one long-wished-for to our homes.

—Ralph H. Shaw in Portland Transcript.

Ironing-Day and Conveniences.

Where one must iron for a large family, ironing-day is one to be dreaded, especially if the outfit be a limited one and the weather warm.

Time and strength may be saved by having a convenient folding-board, as well as a light and easily handled clothes-rack.

If the board is without supports, it, as well as the smaller bosom board, may always be kept well wrapped and in clean cover in readiness for ironing-day. The white covers may be kept clean a long time, if after the ironing is done a cover of old calico be drawn over to protect it from soot and dust.

With the holder and iron-rest, a wiper may be kept in a pocket in the outside covering. The wiper may be of cotton cloth, the under side lined with sandpaper, or it may be of stripes of bed ticking sewed together and crocheted plain stitch with large needle, round or oval in shape. Clean irons are a comfort; a cake of wax is often a convenience.

When the irons are the common flats, and must be heated upon the kitchen stove to get them hot enough, it is often necessary to cover them. A long baking-pan will usually prove to be the very thing. Insist upon the other members of the household helping to keep the cover of the ironing-board clean, as we recall a morning when a daughter had been dyeing green articles, pressing them while damp upon the clean board, not thinking of the sad plight the mother would find it in next ironing-day. Summon to your aid all the possible helps, as ironing at best is hard work when there are many garments to smooth.—*Portland Transcript.*

THE INVISIBLE WORLD.—I am glad I live in the nineteenth century, when mysteries are being lifted, and every day multiplies the analogies between science and religion, and we may hope to see the crown yet which glitters on the tripartite kingdom of science, religion and grace. Is there an invisible world? and do we enjoy our homes alone, or is the air filled with loved ones and aerial beings? Science says "Yes," and it depends upon the number of senses we have whether we agree with science. Our minds are in prison, from which they look out through windows in the walls, and that mind which enjoys the greater outlook must see more than others. Our present inability to see angels is no argument against their existence, as what we know depends upon the number of our senses. The windows of the house in which we live are glazed or stained. We cannot see or hear all. The dog accompanying us through the forest scents the game of which we had no knowledge. The atmosphere is populous with particles that elude the prism and the scales, yet they lend the sky its azure and distribute the sunbeams over the earth. Sound consists in the movement of the air and the existence of an auditory nerve. The deaf are insensible to thunder, yet it thunders. Negative scientific schools say they cannot find our God anywhere! Does not their science teach them that there is another world which neither scalpel nor microscope can explain or explore? Scientific men know that the atmosphere is crowded with life germs, and is it too much to ask that we be permitted to believe that back of these life germs higher lives and more distinguished organisms exist? Were our ears properly attuned, we might hear the atmosphere, now silent, musical with the tread of angel feet, and it may all come in good time. Do angels tread the air we breathe?—*Rev. J. Sanders Reed.*

THE EARTH is nearest the sun on the second day of each year, on which day she is only 90,822,000 miles from his solar majesty.

YOUNG FOLKS' COLUMN.

A Serenade.

[Written for the RURAL PRESS by MARTHA T. TYLER.]

Grey's Hill Seminary was the name of the school, so called because the house stood on a slight prominence at the end of the shadiest street in the village. The front windows faced the river and commanded a lovely view of the woods beyond.

A short distance down the road rose another large frame structure, more substantial but less home-like in appearance than the house on Grey's Hill. This was an academy for boys, and Miss Dixon, the principal of the girls' school, was always wishing it were a mile away instead of being almost at her own gate, for the "young ladies" of her establishment would make acquaintances among the students, and the latter for their part were altogether too fond of extending their walks past the aforesaid gate and of scrutinizing the above-mentioned windows for chance glimpses of the bright young faces under her charge. Miss Dixon, however, had been a pretty girl in her youth, and cherished certain recollections of auld lang syne, which really moved her to be more lenient to the pranks of her fun-loving pupils than one would easily have divined from her extreme propriety of speech and manner.

Stella Langley was the youngest girl in the school, only eleven years of age, but fond of associating with older girls, and with an especial aptitude for scrapes which made her a general favorite. She never meant to be particularly naughty, either, but whenever she attempted a little mischief, she was sure to be caught at it, and this was the whole secret of her troubles. Being so much younger than many of the others and outspoken and odd, they had a great deal of fun at her expense, nor did they scruple, sometimes, to make her the scapegoat for their own peccadillos.

Stella was not only a peculiar girl when awake, but she was a peculiar girl when asleep. When she had once crossed the boundary line of the land of Nod, it was almost impossible to awaken her. She walked in her sleep occasionally, but this was not known to the teachers, as she had never wandered out of her own room, and it had happened but three or four times during her sojourn at the Hill. Her room-mates, Issie Carrington and Mabel Ellis, were in the secret, and of course it had been whispered round the classroom among the other girls; but it just happened that Miss Dixon's keen ears had not caught the report.

It was toward the middle of October, and the school on Grey's Hill had reopened after the long summer holiday, so recently, however, that the pupils had not quite settled down to the regular routine of study and discipline. The three girls, Issie, Mabel and Stella, had retired to their own room one evening, in the peaked roof of the house. It was a very pleasant room, though rather high up and solitary. Miss Dixon slept on the second floor just below, and as the trio prepared to rest each in her little white cot, they laughed and chattered all the while school-girl fashion, but in a subdued tone lest Miss Dixon should hear and reprove them. After a time, however, the lights went out all over the house and the inmates were soon sleeping peacefully—Miss Dixon included.

The village clock struck ten, eleven o'clock, when Issie, who slept as lightly as a bird, was awakened by strains of music. She sat up in bed to listen, not comprehending at first, but realizing by degrees that the students were giving them the benefit of a serenade. She knew this, because the same thing had occurred several times the year before, and Miss Dixon had sternly declared that no notice should be taken of the delightful attention.

Issie hearkened awhile with a satisfied smile, and then stole out of bed in her little bare feet across the room to Stella's corner.

"Stella! Stella! wake up. Oh, of course, it's perfectly useless to try to rouse you. You would sleep through a fire or a thunder-storm," and she ran over to Mabel, who, by this time, was as wide awake as an owl.

"I say, Mabel—oh, *you're* up to snuff, aren't you? Isn't it lovely? Wonder who the boys are."

"Sh!" said Mabel; "let's peep."

So the two children tip-toed over to the window and looked out behind the dimity curtain.

"If it were only moonlight we might distinguish them," said Issie.

"Can't we wake Stella—it's a shame she should miss the fun!" and the twain scampered back to where poor innocent Stella lay slumbering as soundly as if nothing unusual had happened, forgetting by this time that they were making a great deal of noise.

"We promised that we would surely wake her, next time," exclaimed Issie.

"But how on earth are we to do it?" queried Mabel.

How, indeed! They pulled and pushed and shook her, all to no purpose.

At last a mischievous thought struck the ingenious Issie.

"Let's take her over to the window," she said; "perhaps the music will rouse her there."

So poor Stella was hauled out of bed and half dragged half lifted to the window, where she was seated on a low stool so that her frowsy brown head just reached above the level of the broad window-sill, and the curtain partly drawn.

"O Issie!" whispered the half-frightened Mabel, "suppose Miss Dixon should find out!"

"Such fun!" cried the reckless Issie, who was almost suffocated with laughter.

"Hush!" said Mabel. "I hear a footstep."

The startled pair had only time to run softly across the floor and jump into their respective beds, counterfeiting sleep when there with gravity befitting a better cause, when the door opened and in stalked Miss Dixon with a lighted candle in her hand and an expression of countenance that would have done justice to Lady Macbeth.

"Stella! Stella!" she exclaimed as she caught sight of the small figure at the window, "why, what in the world do you mean?"

Now whether it was the sound of Miss Dixon's voice, which she was accustomed to obey, that from force of habit penetrated to Stella's understanding, or whether the music began to prove effective, I cannot say; but she awoke broadly at this juncture and stared with wide-open blue eyes at the approaching figure of Miss Dixon, though of course she knew no more than the man in the moon how she had got over to the window, or why Miss Dixon had come to question her.

The irate principal would not trust herself to say any more. She jerked the curtain back into place, thrust the terrified Stella back into bed, gave a parting glance at the other cots, and walked out of the room with all the majesty of offended dignity.

Issie and Mabel were too thoroughly alarmed to speak or stir, lest Miss Dixon should be listening at the keyhole. They conjectured from her silence that she was very angry, and looked forward to the morrow with great trepidation.

As for Stella, she lay still, thinking that she must have been walking in her sleep again, and realizing how hard it would be, under the circumstances, to make Miss Dixon accept that explanation of what had happened. She did not fall to sleep again until long after the serenaders had departed, and went down to breakfast next morning with a heavy heart.

When prayers were over in the schoolroom, Miss Dixon said she desired to have the attention of the pupils for a moment. Something had taken place the night before which she regarded as a most serious act of disobedience. She had determined that the subject of her displeasure should offer an apology to the whole school. After explaining to them all that had occurred, she ordered Stella to stand up and offer her excuses for such outrageous behavior, if she could find any to offer.

Stella arose trembling, but could only falter that she knew no more about the matter than Miss Dixon herself did.

Issie and Mabel fidgeted in their chairs and looked uncomfortable, but were determined not to confess as long as there was the least possibility of escape for Stella.

"Miss Dixon," said Helen Harrington, one of the older girls, "I think what Stella has just told you may be exactly true. She walks in her sleep."

Mabel, who sat next to Helen, drew a long breath of relief.

"I was unconscious of everything until you spoke, Miss Dixon," continued Stella.

"You made a great deal of noise for an unconscious performer," said the principal, grimly, "but with all your faults, Stella, I have never known you to deceive me, so that I shall accept your statement; only, if you do not soon outgrow the habit of perambulating in your sleep, I shall have to move you into a back room."

I am sorry not to be able to record that Issie and Mabel acknowledged the facts in the case, but I am afraid, on the contrary, that they were disposed to congratulate themselves upon their fortunate escape from justice.

A Tale of Two Shillings.

Once upon a time, two shilling pieces, fresh from the mint, started in life together.

It was not many days before they were separated. One traveled east and west, north and south, and, after being cast into many different purses and pockets, learned much and became quite polished from contact.

The other, afraid of being contaminated, slid himself into a miser's purse, whose strings were never loosened except to imprison other unfortunates. And there the stupid shilling remained until the miser died, and his money was distributed among his heirs, when suddenly he found himself again in company with the traveling shilling, who, when he recognized the dull bit of silver as his once brilliant friend, cried out, "Ha, ha, friend! Wast thou so fond of the bowels of the earth that thou must needs go back again when we parted?"

"Thou hast learned much in thy travels, I suppose," grunted the discolored shilling.

"Much indeed!" returned the other. "A shilling buys many a thing, my friend. I have been exchanged for bread for hungry children and sweets for pretty maids. Once I was given to buy a monkey a cap. I have been thrown in charity. I have been the servant of the rich and of the poor. I have traveled in company with gold pieces and coppers. And this one thing have I learned—gold or copper, all things must serve, or grow to be like thee."

"Thou art a bit polished, I trow," said the dull shilling, "but thou hast wasted thyself. I will wager that my weight to-day is more than thine."

"I dare say," returned the bright shilling, "that thy weight may exceed mine; but I still pass for a shilling, and nobody gives me a bite to know that I be not lead;" and his new master, opening at that moment his purse, out darted the bright shilling once more into the world to learn and to serve.—*Christian Register.*

DOMESTIC ECONOMY.

FLANNEL CAKES.—Two eggs beaten light, one pint of milk, salt to taste, two teaspoonfuls of yeast-powder and flour enough for a batter. Serve hot in round cakes with maple syrup.

APPLE CUSTARD.—Pare and grate two large, tart apples; add four tablespoonfuls melted butter, eight of sugar, juice and grated rind of one lemon, yolks and whites of six eggs, separately beaten. Line dish with puff paste and bake like custard.

LYONNAISE POTATOES.—Cut some cold boiled potatoes into small square blocks; shred half an onion finely; drop potatoes and onion into boiling lard and fry a light brown; drain on paper and serve in a very hot dish. Dust with powdered parsley before serving.

APPLE AND TAPIOCA PUDDING.—To a teacupful of tapioca use a quart of boiling water; let stand awhile and soften; sweeten a little, add a lump of butter the size of a walnut, then slice in tart apples, sufficient to make a layer over the top. Bake until the apples are tender. Eat with sweetened cream.

YEAST.—It was found some 50 years ago by Cagniard, Latour and Schwann that the mysterious substance known to brewers as yeast or barm was really composed of a vast number of minute oval particles endowed with the powers of growth and multiplication, and therefore undoubtedly living.

FRUIT CAKE.—Raisins and spices to taste, one cup molasses, one cup brown sugar, one cup shortening, two eggs, two teaspoonfuls soda, three cups flour, two cups dried apples (not soaked). Beat all together and stir in raisins and spices to suit. Soak the apples over night. In the morning, put in the molasses and sugar, boiling down quite thick.

ROLLED OATS.—Put two teacupfuls of rolled oats into a double boiler, Add one teaspoonful of salt and four teacupfuls of *boiling* water; boil 15 minutes. Best if eaten either slightly warm or cold with cream and sugar or with plain sweet milk. A bright, new tin pail, tightly covered, set in a kettle of boiling water, is a good substitute for a double boiler.

CRABAPPLE SHORTCAKE.—Two cupfuls of thick, sour cream, a pinch of salt, a small spoonful of soda, and flour to make a stiff batter; place in a deep pie-tin and bake a light brown. Have ready a quart of sauce, made of crabapples and sugar stewed thick. Split the cake when done, butter each half and spread with the sauce. Serve with the juice sweetened and slightly thickened with cornstarch.

CHEESE SANDWICHES.—One-fourth pound of crumbled cheese, the yolk of a hard-boiled egg, a tablespoonful of melted butter, half teaspoonful of salt, a dash of pepper, half teaspoonful of made mustard, a tablespoonful of milk, and thin slices of bread or biscuits, lightly but evenly buttered. Put the hard yolk in a small bowl, make smooth with a spoon, add the butter, cheese and seasoning, mixing well, and lastly the milk.

SALT-FISH CHOWDER.—Shred up a pint bowl full of salt fish and let it soak in cold water about two hours. Fry a few slices of fat salt pork the same as for clam chowder and put in the bottom of your kettle, then about three pints of sliced potatoes, three sliced onions and one pint of breadcrumbs, sprinkle with half teaspoonful of black pepper and add hot water enough to cover; boil until the potatoes are soft, then add one pint of milk and let it boil up once, and it is ready to serve. If the fish and pork do not make it salt enough, season to your taste.

SPONGE CAKE.—One cup of sugar, one egg, two teaspoonfuls of baking powder, a scant half cup of sweet milk, 1½ cups of flour and one-third cup of boiling water; flavor to taste; beat the egg thoroughly, add the sugar and milk, then the flour, slowly, stirring well, having sifted the baking powder in thoroughly; add seasoning, and when the whole is beaten well and the cake bar is ready, add one-third cup of boiling water quickly and put into the oven at once. This is nice for layer cake also. Milk, in place of egg with sugar, is better for filling and frosting too.

AN IMPROVED SEWING NEEDLE has been patented which secures the end of the thread in the eye, instead of having a running thread as in the case of ordinary needles. The eye of the needle is round or oval at the bottom, and tapers away chisel-shape at the top or head, thereby causing sufficient elasticity at the top of the eye to hold the thread perfectly rigid. This invention does away with all cutting of the thread, which is the case with ordinary needles where a running thread is used. The object of this invention is to allow the cotton thread to be easily passed through the hole and pulled up toward the head, so as to fix the thread in the chisel-shaped slit, and thereby prevent the thread from slipping out, as is the case with ordinary needles.

GOOD HEALTH

About Expectoration.

Aside from being an exceedingly filthy habit, the custom of free and careless expectoration involves dangers to health which are not generally understood, but which are nevertheless in no sense fanciful.

It is well established that the poison of certain diseases appears in the expectoration. The germs of consumption are known to be minute, rod-like vegetable bodies, visible only by the aid of the most powerful microscope. In the matter expectorated by those afflicted with this disease the germs are met in large numbers. By experiment it has been determined that they are very tenacious of life, and can be destroyed only by certain fluids or by exposure to a high temperature for a considerable length of time.

It is easy to see, therefore, that if the expectoration from the lungs is allowed to lie exposed till it becomes dry, the germs will be taken up and scattered abroad by the air currents, and in this way a fruitful source of contagion will be provided.

Fortunately, most people in good health remain unaffected by the germs which have found entrance into the body. It is only when the powers of resistance are weakened by some defect of the constitution, or when some unusually favorable opportunity for infection has been given, that the poison gains a mastery and produces disease.

When we consider that in a hall of moderate size, which has been occupied by an audience for an hour or more, there are millions of germs of various kinds, some of which, under favorable conditions, are capable of producing disease, then the wisdom of such a provision of nature becomes apparent.

No doubt every one has felt a certain disgust at the hawking and spitting which is met with to a greater or less extent in all public places, and it is well for every one to know that there are excellent sanitary reasons for the observance of a rule which good breeding and a care for the feelings of others ought to be sufficient to enforce.

It is in the discovery of the real causes of disease that we shall most surely find the valuable ounce of prevention. If we must expectorate, let us at least refrain from doing so in public places.—*Youth's Companion.*

POWER OF THE IMAGINATION.—The Philadelphia *Times* tells how a dream of death was accurately carried out to the peaceful end. The story is as follows: A remarkable instance of the hold superstition has upon the mind of even the educated and religious was recently exhibited in the case of Mrs. Rebecca Byrnes of Helena, Ark., a lady noted for her intellectual attainments and pious life. One morning, rising in what seemed her usual health and spirits, she summoned her children to come to her. One son was residing in Topeka, Kan., one in New Orleans, two daughters were married and living in Sedalia, Mo.; but obedient to their mother's call, they came at once, though ignorant of the reason of their summons. When all were about her, the lady informed them that she had had a dream in which her husband, who had been dead for nearly 15 years, had warned her that she had only ten days more of life. She had sent for her children to bid them good-by, which she proceeded to do with much calmness, but with the air of one who had not the slightest doubt that she was already dying. Her friends attempted to reason with her and to point out the folly of placing such perfect confidence in a dream, but all to no purpose, for the lady persisted in asserting that she would depart from earth on such a day and exactly at a certain hour. Her pastor remonstrated with her and even brought the severest censure to bear on her superstitious credulity, and at last Mrs. Byrnes ceased to speak of the matter, so that her family had begun to think she had conquered her fancy. She continued in excellent health and pursued her usual daily life, but just before the hour she had predicted would be that of her death she sought her children and bade them good-by, then seating herself quietly in an arm-chair, expired just as the hour was struck. The physicians declare that her death was due solely to her imagination.

INTELLECTUAL WORK.—"It is not intellectual work that injures the brain," says the London *Hospital*, "but emotional excitement. Most men can stand the severest thought and study of which their brains are capable and be none the worse for it, for neither thought nor study interferes with the recuperative influence of sleep. It is ambition, anxiety and disappointment, the hopes and fears, the loves and hates of our lives, that wear out our nervous system and endanger the balance of the brain."

CREMATION is more extensively practiced in Italy than in any other country. The first crematory was established in Milan in 1876, and there are now 50 in operation in Italian territory.

SMALL HURTS.—A medical journal declares that a healthy man will actually suffer more from the prick of a pin than he would from the pains of dissolution in case he died a natural death.

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[NEW THIS ISSUE.]

Cultivator—N. McLean, Watsonville.
Spray Pumps—Woodin & Little.
Nursery Stock—Trumbull & Beebe.
Nursery Stock—Thos. Meherin.
Cart—Frank Bros.
Horse Liniment—H. H. Moore & Sons, Stockton.
Nursery Stock—Leonard Coates, Napa.
Egg Food—B. F. Wellington.
Grape Hybrids—F. V. Munson, Denison, Texas.
Land for Sale—G. S Williams, Santa Rosa.
Hereford Bull—David Griffith, Penryn.
Seeds—L. L. May & Co., St. Paul, Minn.
Seeds—J. A. Salzer, La Crosse, Wis.
Seeds—W. W. Barnard & Co , Chicago, Ill.
Seeds—Northrup, Braslan & Goodwin Co., Minneapolis, Minn.
Peach and Apricot Pits—Fancher Creek Nursery, Fresno.
Imported Stallions—H. Wilsey & Co., Petaluma.
Nursery Stock—Wm Sickert, Redwood City.
Thoroughbred Cattle—A. Heilbron & Bro., Sacramento.

See Advertising Columns.

The Week.

The rains ceased quickly after depositing varying amounts of water according to locality, as is their usual way. In the Bay region, and probably in some other parts, the rains were in such volume that much ran off without deep penetration, consequently some districts, though having a good record in inches, still have soil too dry to plow well. In other parts the penetration was sufficient and the plows have gone afield with all haste and are rapidly breaking turf and stubble. More rain is needed in most places. Another of Lieut. Finley's cyclones stole in upon Washington on Tuesday, but up to this writing on Wednesday evening the skies and prophecies are all clear for California.

As the deciduous fruit season is closing, the citrus season is beginning to sustain the reputation of California as a fruit-all-the-year country. The orange product will be large and will bring much money to the fortunate producing regions.

Planned for the Home of a Great People.

If ever Nature plans with a purpose of the kind, it was clearly her design that California should become the home of a great nation. Look at her and study her advantages and possibilities in all their aspects and bearings; consider her incomparable climate, her prolific soil, the motive-power of her many rivers and her wealth of forests and mines. Translate these into the language of industry and commerce, and what do they teach? Clearly that California was destined to be the seat of wealth and power—the home of a numerous, rich and prosperous people.

While the Pacific ocean on the west will forever serve as a cheap highway to countries abroad, her great bays and far inland-reaching rivers will remain the channels of domestic trade and traffic. Starting at the seashore and traveling east, we pass over a succession of low mountains and fertile valleys till the foothill region of the Sierra is reached, with the great forest-clad, snow-crowned cordillera beyond. Issuing from these mountains more than 20 large rivers, besides numerous smaller streams, flow west, affording ample means for irrigation and water-power of almost illimitable extent. That the flow of these rivers might not fail when most required for irrigation, Nature took the precaution to pile up every winter enough snow about their sources to keep them well replenished till this need is no longer stringent. Through this wise provision the propulsive power generated by these streams never wholly fails, nor is it ever more than partially abated. As the fall in these rivers varies from 5000 to 10,000 feet, their value for propulsive purposes can hardly be overestimated.

The lack of a good coal has ever been considered an insurmountable obstacle to the establishment of large and successful manufacturing industries in California. But with the immense water-power afforded by so many mountain streams, this difficulty is in large measure overcome, the practicability of transmitting this power to distant points through the electric cable adding largely to its value. Besides the propulsive power derived from this source, both wind and wave power can in this State be made largely available for driving machinery, and that they will in good time be so employed admits of no doubt. What will greatly aid manufacturing in this State is the extent to which we produce the raw material in almost every required form. In this respect no country in the world is richer than California.

But a good country is but half of a great nation, and the poorer half at that. It is their character rather than their possessions that makes a people truly great. And who can tell us what manner of man is this who is coming to inhabit California? We have here assumed that he would be worthy the country he is to occupy; but about this opinions differ. The best countries do not always produce the best races of men, and possibly California may not prove an exception. Our predecessors here were not much to boast of, nor have we as yet made ourselves conspicuous by our intelligence or our virtues. Occupying the best country in the world, we have shown ourselves neither better nor worse than the average of mankind.

The Pomona Station.

The outfitting and equipment of the new University Agricultural Station at Pomona is progressing favorably. The buildings are about completed and the foreman, Mr. K. McLennan, who has long acted in a similar capacity at the Berkeley Station, will soon install his family in his new quarters. Mr. McLennan has had a long experience in horticulture and in the treatment of the newer economic plants which have been introduced, and it is expected that he will soon be able to show results interesting and of value to the region to which he is accredited. Mr. Richard Gird, the patron of the Pomona Station, and who has contributed largely to its establishment, is taking an active interest in the progress of the work, as are the other contributors and friends of the enterprise.

The new station was recently visited by two members of the governing board of the University, Regents Hallidie and Ainsworth, who expressed themselves much pleased with their observations. At the meeting of the Regents on Tuesday of this week, Mr. Hallidie is reported to have spoken at length of his visit. He was delighted with its location, pleased with the local pride in the station and its work, and expressed confidence in the wisdom of the Regents in selecting the location for the station. He suggested that a conspicuous sign and possibly a flagstaff be placed at each of the University stations.

Mr. Hallidie's suggestion is a good one. These institutions should be distinctively known as integral parts of the State University, and should serve to localize the work of the agricultural department thereof. This was Prof. Hilgard's idea in proposing their establishment and it will prove promotive of this idea to have the establishments distinctly marked for the information of local residents and travelers. The unfurling of a flag at each of the stations is also a good idea, for the fund for their maintenance is derived from direct appropriation by the United States Treasury. No doubt it will be found feasible to carry out Regent Hallidie's suggestion in some appropriate manner.

Naming Country Roads.

In the RURAL of June 21st we published a description of a progressive undertaking in Contra Costa county, which included a proposition for the systematic naming and numbering of country roads as devised by A. L. Bancroft of this city, who has extensive agricultural property in Contra Costa and earnestly desires the advancement of the county in all progressive lines. The system was called the "ten-block system" because it divides each mile of highway into ten imaginary blocks, each of which is numbered.

The proposition, as published in our columns, attracted wide attention and called forth favorable comments from perhaps 100 journals located in different parts of the country. There was a claim on the part of a gentleman residing in Pennsylvania that the system proposed by Mr. Bancroft had been mooted by him about four years and by him urged upon the attention of the "Road Commission" of that State. We have before us a copy of the address upon which priority is claimed for the Pennsylvanian, and though his work is honorable and original, it is so different from the idea proposed by Mr. Bancroft that it cannot be regarded as an earlier presentation of Mr. Bancroft's plan. It must be still claimed that the California idea is an original one and that the State is entitled to the credit which it has secured by the wide publication of the plan as Californian in its origin.

The question will soon come up on the realization of the plan which has received such favorable consideration throughout the country. It has been credited to Contra Costa county in many cases as a project already carried out, but it was not published as such. It was given out as a project still under consideration. It rests of course with the Supervisors of the county to put it into effect and to enjoy the distinction of being the first county in the United States which has its roads fittingly designated and so marked that the traveler can tell his location and directions as well as he can on city streets. We understand that there will soon be presented to the Contra Costa Supervisors a report of a committee urging upon them the necessary steps to authorize and carry out the undertaking. This report will no doubt be published in the local papers. In order, however, that the minds of our readers may be refreshed on the proposition presented, we give the following brief statement:

The roads being named in as long stretches as practicable, they are then measured, commencing at the county seat or the end nearest to it, and each mile along them is divided into ten equal parts or imaginary blocks having a frontage on the road of 528 feet, 176 yards or eight chains. Two numbers are allotted to each block, the odd ones on the left side of the road and the even ones on the right. Each and every house located within a given block has the number of that block. In very few instances in any part of our county will the country houses be nearer together than ten to a mile. Whenever this occurs and two or more are located within the same block, they all have the same number and all but the first are followed by the letters of the alphabet in regular rotation—438, 438a, 438b, 438c, etc. Should they in any extreme case run as many as 250 to the mile, they could all be numbered by this system equally well and the numbers indicate their location. The numbers give the distance from the commencement of the road in such a way that it can be calculated almost instantly. As there are two numbers to each block, divide the house number by two to ascertain the number of blocks from the commencement; as there are ten blocks to the mile, divide that amount again by ten or point off one decimal and the distance in miles and tenths is obtained. In case of odd house numbers add one, divide by two and point off one decimal and the same result is shown.

Some of the great advantages of this plan are here briefly mentioned. Any new dwellings along the roads can have their correct number applied to them at any time, to any extent and without interfering with the existing numbers. Distances can be quickly calculated from any house number to any other house number in the county. Houses of residents can be found readily and with confidence. Strangers can be directed how they can find the residence desired. The fees of jurymen, constables and other officials can be accurately calculated. Road work to be done can be accurately defined by stating in which blocks it is located. If the divisions between the blocks are permanently marked by means of stone monuments, they can be used as starting-points to describe the boundaries of farms which are sold and for which deeds are required, etc. With this system established, a directory of the town and country residences upon the same basis of city directories becomes feasible, or the addresses of all voters may be given in the Great Register of the county, which will be useful to a limited extent.

We are informed that the cost of carrying out this plan of designating and numbering will not be great. It is estimated that it will cost perhaps 62 cents for each $1000 of assessed value. It seems to us this will be a small tax commensurate with the advantage of having a county's roads thoroughly marked and divided so that even a stranger can easily find any desired location without miles of useless travel or waste of time in seeking directions from people along the roads. We shall be glad to see the enterprise carried out, because it is in the line of progress and development, and promises to become popular everywhere. Great credit will, of course, attach to the county which first puts the plan in practice.

The Northern Citrus Fair.

The State Board of Agriculture has located the Northern Citrus Fair at Marysville and the Southern Citrus Fair at Los Angeles. The latter will be held the first week in March; the former will open in Marysville on Monday, Jan. 12, 1891, to continue one week.

Arrangements for the Marysville Fair are going forward actively. All the $2500 from the State appropriation will be devoted to premiums. There will be 27 classes. The county making the finest show will get $200. The same amount is offered for the best show of Navels, the display to contain no less than 2000 oranges. Exhibits of olives, persimmons, figs, raisins, pomegranates, lemons, limes, shaddocks, dried fruits, preserved fruits, wines, nuts, plants, flowers and nursery stock, are also desired, and $50 are offered for the best essay on orange culture. For the most artistic display $50 are offered. In an early issue we shall be able to present the premium list in exact form, so that exhibitors may know precisely what is open to them.

It is announced that the W. R. Strong Co. shipped the first carload of northern-grown oranges on Tuesday of this week. The fruit is from Butte county and destined for New York.

The Sale at Souther Farm.

The first annual horse sale at Souther Farm, which was fully announced in the RURAL in advance of its occurrence, was duly held and was very creditable to Gilbert Tompkins, the enterprising proprietor. The arrangements were first class in every respect, and the proceedings were without a hitch. An old stockman who has attended sales for the last score of years in different parts of the country, and is consequently a good judge, assures us that the sale was the best arranged and fitted out he has ever attended in this country. There was a large crowd in attendance, they were treated handsomely, and every convenience provided for their entertainment. Ample and well-planned seating arrangements during the sale were provided, which is a comfort too little thought of at such affairs. The sale was honest and square, and though prices did not meet anticipations in all cases, they were, we believe, to be fairly considered encouraging. We have not space at command for the details in this issue, but we desire to compliment Mr. Tompkins upon his manifest skill, enterprise and spirit of hospitality, as shown at his first annual sale, and to express the hope that it may prove but the first of a long and successful series.

A Government Spraying Device.

B. T. Galloway, Chief of the Division of Vegetable Pathology, U. S. Department of Agriculture, has devised an apparatus for spraying plants which need the application of fungicides or insecticides. Although it seems a small affair from a California point of view, and though the Californian would object on principle to packing on his back the bug and fungus medicine, the arrangement may prove of much value to our people who have to deal with diseases or insects affecting vines, nursery stock, garden plants and other low growths which can be best reached by a man walking among them. Apparently because of the large need for such application at the East, what is called the "knapsack sprayer" seems to best answer the demand. In this State the larger outfits, so contrived that the horses can move the weight, leaving the men free to handle the nozzles, will not only be used for work among trees, but will also be employed among vines and wherever else it may be practicable. Still the hand machine has important uses, and we publish the device of Prof. Galloway because it is public property and any one is at liberty to manufacture it for private use or for sale.

Fig. 1 shows the outfit in use, the pump being operated with the right hand, the nozzle held with the left.

Fig. 2 shows the reservoir and its appurtenances in detail. The reservoir is made of 16-oz. copper and holds a little over four gallons. Mr. Galloway says: "The hight of the reservoir is 16 inches, its breadth 15 inches and depth 5 inches, ten pounds of copper being necessary for a tank of these dimensions. When filled with the Bordeaux mixture, or any of the copper solutions now in use, the machine weighs practically 50 pounds, which is about as much as a man wishes to carry on his back for any length of time. In fact, we find very few men able to carry such a load constantly for more than a few days at a time. This is why we did not make the reservoir larger, as some advised us to do, thinking one of six gallons' capacity about the proper size. Where the pumps are being used three days out of every 15, as is the case with many vineyardists, a six-gallon reservoir would probably not be too heavy, but for a man using the machine six days in the week for three or four months, as must be done in large nurseries, it is simply out of the question."



FIG. 1—THE KNAPSACK SPRAYER IN OPERATION.

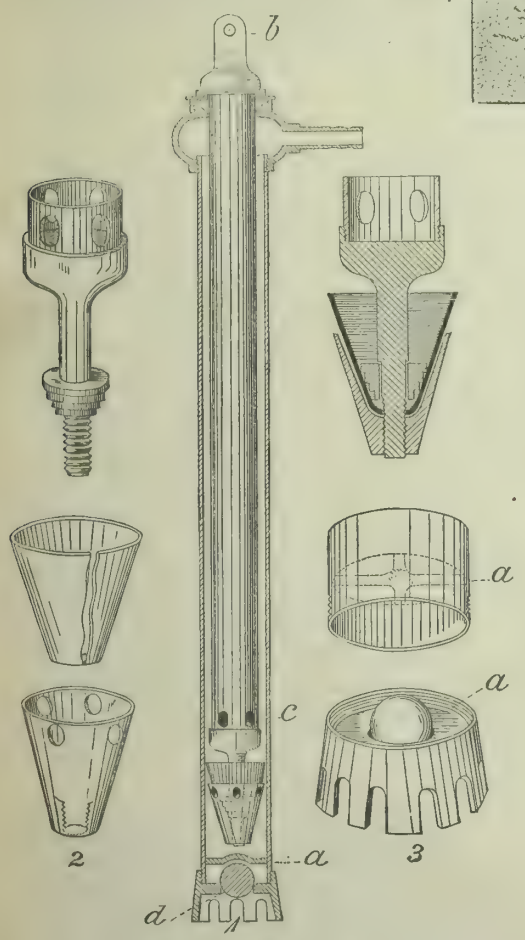


FIG. 4—THE PUMP.

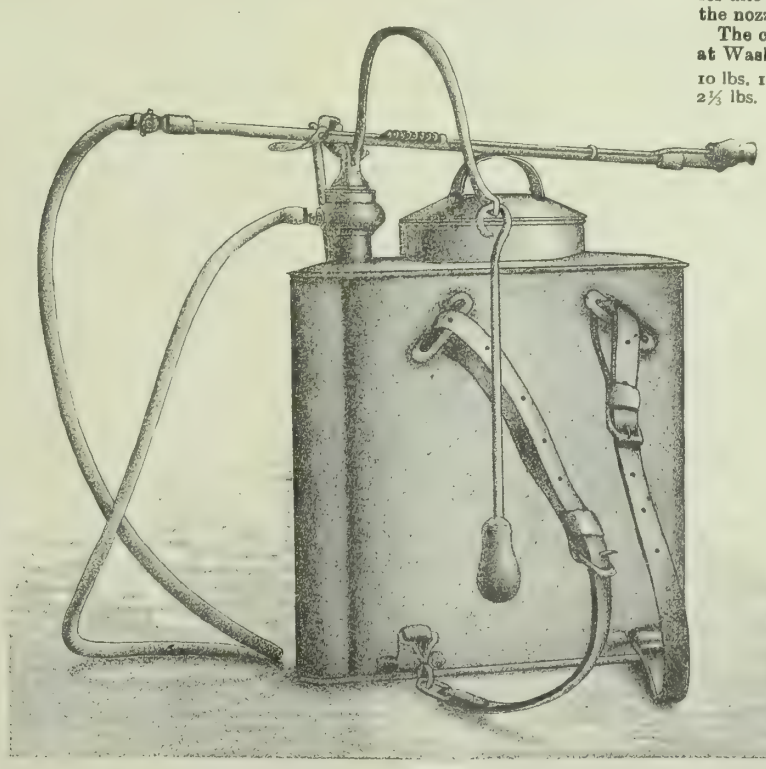
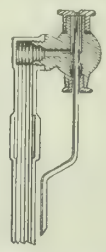


FIG. 2—THE RESERVOIR AND ITS APPURTENANCES.



SECTIONAL VIEW OF NOZZLE.

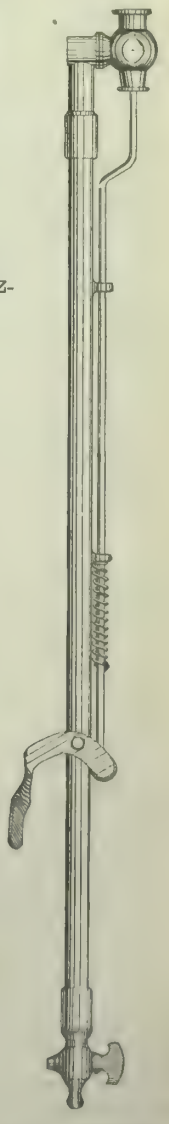


FIG. 6—THE ROD AND NOZZLE.

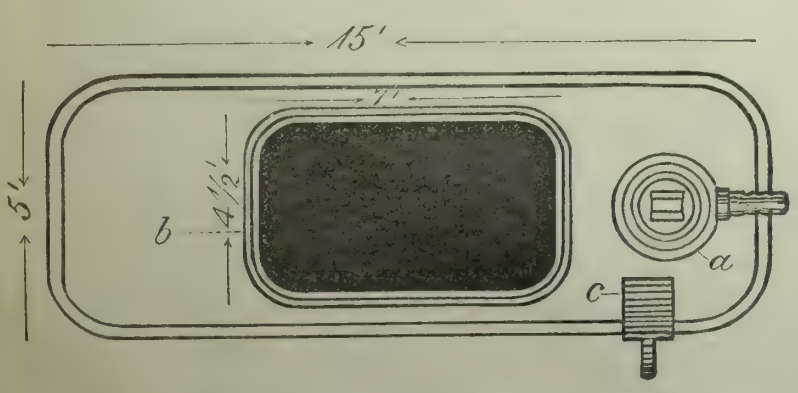


FIG. 3—THE TOP OF THE RESERVOIR.

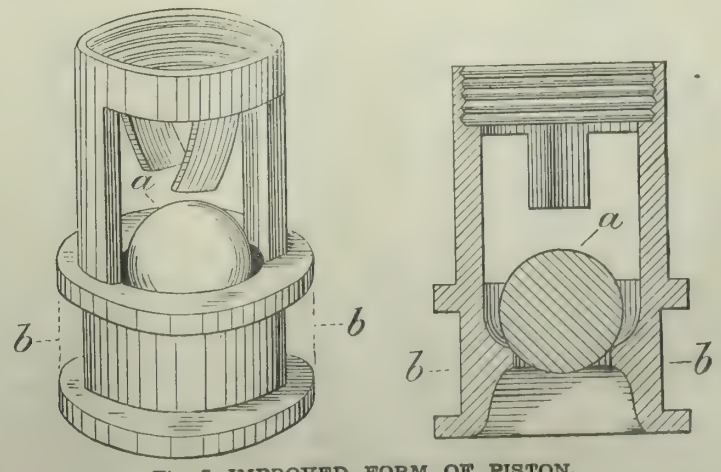


FIG. 5—IMPROVED FORM OF PISTON.

The bottom of the reservoir as well as the top is soldered in, and, as is shown in Fig. 3, the top is provided with two openings, one for the pump and the other for introducing the liquid. The pump orifice, *a*, is 1½ inches in diameter, while the opening for the liquid, *b*, is 4½ inches wide by 7 inches long. Above and surrounding this opening is a rim 1½ inches high, into which is fitted a strainer, made of fine copper wire. The strainer rests on a slight projection made in the copper at the bottom of the rim, and is removed by means of a handle across the middle. For closing the opening a lid made of copper, is used, this fitting down tightly in the rim.

Fig. 4 shows the pump, which is 17½ inches long and 1½ inches in diameter, and for making it 6 castings, weighing 2⅓ pounds, 15½ inches of 1½-inch brass tubing and 14¾ inches of 1-inch brass tubing, are required.

It is not necessary to go into the details of the various parts of the pump, as the figures and explanations thereto will, we think, enable any one to understand the offices of the various parts. The pump is soldered to the bottom of the tank, the solder being placed at the several points.

It is fastened at the top by means of solder, also; for some reasons this is objectionable, but as it will not be necessary to remove the tube, it is not a serious inconvenience after all. To obviate the difficulty, however, a nipple might be soldered in the tank, into which the tube could be screwed. The plunger is made in two styles, but for various reasons we have abandoned that shown in Fig. 4, and now use only the form illustrated at Fig. 5. This is screwed to the end of the tube, the end being left open to do away with the necessity of side portholes, as shown at *c*, Fig. 4. As seen in the cut, the plunger is not packed, the space *bb* being left for this purpose. Ordinary wicking is used for packing.

In using the pump the hollow piston is drawn up, creating a vacuum into which the liquid rushes through the opening *d*, Fig. 4. The piston is then forced down and this closes the valve *d*, Fig 4, and opens the one at *a*, Fig. 5. This operation being repeated, the liquid is forced out of the opening in a continuous stream, the latter being effected by means of the air-chamber in the piston. The figures show plainly the various parts necessary for working the pump, attaching the reservoir to the back, etc. We use, as a rule, about 4 feet of ⅞-cloth insertion hose, and this is fastened to the pump and lance by means of copper wire.

Fig. 6 shows the lance or rod and nozzle, the mechanism being clear in the drawings. The rod operating with a spring is a "degorger" for allowing sediment to be thrown out from the nozzle.

The cost of this apparatus, as manufactured at Washington, is as follows:

10 lbs. 16-oz. sheet copper at 23 cts. per lb.	$ 2 30
2⅓ lbs. castings at 25 cts. per lb.	62
Castings and labor on lance	2 00
Straps and hose	5
13 hours' labor at 40 cts. an hour	5 20
Total	$10 87

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

VEGETABLE FARM.—Irvington *Express*, Dec. 6: Robbie Crowell and Jim Millard have rented ten acres of land near Mr. Stivers' place, on the Niles road, and are busy getting it ready for the fine vegetables which they intend raising for market.

HAY FREIGHTS.—Livermore *Herald*, Dec. 4: Our haymen are making complaint of a new freight rating of the Southern Pacific Company for hay shipments, which they characterize as not only unjust but absurd. There are two sizes of box freight-cars in use for hay shipping, one 28 and the other 34 feet in length. One has been rated at 10 and the other at 12 tons capacity, the hay rate to the city being $1 44 per ton. The change was an arbitrary advance on hay in large cars, of 20 per cent. This makes the freight on ten tons of hay to San Francisco in a large car $18, while in a small car it is but $14.40. The shipper cannot discriminate, but must take cars, large or small, that are given him.

Butte.

SACRAMENTO VALLEY RAISINS.—Chico *Enterprise:* The last car of raisins from the Rancho Chico was loaded up to-day. Mr. Brown, the raisin expert, who has been superintending the curing and packing of the raisin crop, informs us that this last car makes a total of 13 car loads of raisins shipped to Chicago by the firm of Lossee, Kuhn & Larger from the Rancho Chico. Each car contains 1000 boxes, so that the total output is 13,000 boxes.

THE FLEMING CANAL.—Oroville *Mercury*, Dec. 5: Work has been commenced on the Fleming irrigation canal. This canal taps the Feather river in Thermalito, west of Oroville, and will extend over the country for many miles. The canal is 65 feet wide, and it is calculated that it will carry 50,000 inches of water. Work is now being pushed vigorously and water will be turned in next June. The canal will flow through a rich fruit country which is now covered with young orchards. It is this kind of work that is the making of our citrus belt. Oroville *Register:* With the big irrigation canal in Colusa, that of Brown's Valley in Yuba, the work now being prepared in Butte, together with one contemplated by the Big Bend Company and one by the Golden Feather, it looks as though this part of the State was rapidly waking up to the value of water.

Fresno.

IRRIGATION.—Fresno *Republican:* The Panoche Irrigating Canal Company is a corporation which has just been organized in this city. The purposes for which the corporation has been formed are to do all the acts generally accorded land and water companies and to exercise for those purposes the right of eminent domain. The capital stock of the company is $50,000, which has been subscribed for. The preliminary surveys for the reservoir sites and canals of this company have already been made, and Mr. Hughey, who is the engineer, will soon take the field to make permanent locations. The canal will be built this winter, but the construction of the reservoirs will have to be deferred until next summer, when the conditions will be more favorable. The company expects to impound enough water to irrigate 20,000 acres of land. The valley in which the company will operate is one of the finest in the State, and has simply been waiting for water, to make it the most productive in the county.

RAISIN PACK.—Fresno *Republican*, Dec. 5: Williams, Brown & Co. are already closed up, having shut down for the season Saturday night. The company would not make known their exact pack in boxes or by cars, but it easily reached the figures they started out to gain. The Home Packing Company has shut down, and has no cause for complaint concerning its first year's business. The pack was not all that was expected, but larger than was estimated immediately after the September rains. Schacht, Lemoke & Steiner stopped receiving raisins yesterday, but it will take them a week or ten days to use up the fruit now on hand. The pack has fully come up to expectations. Griffin & Skelley stopped receiving fruit on Saturday night, but it will require all the week to close up the business. A. Lusk & Co. are still receiving fruit, but will make an effort to close down by Saturday night. Cook & Langley were still receiving fruit yesterday, but are pushing matters so as to close up by Saturday night. It is somewhat difficult for the packers to stop operations this year; more difficult than they have ever before found it. The weather has been so fine that vineyardists have continued to cure raisins up to this time. The pack of the season will be considerably larger than that of last year, and in the main it is of excellent quality. It is not possible to get figures now, but all the houses profess a willingness to "furnish them as soon as we close and can foot it up." The only reliable figures on the subject will come from the railroad office at the end of the year.

RAISIN PACK AT MALAGA.—Malaga, Dec. 4: The El Modelo Vineyard Co. has shipped 87 carloads of raisins this season. Several lots of raisins were purchased by the firm from vineyardists about Traver, and Mr. Frazier says for quality they averaged well with any lots purchased in Fresno county or elsewhere. Their packing-house closed for the season last Saturday.

Inyo.

LAND CONSIDERED WORTHLESS NOW GROWS GOOD CROPS.—Independence *Independent*, Dec. 5: Twenty acres of alfalfa land on Watterson's ranch, near Bishop, got flooded last winter, and in the spring was so tramped over by stock that the alfalfa was ruined. The ground was plowed and sown with wheat. Twenty-six tons of first-class wheat was gathered from the 20 acres. A few years ago this land was considered utterly worthless, like much of the same kind in Owens valley.

Mendocino.

HAY IS SCARCE.—Ukiah *Republican*, Dec. 4: Hay is now selling at $16 to $18 per ton, and almost unobtainable at that. During the last two weeks a number of carloads have been shipped in from Petaluma at a cost of $15 or $16 per ton there. The cause of the scarcity lies in the fact that it was impossible to even put in volunteer last winter, and also because the increased acreage of hops and fruit is crowding out the grain and hay fields. The large amount of hauling to be done at the asylum early next spring will be apt to make hay still dearer.

PRUNE NOTES.—Ukiah, Dec. 4: Sam McGimpsey of Boonville and Mr. Weller of Belle Valley intend to plant prunes to a considerable extent this spring. McCowan of Anderson will erect a fruit-drier of good capacity soon. Mr. Eldred of Christine had 50 bearing prune trees this year. The crop was 1800 pounds of dried fruit, bringing 7 cents per pound or $126 from a half acre of fruit, which is certainly encouraging.

Napa.

VINTAGE OF 1890.—St. Helena *Reflector*, Dec. 5: Jno. H. Wheeler of Bello, Napa Co., who was for several years Chief Executive Officer of the Viticultural Commission, speaking of the vintage, said: "There has never been a season in this State, in my judgment, when there has been so much good wine made as this year. Everything has been favorable, especially the weather of the past few weeks, which has brought a large second crop of grapes just to the right perfection for wine purposes. The second crop was unusually large this season. I only finished my grape crushing last week. I expected I would crush about 250 tons. Instead of that, nearly 350 tons have gone into the press. It is a good thing for the State that the year's product generally is of excellent quality. More fine varieties of wine grapes have been picked this year and fewer Zinfandel or Malvoise have been crushed. For red wine around my way, the grape known as Crabb's Burgundy has been planted largely, and this season has yielded heavily. This, undoubtedly, is one of our best claret grapes. A quantity of Cabernet, Grenache and Carignan has also gone into the press this season. For white wines, our growers started better a few years ago than those who planted Zinfandel for claret. The Riesling is a fine white grape. The Sauvignon Vert, which has been also widely planted, has given a good crop this year."

Orange.

AN ANAHEIM FARMER'S WAY.—Los Angeles *Herald*, Dec. 4: Victor Schumacher sowed two acres to barley for hay Nov. 15, 1889; the following April he took off four tons of hay, plowed, irrigated and planted the same piece with corn; about the middle of August he planted potatoes between the rows of corn, then took off his cornstalks and all, regular Eastern style, and inside of 12 months from Nov. 15, 1889, he had his third crop from the same land sacked and ready for market at $1.40 per cental for his spuds. His potato rows were unusually far apart, and he had only 30 sacks per acre.

Placer.

A WONDERFUL TREE.—Grass Valley *Tidings:* What may be styled the "boss fruit tree" of California and the world is on the ranch of R. Hector in Placer county. In a paper read before the recent convention of fruit-growers at Santa Cruz, he said that his famous cherry tree had during the past five years brought him a gross return of $1800. Last year, 300 ten-pound boxes of cherries were picked from this tree. The fruit has brought an average return of $1.50 a box during the five years. The tree is of the Black Tartarian variety, is 35 years old and 60 feet in hight, while its trunk has a girth of over ten feet at a point six feet above the ground. It stands upon bench land, of sandy loam, near the American river. The soil is very deep and rich. The ground is irrigated immediately after the fruit is picked from the tree. The location is warm and sheltered, and the fruit comes very early into the market.

San Benito.

STOCK NOTES.—Hollister *Free Lance*, Dec. 4: Stock men are happy. Cattle have stood the summer and fall season well and are in excellent condition for the winter. Feed was beginning to start before the rain of Tuesday night, and it is now coming out rapidly. In a short month the hills will be green with verdure and cattle will be luxuriating in plenty of new feed.

San Diego.

BIG SHIPMENT OF WHEAT.—San Diego *Union:* It is a good sight to see the Stracathro taking on wheat at the railroad wharf. Carload after carload is daily going into her capacious hold. She loaded steadily for about ten days at Spreckels Bros., wharf, and two days ago moved to her present berth. When she sails for Liverpool she will have on board 1700 tons of wheat, 34,000 sacks, equal to about 170 carloads, making one of the largest cargoes of grain ever shipped from this port.

San Joaquin.

FINE PERCHERON STALLION.—Stockton *Independent*, Dec. 2: George Warren of France arrived in Stockton Sunday, his mission being to deliver to C. K. Bailey, the Linden farmer, a draft horse, a celebrated two-year-old Percheron stallion that is a beauty and weighs about 1300 pounds. Mr. Warren sold several other horses in the United States. When he started from France he had a French coach horse for L. U. Shippee, which he says was as fine an animal as he ever saw. After nine days out, the horse took sick and died.

San Luis Obispo.

NURSERY TRUST.—S. L. O. *Tribune:* Owing to the scarcity of nursery stock and the exorbitant prices charged, but few trees will be planted this season. We have suffered greatly from this state of affairs for the last three seasons. Why do not the nurserymen increase their production to meet the ever-increasing demand? When questioned on this point lately, one of them replied that it was to their interest to keep down the supply and keep up prices; that in fact they were making a big thing out of it. This, then, is the explanation. The most prosperous industry in the State and the one on which the future prosperity of this section of country is based is being throttled by a few nurserymen who have undoubtedly combined to enrich themselves by robbing the farmers. Surely it is the duty of the whole community to join hands with the Farmers' Alliance to crush this and the many other combinations that meet us whichever way we turn, ready to sap our strength and drink the very life-blood of our prosperity.

Sonoma.

A PROFITABLE SEASON.—Sonoma *Democrat:* All the way from Cloverdale down the Russian River valley, by way of Geyserville, Dry Creek and Healdsburg to Santa Rosa, and down the Los Guilicos valley toward Sonoma, the winemen are jubilant. The fruitmen who are fortunate enough to have orchards in full bearing of prunes, peaches and the like, likewise have reason for congratulating themselves. During the past season larger prices by far were realized for the deciduous fruits than ever before. The wineries, which barely bid enough in 1889 to pay for picking and hauling the common grapes to press, the past season found the farmers picking and drying their grapes, and the latter have realized a better price for their grapes in that form than in any other. It was the first chapter after the new leaf was turned in the prosperity of this coast.

Sutter.

FINE RAISINS.—S. H. Raub is packing some fine raisins at his place down the levee. He packs them in what is styled London layers, with fancy label and wrapper. From 142 square rods Mr. Raub will put up 800 cases of raisins. A pretty good showing of this land's productiveness. His ranch is Government land along the Sacramento river, and was overflowed last winter only by breaks in the levee on his own land.

A FLOATING DAM.—Yuba City, Dec. 5: The Levee Commissioners of District No. 1 finished putting in a floating dam at O'Neil's Landing last Tuesday. At that point there has always been considerable wash on the bank caused by the current of the river, and the idea of the dam is to prevent further damage and to cause the sand and slickens to fill in and form a new bank. Large logs are lashed together in threes or fours and fastened to a heavy cable a short distance apart and the entire chain of small rafts is fastened to the bank securely, but allowed to float in the water. The logs act as a check on the current which forms an eddy and the debris is deposited under the logs and thus improves the bank. This system has been successfully tried heretofore.

A BENEFICIAL RAIN.—Yuba City, Dec. 5: The long-looked-for rain began falling here last Tuesday about noon, and has continued with high winds with but short intermissions. It is to be hoped that during the remainder of the month there will be fine weather, as our farmers are anxious to begin plowing. Besides considerable summer-fallow to be plowed and sown, thousands of acres of winter plowing will be put in if the season is favorable. There is now plenty of moisture to start the seed to growing and insure comparatively good plowing. The pasture lands will also soon produce an abundance of feed.

OUR VINEYARDS AND NEW VARIETIES OF GRAPES.—Yuba City *Farmer*, Dec. 5: In passing over our county recently, we noted many young vineyards which will add greatly to our already large grape product. We note that nearly all grapes planted now are the raisin varieties, with a small percentage of Zinfandel for wine-making. Among the varieties most sought after, the Thompson's Seedless takes the front rank at present, and it is without doubt a grand acquisition to our raisin varieties. It has always been a mystery to us that our vineyardists have experimented so little with the vine. No effort has been made in this State to produce new varieties from the seed. It is not only possible but it is highly probable that many improved varieties could be had if an effort was made. Here both the American and foreign grapes reach perfection side by side, which makes it possible by hybrids to combine the best qualities of both. Grape seed for sowing is entirely freed from the pulp and then mixed thoroughly with pure sand, to be kept moist but not wet throughout the winter. It should be placed where the temperature is evenly cool, above the freezing point, but a little freezing will do no harm. The seed should be sown rather thickly in the spring in a cool frame and transplanted to the field when thoroughly rooted, after danger of frost is over, or if specially strong plants are desired, they can be picked out three inches apart in the frame and allowed to reach a larger size before transplanting.

Stanislaus.

WHAT A SQUIRREL EATS.—Oakdale *Leader*, Dec. 6: C. W. Austin shot a squirrel that had 1020 grains of wheat stored away in the pouches of its cheeks. At this daily rate of consumption, 100 squirrels would probably eat a sack of wheat in five days, or about six sacks a month. This would keep an ordinary family provided with flour.

Tehama.

THE RIGHT KIND OF WINTER.—Red Bluff *Cause*, Dec. 6: The outlook for the farmers at the present time is most encouraging. One farmer said to-day he had set six or seven plows at work, and that he would take a winter of the kind we have been having in preference to the kind we had last winter every time. When the rain comes late in the season, it usually continues late in the spring, and growing grain is greatly benefited by it. A great deal of grain will be sown between now and next March.

MORE TREE-PLANTING.—Anderson *Enterprise*, Dec. 4: Mr. Hopkins has closed the purchase of the 8000-acre Barry tract of land opposite Cottonwood, in Tehama county. He will superintend the planting there, this season, of 500 or 600 acres of fruit trees on the bottom adjacent to the town of Cottonwood. Mr. Hopkins will also, besides replanting all of the trees lost on the Hopkins Model Colony this year, add thereto about 65 acres. The additional orchard will be on the east side of the road running through the tract. The Barry tract of land adjoins on the west the 4000 acres recently purchased by A. T. Hatch of Wm. Owens, showing that the extreme north of Tehama county, adjacent to Shasta, is becoming a region of vast improvements.

Tulare.

ORCHARD AND VINE NOTES.—Visalia *Delta*, Dec. 4: The Visalia Fruit and Land Co., an incorporated company with $88,000 capital, has purchased the S. C. Brown ranch, consisting of 440 acres, paying therefor $100 per acre, or $44,000. The land lies southeast of town, and will be planted to fruit this season. One hundred and forty acres will be planted to trees, 30 acres in vines. There are at present 30 acres in vines on the place. Next year the remainder of the ranch will be planted to fruit.....F. B. McKevitt of Vacaville has purchased the D. G. Overall ranch. The ranch consists of 240 acres, and the place will be planted to peaches and prunes. Mr. McKevitt and business associates have filed articles of incorporation (capital $100,000) in the Secretary of State's office at Sacramento. The name of the organization will be the Giant Oak Fruit Company.

LARGE CORN.—Visalia *Times*, Dec. 4: U. D. Switzer last year secured some seed corn from Arkansas, from which he raised a crop this season. The ears of corn are ten inches in length, and girt over eight inches. The seeds are extra large and full. The corn was planted late, on ground from which a crop of hay had been harvested this season, and it is probable that the corn crop would have produced better had it been planted earlier. Then again, it was not cultivated after being planted, which probably retarded its growth also. Nevertheless it is larger corn than is generally raised in this vicinity.

ARIZONA.

BEANS IN THE MOHAWK.—Yuma *Times*, Dec. 3: Charles Landon, a rancher in the Mohawk valley, has shown this season that beans can be made a profitable crop there. He planted several acres to beans on the 20th of last March, but as he did not know exactly the best way to treat them, the yield was only enough to replant two acres and a half. He replanted with the seed obtained from the first crop on the 25th of August. This time he plowed first, then irrigated and then sowed his beans broadcast, harrowing afterward. The result was a yield of a ton to the acre. He sold 1000 pounds at home for $45, which would give a return of $90 per acre, and this, with two crops a year from the same ground, makes beans a good crop to raise. California ships beans to Boston, and Yuma county might do the same.

CALIFORNIA CATTLE TRAIL.—Tucson *Citizen*, Dec. 6: Saturday last a number of prominent cattlemen met in this city and perfected a temporary organization. Among other objects of the new association will be to arrange for the driving of cattle to California, which it is the general opinion of cattlemen can be done via the trail taken by W. L. Vail last spring, at a cost of not more than $1 per head. Already $10,000 has been subscribed for the purpose of locating wells along the route and constructing a ferry-boat on the Colorado river. Owing to the heavy rains the present year, the necessity of wells will not immediately arise, but the money will remain in the hands of the treasurer for any contingency. The organization starts out sufficiently strong to carry out its work.

NEVADA.

ANGORA GOATS.—*Central Nevadan:* Twenty miles south of Battle Mountain, on the foot-

hills of the Lewis range of mountains, where Mill creek enters Reese river valley, is located the most prosperous Angora goat ranch on the coast. Fourteen years ago a small band of goats with silky hair was taken from the Sheriff Swift ranch, half a mile out of Carson, to the Mill creek country, where the goats have since flourished on the rich bunch-grass of an average Nevada cattle range, until now the band numbers many hundreds, from which yearly clips of long, silky hair are taken and in baled form shipped to the Chicago market, there commanding the highest price. C. P. Bailey, owner of this ranch, is also the proprietor of two Angora flocks in California, one in Texas and one in Mexico. The large glove factory in San Jose is run by him; so altogether he is a practical goat man. Of the five flocks mentioned, the Nevada-nurtured gives the best returns, showing more increase, largest averaged clips and fattest animals.

CROP NOTES.—Virginia City *Chronicle:* The Monthly Weather Review of the Nevada State weather service reports as follows: Belmont, Nye county—Geo. Nicholl, Observer: The farmers are finishing up their third crop of alfalfa, also their threshing. The hay crop generally has been over the average and of excellent quality, while grain has been a fair crop and in places exceptionally good, yielding in some instances over two tons to the acre. The apple crop has been enormous. The Duckwater orchard (Irwin's place) showed acre upon acre of apple trees of every known variety, the branches of which were literally bent to the ground with luscious fruit. The vegetable crop has been fair, although some varieties suffered from the late cold spring weather.

ENTOMOLOGICAL

Chemical Fumigation for Scale Insects.

[An essay by H. K. SNOW, Tustin, read at the Santa Cruz Convention.]

I have not the time to write any extended remarks on fumigation by the use of hydrocyanic gas treatment, but as I feel deeply interested in citrus culture, and having been using this gas for several months, I feel it my duty to report, according to the request of many fruit-growers, my experience. I made my tents and commenced February 15th of this year under the instructions of A. D. Bishop. I made two large tents 30 feet high and 20 feet in diameter and the other two were 22 feet high and 17 feet in diameter out of ten-ounce blue denim; sized them first and then painted them, using lead, oil, lampblack and spirits turpentine, which makes them perfectly dark and tight. My first work was done on my lemon orchard by using on trees from 12 to 14 feet high about four ounces cyanide of potassium and four measured ounces of sulphuric acid turned into eight ounces of water and let the tents remain over the trees for 15 minutes; but as the work progressed I found that the time was not long enough and that the gas was not as strong as it ought to be, so now we use about one-fourth more material and let it remain under the tents 25 minutes and trees 20 feet high 30 minutes.

The work is very simple and any one with ordinary intelligence can use it after seeing it done. The first thing we do to prepare to gas a tree is to take an earthen vessel that will hold six or eight quarts and set it directly under the tree with, say eight ounces of water. We then weigh out four ounces of cyanide and put it into a tin cup and then measure out four ounces of sulphuric acid and put that into an earthen mug or pitcher and set them alongside of the vessel with the water under the tree. We then place our tents over the trees and one man lifts up one side of the tent and another man crawls under and empties the acid and cyanide into the vessel with water and puts a tin pan with cleats nailed inside over the vessel so that it will turn the gas downward and not spatter on the tents. He then crawls out and the tent is let down; then see that the folds of the tents are well on the ground, and in 25 minutes the tree is fumigated. I will say right here that there is not one scale left alive where there are 100 on the best-sprayed tree ever done. I cannot say that it kills every bug when done in the best way, for there will once in awhile one escape for some reason unknown at present, but I think it is the only solution of the raising of marketable citrus fruits where the red scale has a foothold. Spraying with the best washes known so far will not do it, and therefore too much honor cannot be given to Prof. Coquillett and Alex. Craw for discovering the gas treatment and Messrs. Bishop, Wall and Jones for putting it into practical use by persistently working with it until they proved that it could only be done successfully in the night-time, the rays of the sun having such an effect upon the gas as to burn the trees in daylight.

To show the difference between gassing trees and spraying I will state that I went into an orchard that I had treated and picked an orange each from seven different trees that were covered with red scale, and in coming home I passed an orchard which had been sprayed with the resin wash about two weeks, so I picked off an orange and thought to myself it was a good job. When I got home I took my glass to examine it, and found several young red scale. I then took a pin and in a few minutes killed 70 young scales crawling on that one orange. I then took from my pockets the seven oranges taken from seven different fumigated trees and could not find a *live* scale on them.

Fumigation by hydrocyanic gas treatment is the greatest boon ever discovered for the orange grower. It kills the black and brown scale as well as the red scale, and I have no doubt in my mind but what it will kill the white cottony cushion and San Jose scale also.

The cost is not over one-fourth to one-half more than for spraying. In fumigation, there is no missing a limb nor half spraying the top; no chance to be careless or slovenly. Every part of the tree from top to bottom is completely enveloped in gas, and if you have used good judgment in the amount of your ingredients, you may depend upon it that not many scale are left to tell the tale.

In making the tents, I would recommend that the diameter be nearly as large as the hight. You can place the tent over the tree easier and quicker and with less injury to limbs and the fruit. The tent folds together so completely that it can be adjusted to a small tree and not waste the gas.

Lime, Salt and Sulphur Wash.

This is at present the most popular application as a winter wash for scale insects on deciduous trees. The progressive fruit-growers of Sutter county have given special attention to the preparation of the material to secure the best results, and we give below the formula approved by R. C. Kells, J. C. Gray and H. P. Stabler, Horticultural Commissioners of Sutter county, as follows:

The Horticultural Commission, at a recent meeting, decided to recommend to the fruit-growers of Sutter county the application of this popular wash this winter to all deciduous trees infested with San Jose scale. The following formula has been used with great success throughout the State:

40 pounds unslacked lime.
20 pounds sulphur.
15 pounds common stock salt.
Water to make 60 gallons.

Boil 10 pounds of lime and the 20 pounds of sulphur in 20 gallons of water for half an hour or more, or until both lime and sulphur are dissolved. The sulphur must be thoroughly dissolved and mixed with the lime; the mixture will then be of an amber color. Then slack in an empty half barrel 40 pounds of lime with soft hot water, using enough water to thoroughly slacken the lime, and keep it in a liquid form. After the lime is slacked, add 15 pounds of common stock salt, while the material is still hot.

When the salt is well dissolved, mix the two lots together with sufficient water to make 60 gallons of spraying material, which will then be a thin whitewash. The material should be strained, after being thoroughly mixed, through a fine wire strainer.

Apply the wash milk-warm or warmer, with a spray pump.

Use either a "New Bean nozzle," or a San Jose nozzle. If the latter is used, the usual brass disc accompanying it should be replaced with a rubber disc to prevent the material clogging the nozzle. Use only when foliage is off the tree.

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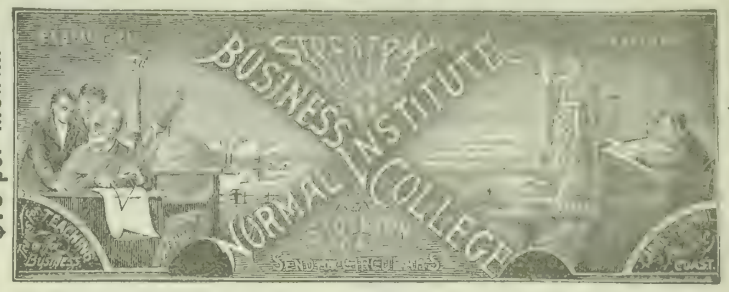
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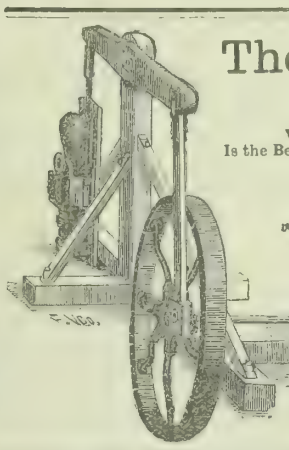


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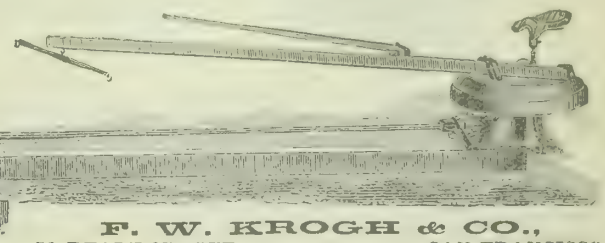
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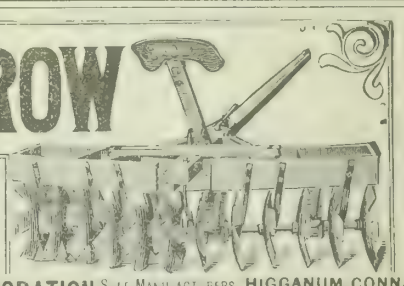
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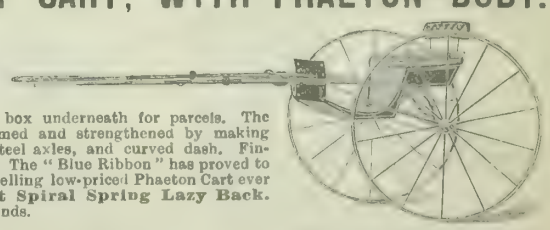


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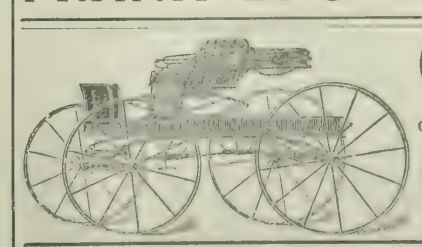
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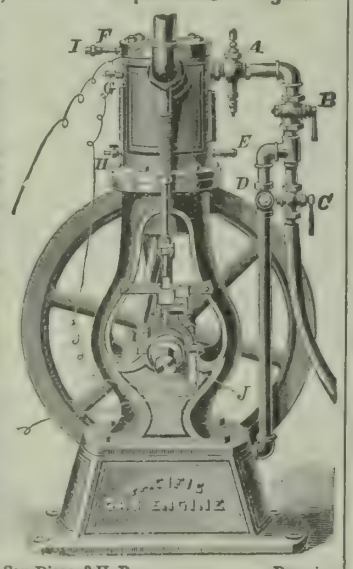
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The Champion Spray P

The cut used herewith illustrates Woodin & Little's new spraying pump, the "Champion," and its adaptability for the work for which it has been especially designed.

After ten years' experience in the spraying ipump business, and the wants of orchardsts therein, we have built this pump as being best suited to their requirements. Before putting it on the market we submitted the model to several prominent fruit-growers, and as the design met with their unqualified approval also, we have no hesitation in declaring it the best spray pump ever made, and justly entitled to be named the "Champion."

As will be seen from the illustration, the pump is very compact and strong. It is perfectly double-acting and has a brass-lined cylinder. The motion of the piston is horizontal. The handle is so arranged that the leverage is very powerful, and the movement is easy and natural. The air chamber is unusually large, admitting of the continuous and even discharge necessary for good and thorough spraying.

The valves are metal and have metal seats. They all lie directly beneath the air chamber and are readily exposed on loosening four bolts, and without touching the cylinder. The plunger is a solid disk of vulcanized rubber, and is made so that the wear may be instantly taken up by merely turning a nut.

The pump has a double suction and a double discharge, one each on either side. The cut shows the pump in operation with four lines of discharge hose. It can be readily arranged for a less number if desired. With this pump one man can easily keep four men busy spraying, as well as attend to the team and the stirring of the liquid.

WOODIN & LITTLE,

San Francisco, Cal.

Christmas Presents—Unique, Elegant, and Useful.

The Sterling Furniture Co., one of the leading firms in San Francisco in their line of business, were obliged some months ago, from the magnitude to which their business had increased, to remove from their original location on Sutter St. to the Rosenthal building, Nos. 1039 and 1041 Market St.. Here they occupy six floors and the basement. The intending purchaser will find in their extensive stock all the novelties that have been recently introduced in furniture, as well as furniture of the latest designs, notably antique and 16th century and richly upholstered. Folding beds with the latest improvements, supplied with woven wire mattresses of the Byington pattern. Carpets of all kinds in the latest patterns. Rugs—genuine Persian rugs. Curtains of every description, including those of the finest lace and the richest satin damask. In fact, purchasers will find a superb assortment from which to select, suited to their requirements and the weight of their purses, and the goods, like the name of the firm, *Sterling* in quality, and prices at the lowest rates. The firm besides being importers are also manufacturers, having an extensive manufactory located at the corner of 17th and Folsom streets, where is manufactured to order anything required in their line. To facilitate parties in going to housekeeping, the firm offers to furnish four rooms for $150, the outfit consisting of a parlor set of 7 pieces, a bedroom set of 10 pieces, a dining-room set of 7 pieces and a kitchen set of 3 pieces; and carpets for the four rooms, of which the one for the parlor is of fine Brussels, the dining-room and bedroom of Ingrain, all of superior quality, and the kitchen to be covered with Linoleum. All these appointments are first class, and the wonder is that any one will continue to live in lodgings when they can furnish a home so elegantly and for so little money, and enjoy the comforts of their own fireside. For the convenience of those who may for a time wish to store their furniture, there is fitted up on the upper floor of the building a number of small rooms furnished with lock and key where their goods can be stored separately, the storage being furnished at the lowest rates. It is not in the scope of this article to describe in detail the many unique and elegant pieces of furniture with which these warerooms are filled. Suffice it to say there can be found here whatever one may desire to have in furniture, carpets, curtains, etc., from the most costly and elegant to that of plain, every-day use, every article of which is first class and furnished at popular prices.

"Battle of Gettysburg."

The celebrated Panorama of the Battle of Gettysburg and Museum, corner Market and Tenth Streets, San Francisco, is a wonderful production. It has captured the entire State, doing a great deal of good. There is no better way of passing an hour or so, and in studying American history, than by visiting this Grand War Panorama. If any of our readers have not seen it, it will pay them well to do so.

A CONVENTION of labor leaders and workers of the United States is to be called in February, at which a platform of principles will be adopted to be presented to the country for ratification at the fall elections.

THE 41,000,000 gallons of spirits made in the United Kingdom in 1889 were mostly used in England, and nearly three-fourths of this vast quantity were drunk as a beverage.

The correctness of the maxim "nothing succeeds like success" is well exemplified in Ayer's Sarsaparilla. The most successful combination of alteratives and tonics, it always succeeds in curing diseases of the blood, and hence its wonderful popularity.

NEW LANDS TO BE TILLED.

The fruit boom this season has apparently had a stimulating effect upon agriculture of all kinds. Hundreds of acres of new land are being cleared, and orchards and vineyards will be set out during the coming winter and spring. H. B. Litton, of Forestville, while in town Saturday informed a *Democrat* reporter that he expected to increase the tillable area of his ranch by several acres this winter. "I have discovered the cheapest and easiest means of clearing my land," he continued, "and in consequence shall do more grubbing than I had first intended."

"Is it not quite expensive to grub an acre of hill land that is well covered with scrubby timber?" queried the reporter.

"It used to be when we had to rely on hand-grubbing, but now we use a machine and save thereby $50 an acre. I use the machine made by George Harvey, and to say that it works like a charm would be expressing the unanimous verdict of all who have seen it in operation. By the use of this machine I can grub out a tree in two or three minutes that one man could not take out in half a day. This will afford an idea of the great saving which the machine must be to any one who has any land to grub. I made a test on one occasion to satisfy myself and some of the neighbors who had come over to my place to see the machine work, and the result was most surprising to those who had never seen a tree removed from the ground except by hand. I hitched on to a tree 2½ feet in diameter, and in less than three minutes it lay on top of the ground with its every root clean and free from the soil. Some of the roots were nine feet in length. The power of the machine is practically unlimited and it works on a sidehill or on level ground. The power of one horse is multiplied 36 times without an extra block, and every block used adds the power of 36 horses. Thus you see the power may be multiplied indefinitely, and when once the chains are attached to the base of the tree, it is bound to come."

Mr. Litton is enthusiastic in his praises of the machine, and asserts that no land-owner in California can afford to be without one. One of the great advantages possessed by the machine is the thoroughness with which it does its work. Every root is taken out clear and clean, which is almost an impossibility in hand-grubbing.—*Santa Rosa Daily Democrat.*

Traction Engines.

A RURAL representative visited the Best Agricultural Works one day last week. There is now a full force of men at work on traction engines and combined harvesters. A 50-horse traction engine was nearly completed, destined for Grayson, Stanislaus county. Four more were on the stocks and will be finished before the 1st of February. Ten combined harvesters (horse-power) were well along and will be completed with quick dispatch to make room for 10 combined steam harvesters. The agricultural machinery and implements built at these works are gaining an extensive notoriety. Mr. Best has received letters from Sweden, Europe, Ohio, Illinois and Mexico making inquiries concerning his traction engine.

A very fine illustrated catalogue has just been issued, which will be sent on application. Any one interested in this new development of industrial advancement through locomotive power of traction engines would do well to visit the Best Agricultural Works at San Leandro, one-half hour's ride from San Francisco.

Don't Fail to Write.

Should this paper be received by any subscriber who does not want it, *or beyond the time he intends to pay for it*, let him not fail to write us *direct* to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

ENGLAND'S military garrison in Ireland is numerically larger than the regular army of the United States.

A Pioneer Horse Firm.

Considerable interest pertains to the advertisement of H. Wilsey & Co. of Petaluma, Cal. They were pioneers in the introduction of French draft horses to this State and have long been known for their work in this direction. Perhaps their importation in 1882 was the first direct from France to this State, and they have made several since. They now announce bargains because of the necessity of closing a partnership.

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY.

Electric-Lighted and Steam-Heated Vestibuled Trains between Omaha, Council Bluffs and Chicago.

Steam-Heated and Electric-Lighted Vestibuled Trains between Chicago, St. Paul and Minneapolis.

Finest Dining Cars in the World.

Free Reclining Chair Cars between Omaha and Chicago.

Fast Mail Line between Chicago, Milwaukee, St. Paul and Minneapolis.

Transcontinental Route between Omaha, Council Bluffs and Chicago.

5700 miles of road in Illinois, Wisconsin, Minnesota, Iowa, Missouri, South and North Dakota.

Everything First-Class.

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Ticket Agents everywhere sell Tickets over the Chicago, Milwaukee & St. Paul Railway.

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Office, No. 138 Montgomery St., under Occidental Hotel.

BUGGIES, Buckboards, Spring Wagons, Surreys and Road Carts. Write for our new catalogue. Baker & Hamilton, San Francisco and Sacramento.

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A MANUAL OF METHODS WHICH HAVE YIELDED GREATEST SUCCESS; WITH LISTS OF VARIETIES BEST ADAPTED TO THE DIFFERENT DISTRICTS OF THE STATE.

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CAUSTIC BALSAM
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Because it is a perfectly safe remedy for any one to use. After applying as directed it needs no attention, acts quickly and is effective. Removes all bunches or enlargements and guaranteed not to leave scar or blemish. Supersedes all cautery or firing. Every bottle sold is warranted to give satisfaction. Price $1.50 per bottle. Sold by all druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. Address LAWRENCE, WILLIAMS & Co., Cleveland, O.

Land to Rent.

A Splendid Opportunity

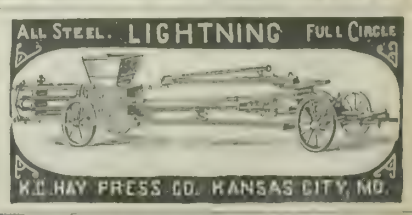
To rent on exceedingly favorable terms, either for cash or a reasonable portion of the production, 164 acres of well-tilled land, a very comfortable house, with abundant shade trees, and splendid well of excellent healthy artesian water flows through the garden and door-yard. Water sufficient to irrigate 100 acres or more. Much of the land leveled, checked and ditched. Large barn and convenient outhouses. About 25 acres of alfalfa, and seven of orchard. The land is conveniently fenced into subdivisions, including a good pasture, large reservoir, etc. This place is one of the pleasant, healthfully located places in the Tulare valley, seven miles S. W. of Tulare city. Possession given immediately. Also, 156 acres adjoining on the east side and 160 acres on the west side of the above tract, making FOUR HUNDRED AND EIGHTY ACRES all well-tilled, productive land for all kinds of grain-growing, etc. Also 640 acres three miles from Pixley, and 160 acres within one mile of Tulare city, also on very favorable terms.

Apply soon to Capt. Thos. H. Thompson, Tulare; E. M. Dewey, Porterville; or A. T. Dewey, 220 Market Street, San Francisco.

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OUR CATALOGUE OF NORTHERN GROWN TESTED SEEDS FOR 1891
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BEST TREE WASH.

"Greenbank" 98 degrees POWDERED CAUSTIC SODA (tests 99 3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by
T. W. JACKSON & CO.,
Manufacturers' Agents,
104 Market St. and 8 California St., S. F.



KNABE PIANOS
It is a fact universally conceded that the KNABE surpasses all other instruments
A. L. BANCROFT & CO
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MACHINERY!
SECOND-HAND, FOR SALE. IRON PLANER, DRILL Press, Lathes, Wood-working Machinery, Belting, etc. I. A. HEALD, 108 Main Street, San Francisco.

FOR SALE—COUNTY RIGHTS, $20 AND upward, of the Smith Patent Combined Kitchen Utensil. Good profits, large sales. CHAS. A. H. SMITH, Alameda, Cal.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

WILD FLOWER STOCK FARM, Fresno Co. A. Heilbron & Bro., Props., Sac. Breeders of thoroughbred Scotch and Crulkshank Shorthorns; also Registered Herefords; a fine lot of young bulls in each herd for sale.

CHARLES E. HUMBERT, Cloverdale, Cal., Importer and Breeder of Recorded Holstein-Friesian Cattle. Catalogues on application.

PERCHERON HORSES.—Pure bred horses and mares, all ages, and guaranteed breeders, for sale at my ranch near Lakeport, Lake Co., Cal. New catalogue now ready. Wm. B. Collier.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. None better.

REGISTERED HOLSTEIN CATTLE. Also best thoroughbred Poultry and Eggs. Address Hibbard & Ellis, Santa Rosa Breeding Association, Cal.

P. H. MURPHY, Perkins, Sac. Co., Cal., Breeder of Recorded Shorthorn Cattle and Poland China Hogs.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

PURE-BRED HOLSTEIN FRIESIAN Cattle for Sale. Bonnie Brae Cattle Co., Hollister, Cal.

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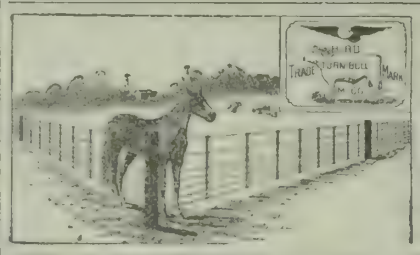
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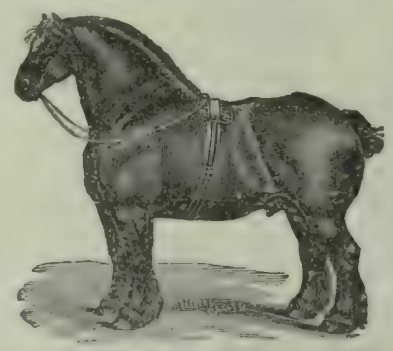
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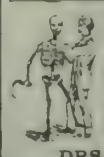
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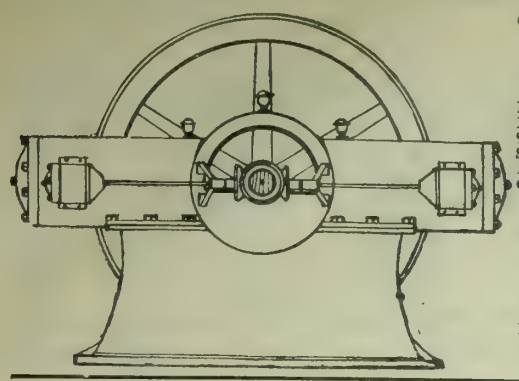


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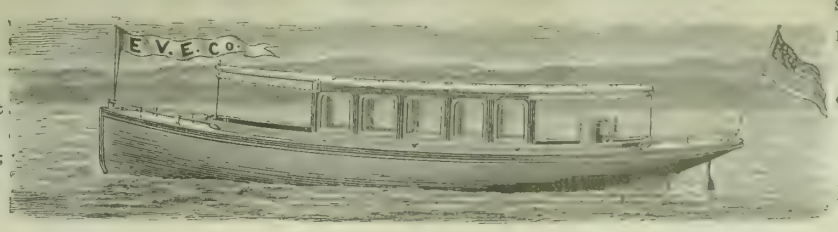
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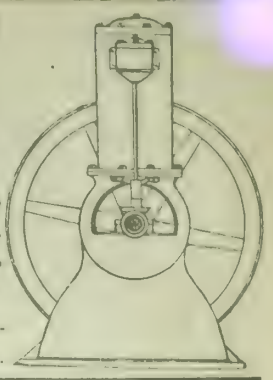
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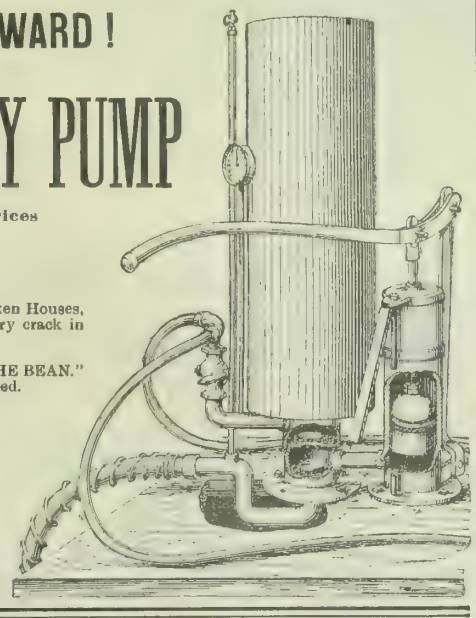
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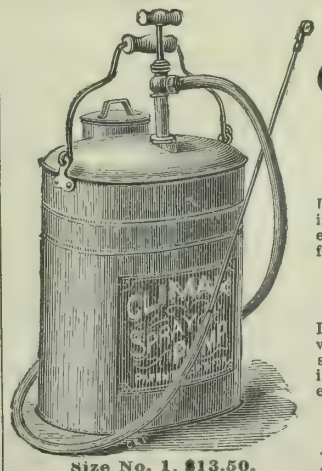
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Dec. 10, 1890.

As the year draws to a close, general business falls off. Although trading the past week was quiet in cereals, there was a hardening tendency in wheat and barley; oats were firm, while corn was easier. Rains last week have been followed by outdoor work. With more rains soon, the effect for the better will be quite marked. The money market at the East and abroad continues to work close, causing failures, destroying confidence and working against farm products, and yet the attention of Congress is drawn to political measures instead of laws for our relief. The English and Eastern wheat markets have fluctuated slightly. The following is to-day's cablegram:

LIVERPOOL, Dec. 10. — Wheat — Hardening. California spot lots, 7s 4d@7s 6d; cargoes off coast, 37s 3d to 37s 6d; just shipped, 37s 3d; nearly due, 37s 3d; cargoes off coast, steady; on passage, quiet but steady; Mark Lane wheat, quiet but steady.

Foreign Grain Review.

LONDON, Dec. 8.—The *Mark Lane Express*, in its review of the British grain trade, says: Although supplies of English wheat are limited, prices are barely supported. Foreign wheats are stronger. Corn is firm; American advanced 6d. At to-day's market English wheat was neglected, except fine whites, which were steady at 37s 6d. Foreign wheats were firm.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Dec	Jan.	Feb	Mar.	April	May.
Thursday	7s8½d	7s8½d	7s8½d	7s8½d	7s8½d	7s8½d
Friday	7s8½	7s8½d	7s8½	7s8½	7s8½d	7s8½d
Saturday	7s8½	7s8½d	7s8½d	7s8½d	7s8½	7s8½d
Monday	7s8½d	7s8½d	7s8½d	7s8½d	7s8½d	7s8½d
Tuesday	7s8½d	7s8½d	7s8½d	7s8½d	7s8½d	7s8½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	37s6d	37s3d	37s3d	Firm.
Friday	37s6d	37s3d	37s3d	Quiet.
Saturday	37s6d	37s3d	37s3d	Firm.
Monday	37s6d	37s3d	37s3d	Quiet.
Tuesday	37s6d	37s3d	37s3d	Dull.

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per bushel:

Day.	Dec.	Jan.	Feb.	Mar.	May.	July.
Thursday	102½	103½	....	105⅝	105½	...
Friday	102⅝	104⅛	105⅝	105⅝	105⅝	...
Saturday	102⅛	103½	....	105½	104⅞	...
Monday	101⅛	102½	103⅝	104½	103½	...
Tuesday	102⅝	103⅛	....	105⅝	105⅛	...

The closing prices for wheat have been as follows at Chicago for the past week, per bushel:

Day.	Dec.	May.	June.	July.
Thursday	90⅝	99½	....	....
Friday	....	99	....	....
Saturday	....	97⅝	....	....
Monday	....	97⅝	....	....
Tuesday	....	98⅛	....	....

NEW YORK, Dec. 10.—Wheat—$1.04¾ for cash, $1.03 for December, $1.03¾ for January, $1.05½ for March, $1.05⅝ for May, and 99c for July.

CHICAGO, Dec. 10.—Wheat—91⅝c for December and 98⅝c for May.

Dried Fruits.

NEW YORK, Dec. 4.—The *Commercial Bulletin* says: The present condition of the market for California raisins is not as flattering as holders could desire. There is no considerable supply of first-class goods on the spot or offering to arrive. More or less trouble has been experienced with buyers who deem it expedient to reject goods coming in on contract for the most trivial reasons in some cases, and the adjusting of such cases is not unfrequently the means of unsettling values somewhat. A somewhat similar experience with the deliveries of prunes and peaches has rather a depressing effect upon the market. Those goods and prices are therefore rather unsettled at the moment. Doubtless the money situation has some bearing on the market.

NEW YORK, Dec. 5.—Prime California prunes, 60@70s, in bags, are offered here to a limited extent at 11⅜c spot.

NEW YORK, Dec. 6.—Dried pears, good quality, 12½c; sacked, 60@70c. Prunes, 11¼@11¾c. The supply of boxes is not large. Unpeeled peaches range from 14@18c; peeled, 30c; both nominal. No canned fruit of any account in first hands.

Florida Oranges.

NEW YORK, Dec. 5.—The Grixbaum, the first vessel of the new Jacksonville and New York Steamship line for carrying fruit, is expected to arrive at Jacksonville to-day and bring back 10,000 boxes of oranges at 30c ₩ box. It is expected the line will send 1,000,000 boxes this year.

Hops.

NEW YORK, Dec. 6.—Hops ruled dull. Not enough spot trade to alter recent rates. Strictly cash buyers might obtain some concession in the opinion of many, but not in a large way, as a sound future is accorded all choice growths. Exports, 473.

Eastern Wool Markets.

NEW YORK, Dec. 7.—The trade in wool here is of a groping character. Western owned lots are largely advised to be sold, but sellers are forced to use caution while awaiting the outcome of the late Passaic, N. J., failure. Besides, a sudden free offering at this time would tend to unwarrantably weaken prices. Carpet wool, active. Boston exhibits large sales for the season. The movement incidentally is a pressure to realize among some holders. Some concessions are made, but a general decline is not feared. Philadelphia quiet; prices fairly upheld.

Speculating in Apples.

BUFFALO, Dec. 8.—The failure of the apple crop in this region gave some of the local speculators a cue for a venture that is panning out big. Last fall the speculators went out West and purchased fully 200,000 barrels of apples, which are stored at points along the Niagara Falls branch of the New York Central. They were purchased early in the season, principally in Kansas, Texas and Missouri, at an average cost of $3.15 to $3.25 a barrel. Dealers in Buffalo have options on most of the apples and they are in no hurry to sell, although from $4.50 to $4.75 has been offered at the points of shipment. Orders have already been received by the holders of the fruit from New Orleans, Chicago, Pittsburg, St. Louis and other points. The speculators expect to clear at least $1 a barrel and possibly more.

Local Markets.

BARLEY

	Buyer Season. H.	Buyer Season. L.	Seller 1891. H.	Seller 1891. L.	Buyer 1890. H.	Buyer 1890. L.
Thursday	152½	149½	....	....	146	146
Friday	151½	153½	108⅝	108½	149½	148½
Saturday	154⅜	154	....	....	....	....
Monday	154½	154½	....	....	....	....
Tuesday	154½	154½	....	....	....	....

WHEAT

		Seller Season.	Buyer 1891.	Buyer 1890.	Buyer Season.	Seller 1890
Thursday	h.	....	....	131½	141½	....
	l.	....	....	130⅜	140½	....
Friday	h.	....	....	131½	141½	....
	l.	....	....	131½	141	....
Saturday	h.	....	....	130⅜	141	....
	l.	....	....	130⅜	140⅜	....
Monday	h.	....	140½	131	141	....
	l.	....	146	130⅛	140⅝	....
Tuesday	h.	....	....	130⅜	140⅜	....
	l.	....	....	130½	140⅜	....

BAGS—The market is reported quiet at 6⅛@6⅜c for May-June delivery standard-sized, hand-sewed grain bags.

BARLEY—The sample market shaded off under bear raids and fair receipts from up North, but it strengthened as soon as the stock returns were published. In futures, trading has been only fair, short sellers fearing to venture in, except at higher prices. The reported sales on to-day's Call are as follows:

Morning Session: Buyer season—100 tons, $1.53⅛ ₩ ctl. Afternoon Session: Buyer 1890—100 tons, $1.46. Buyer season—200 tons, $1.51¾ ₩ ctl.

BUTTER—The market after easing off shows, toward the close, a stronger tone for gilt-edged, but no perceptible change for other grades, but, if anything, a weaker tone. The supply of gilt-edged is light and dealers have no trouble in selling, but poor to good is hard to sell. Receipts are larger. Pickled is being taken more freely.

CHEESE—Receipts are freer, yet the market is strong at full prices for the better grades.

EGGS—The market is steady, with the tendency to stronger prices. It looks as if supplies are held back to meet the usual demand in Christmas week.

FLOUR—The market is steady, with a good local and export inquiry.

WHEAT — The sample market is unchanged. Oregon and Washington are sending us liberal supplies. Receipts from these two sources aggregated the past week nearly 2000 tons. The stocks in this State are not as large as many had been led to believe. In futures, trading has been moderately fair. The following are the reported sales on to-day's Call:

Morning Session: Buyer 1890—300 tons, $1.30. Buyer 1890, season storage paid—100 tons, $1.31¼. Buyer season—1700 tons $1.40¾ ₩ ctl. Afternoon Session: Buyer 1890—1000 tons, $1.30; 600, $1.30⅛. Buyer season—600 tons, $1.40¾ ₩ ctl.

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Dec. 9th, were as follows:

Flour, qr. sks	113 753	Middlings, sks	4,762
Wheat, ctls	425,139	Alfalfa, "	209
Barley, "	22,163	Chicory, bbls	240
Rye, "	....	Broomcorn, bdls	180
Oats, "	12,411	Hops, bls	17
Corn, "	6 947	Wool, "	457
*Butter, "	804	Hay, tons	2,004
do bxs	225	Straw, "	13
do bbls	....	Wine, gals	216,510
do kegs	....	Brandy, "	13,680
do ½ do	32	Raisins, bxs	26,274
†Cheese, ctls	643	Honey, cs	403
do bxs	12	Walnuts, sks	415
Eggs, doz	16,310	Flaxseed, sks	4,607
do " Eastern	39,660	Mustard, sks	283
Beans, ctls	4,477	Almonds, sks	315
Potatoes, sks	33,113	Peanuts, sks	178
Onions, "	2,582	Popcorn, sks	660
Bran, sks	11,609	Beet sugar, bbls	69
Buckwheat, sks	....	do do sks	1,538

*Overland 340 ctls. †Overland 1093 ctls.

Cereals.

The local wheat market has dragged at unchanged quotations. To force a large parcel on the market, lower prices would have to be accepted; to go into the market to secure a fair parcel, full quotations would have to be paid. The stock of wheat in the State on December 1st is smaller than many had estimated, but it is fully up to our estimate of the crop outturn. The stock returns give only about 400,000 tons for export, with more to carry over into the season of 1891–92. The tonnage in port and to arrive has a carrying capacity of about 500,000 tons, which gives a surplus over our requirements. The wheat surplus in Oregon and Washington is not as large as heretofore claimed. Close money markets at the East and abroad have been against wheat in the markets of the world. At this writing it looks as if money will work into easier position after the turn of the year. It is openly asserted at the East and charged by the Treasury that a pool controls gold; this goes far to prove that this country is in want of more money, and this can be secured only by remonetizing silver. With silver at par, wheat and other farm products will appreciate in price. The decline in the price of wheat at Chicago and New York is due to higher freights, and has not in any way been brought about by foreign market advices.

Our exchanges are enthusiastic over the late rains. Plowing and general outdoor work is being pushed. The cool nights keep the moisture in the ground, while it retards vegetation.

Barley has been strong and active. The small stock in the State confirms our early estimate regarding the crop and consumption. The available supply in Oregon and Washington is said to be lighter than many claimed, which, if true, ought to make our market do better after the turn of the year. It looks as if an increased acreage will be put in in this State, but, of course, this will be controlled by the weather later on.

The high prices ruling for oats have attracted more liberal supplies the past week. Confirmed advices report the available supply in this State, Oregon and Washington as being light. With Eastern oats not available, holders on this coast appear to have control of the situation.

Corn is easier. The attempt to advance prices above buyers' views has proven a failure. The large stock in the interior and an offish demand are against holders.

Rye is steady at current quotations.

Report of flour and grain remaining in the State of California on December 1, 1890:

Feedstuff.

Ground feed is in good demand. Bran, middlings and rolled barley are strong at an advance. Feed-meal and cracked corn are weaker. Receipts of bran and middlings are light,

Hay continues strong. Receipts have fallen off. The demand is fairly free. Rains started the plows in nearly all localities, which generally causes a freer consumption of hay on farms. The prevailing opinion is that prices will not shade off, even with rains. Cold weather has checked the growth of grass in all sections except farther south.

Fruits.

Oranges are slow in coming in. Those received are generally poor in quality and do not command attention from the trade except at low prices. It is said that from now on we can reasonably look for freer receipts and a steady improvement in the quality of oranges.

The receipts of apples continue large and under a strong selling pressure the market is lower, with the

Japanese oranges are selling from 25c to 30c a box in quantities from store.

Pears are in light receipt. Some foothill and mountain pears are coming to hand. The demand is fair.

poorer keepers suffering the most. Receipts are not confined to any particular section, for all localities are sending us liberal supplies with Oregon increasing its shipments to us. Humboldt, Siskiyou and other northern and mountain apples sell alongside of Oregon at top prices. Bellflowers are generally over-ripe and as the stock is large it takes something very fine to fetch over $1 a box. Humboldt greenings if choice fetch $1.25, while Valley greenings fetch $1 as the highest price. Spitzenbergs sell at from $1.25 to $1.75 at box. Other varieties sell in like proportion.

Grapes are slow of sale and hard to quote. Frosts will soon stop receipts.

The dried-fruit market is decidedly dull, but not more so than obtains in the closing month of the year. Selling offers are not large and neither are they pressing, while buying orders are equally light. To press a large parcel of peaches or other fruits on the market, concessions would be necessary, and to fill a large order, full prices would have to be paid. No improvement is looked for until after the turn of the year.

The raisin-packing season is over. The pack is larger than expected, owing to long-continued fine, clear weather.

Vegetables.

Tomatoes coming in show the effects of frosts. Cauliflower, except from favorable localities, will soon stop coming in owing to heavy frosts. Bleached celery is in fair receipt, but the bulk is being held back for the holidays. Green peppers are going out. Egg plant is about out of market.

Onions are weaker under freer receipts and no increase in the demand. Oregon and Washington are sending us liberal supplies. Shipments have come to hand by overland railroads.

Potatoes, which were strong at an advance, are easier at the close. The prevailing opinion is that supplies are being concentrated to force prices higher. The supply in both Oregon and Washington is said to be light. In this State the supply is said to be only fair, and with a backward season still higher prices are apt to obtain. Last year at about this time the market began to advance, but last year continued rains and high water, with very bad roads, were against receipts, which caused the high prices for potatoes. This year heavy shipments of potatoes out of the State decreased the supply.

Live-stock.

The market is reported unchanged in quotations. A weak tone prevails in bullocks and mutton sheep. Hogs are steady. Calves are scarce and command full prices.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS — On foot, light grain fed, 4½@4¼c ₩ lb; dressed, 7@8c ₩ lb.; heavy, 4@4¼c ₩ lb.; dressed, 6½@7½c ₩ lb. Stock hogs, 3@3½c ₩ lb.

BEEF—Stall fed, 6½@—c ₩ lb.; grass fed, extra, 6@—c ₩ lb.; first quality, 5¼@5½c ₩ lb.; second quality 4¾@5c ₩ lb.; third quality, 4c@— ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 8@9c ₩ lb.; large, 6@7½c.

MUTTON—Wethers, 7c ₩ lb.; ewes, 6½c ₩ lb.; lamb, spring, 8@9c.

Miscellaneous.

The poultry market exhibits a strouger tone, due to light receipts and old stocks cleaning up. Large, fat poultry is wanted, but scrubby stock goes begging.

A consignment of beans has come to hand from Chili. The general market is barely steady, notwithstanding light receipts. Free shipments continue to be made East.

Honey is in good inquiry, with full prices obtainable.

Seeds are dull, more rain is wanted.

Buyers are bearing hops. A parcel of gilt-edged (200 bales) from Oregon was offered at 37½c; the highest bid was 33¾c. Dealers look for better prices as soon as money gets easier at New York.

In wool there is nothing doing. Close money market at the East is against holders. A consignment of 113 bales has come to hand from Honolulu.

Exports by sea the past week aggregate as follows: Wheat, ctls, Havre, 64,800; Antwerp, 73,860; Cork, 102,599; St. Nazairn, 55,176; Dunkirk, 59,041. Flour, bbls, China, 15,191; Manilla, 600; Honolulu, 1040; Hilo, 100; Nanaimo, 200; Mahukona, 125. Barley, ctls, Honolulu, 1888; Mahukona, 1550. Rolled barley, lbs, Honolulu, 145,309; Mahukona, 35,500. Beans, lbs, China, 10,856; Victoria, 4214; Boston, 70,562; Honolulu, 30,370; Mahukona, 300; New York, 11,785. Hops, lbs, China, 412. Canned fruits, cs, New York, 1975. Brandy, gals, China, 2457; New York, 29,017. Hay, bls, Honolulu, 578. Mustard seed, lbs, New York, 240,776. Apples, bxs, Honolulu, 515. Bran, sks, 3325; Mahukona, 850. Corn, ctls, 501. Potatoes, sks, Honolulu, 924. Wine, gals, Honolulu, 15,569; New York, 196,672.

From the *Commercial News* of Dec. 9th the following summary of tonnage movement is compiled:

On the way to	1890.	1889.
San Francisco	320,076	195,829
San Diego	7 908	10,412
San Pedro	3.244	904
Oregon	36,656	31,366
Puget Sound	33.685	17,517
Totals	401,569	256,028
In port at		
San Francisco, disengaged	9,826	21,940
" " engaged for wheat	38,703	80,160
San Diego	7,184	.....
Columbia River	11,802	.....
Puget Sound	.....	.....
Totals	67,575	102,100

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Dec. 4, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	4,931.092	5,289.083
Flour, bbls	500,788	478,312
Barley	165,626	790,844

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Dec. 10, 1890.

BEANS AND PEAS.			
Bayo, ctl	4 00	@	4 10
Butter	2 90	@	3 00
Pea	2 50	@	3 00
Red	2 60	@	2 90
Pink	2 00	@	2 40
Small White	2 50	@	2 80
Lima	3 50	@	3 85
Fld Peas, blkeye	1 55	@	1 70
do green	2 50	@	2 75
do NLes	1 35	@	1 55
Split	6	@	—
BROOM CORN.			
Choice to Extra	60 00	@	75 00
Fair to Good	45 00	@	55 00
Poor	40 00	@	—
CHICORY.			
California	5½	@	6
German	6	@	6¾
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair, lb	15	@	22½
do good to choice	28	@	33⅓
do Gilt-edged	38	@	39
do pickled	27½	@	32½
do in kegs	20	@	25
do Creamery rolls	38	@	40
do Eastern tubs	30	@	—
CHEESE			
Cal. choice mild	12	@	13
do fair to good	10	@	11½
do gilt edged	13	@	14
Young America	13	@	15
N. York Cream	13	@	15
Western	11	@	13
EGGS.			
Cal. ranch, doz	35	@	37½
do do sel'cted	40	@	—
do. store	34	@	—
Eastern, fresh	25	@	30
do selected	32½	@	—
FEED			
Bran, ton	22 00	@	22 50
Feedmeal	25 00	@	30 00
Grd Barley	31 50	@	33 00
Middlings	24 00	@	26 00
Oil Cake Meal	25 00	@	27 00
Manhattan Food Per 100 lbs	7 50	@	—
HAY.			
Compressed	13 00	@	18 00
Wheat, per ton	12 00	@	17 00
do choice	18 00	@	—
Wheat and Oats	12 00	@	15 00
Wild Oats	12 00	@	15 00
Tame do	12 00	@	15 00
Barley	9 00	@	13 00
Barley and Oats	10 00	@	14 00
Alfalfa	12 00	@	13 00
Straw bale	70	@	80
FLOUR.			
Extra, City Mills	4 10	@	4 25
do Co'try Mills	4 00	@	4 25
Superfine	3 00	@	3 50
GRAIN, ETC			
Barley, feed, ctl	1 42½	@	1 50
do Choice	1 51½	@	1 53⅜
do Brewing	1 53½	@	—
do do Choice	1 56½	@	—
do do gilt-edg'd	1 61½	@	—
Chevalier once	1 57½	@	1 62½
do com to good	1 40	@	1 52½
Buckwheat	2 00	@	—
Corn, White	1 30	@	—
Yellow, large	1 30	@	—
do, small	1 30	@	—
Oats, milling	2 01	@	2 05
Surprise	1 95	@	2 10
Choice feed, ch'c	1 95	@	—
do good	1 80	@	1 90
do fair	1 70	@	1 77½
do Gray	1 75	@	1 80
do Black	1 70	@	1 90
do do for seed	2 00	@	2 05
Rye	1 32½	@	1 38½
Wheat, milling. Gilt edged	1 41½	@	—
do Choice	1 38½	@	—
do fair to good	1 33½	@	—
Shipping, choice	1 33½	@	—
do good	1 31½	@	—
do fair	1 28½	@	—
Sonora	1 27½	@	1 31½
HIDES.			
Dry light to h'vy	10	@	11
Salted	5	@	8½
HOPS.			
Oregon, 1890	27½	@	35
Cal 1890 Choice	32	@	35
do Fair to G'd	27½	@	30
NUTS – JOBBING.			
Walnuts, Cal. lb	8	@	9
do Ch'ce	9	@	11
Almonds, hd shl	6	@	7
Softshell	14	@	15
Paper shell	15	@	16
Brazil	19	@	20
Pecans mall	11	@	14
do large	17	@	18
Peanuts	4½	@	5¼
Filberts	11	@	13
Hickory	6	@	8
Chestnuts	12	@	15
Pine nuts	7	@	8
ONIONS.			
Silver Skin	2 50	@	3 15
POTATOES.			
Early Rose, sks	95	@	1 10
Chile	—	@	—
Peerless	1 00	@	1 10
do Salinas	1 05	@	1 20
River Reds	1 10	@	1 30
Burbanks	1 00	@	1 15
do Salinas	1 30	@	1 50
Sweet sks	1 00	@	2 00
POULTRY AND GAME.			
Hens, doz	5 00	@	6 25
Roosters, old	4 50	@	5 50
do young	4 50	@	6 00
Broilers, small	3 50	@	4 00
do large	4 50	@	—
Fryers	5 00	@	—
Ducks, tame	4 00	@	5 50
do large	6 00	@	7 50
Geese, pair	1 50	@	2 00
Turkeys, Gobl'r.	15	@	17
Turkeys, Hens	15	@	17
do dressed	17	@	18
Pigeons	1 75	@	2 50
Rabbits, doz	1 25	@	1 50
Hare	1 50	@	1 75
Quail	1 00	@	1 25
Snipe, English	1 50	@	1 75
do Jack	65	@	75
Ducks, Mallard	3 50	@	4 00
do Canv'sback	4 00	@	5 50
do Sprigs	1 75	@	2 25
do Teal	1 00	@	1 25
do Widgeon	1 25	@	1 50
do Small	1 00	@	1 25
Geese, Gray	2 50	@	3 00
do white	1 25	@	1 50
Brant	1 25	@	2 00
Henkers	4 00	@	5 00
EGG FOOD.			
Manhattan, ₩ lb	12	@	—
PROVISIONS			
Cal. Bacon, he'vy, lb	10½	@	11
Medium	12	@	—
Light	13	@	—
Lard	9	@	10
Cal. Sm'k'd Beef	11	@	12
Hams, Cal	12½	@	13
do Eastern	13½	@	14
SEEDS.			
Alfalfa	9	@	9½
Canary	3½	@	4
Clover, Red	9½	@	10
White	17½	@	20
Cotton	20	@	—
Flaxseed	2	@	3
Hemp	4	@	5
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German	5	@	6½
do Common	5	@	6
Mustard, yellow	1 90	@	2 25
do Brown	2½	@	3
Rape	1½	@	2
Ky. Blue Grass	25	@	27½
Sweet V. Grass	15	@	—
Orchard	14	@	16
Hungarian	7½	@	8
Lawn	37½	@	40
Mesquit	7	@	8
Timothy	6	@	7
TALLOW.			
Crude, lb	3	@	5
Refined	6	@	—
WOOL – SPRING, 1890			
Humb't & Men'cino	19	@	24
Sac'to valley	15	@	22
Free Mountain	18	@	24
S Joaquin valley	12½	@	17
do mountain	17	@	22
Cala'v & F'th'll	15	@	24
Oregon Eastern	13	@	22
do valley	20	@	25
So'n Coast, def	10	@	14
So'n Coast, free	12½	@	19
FALL 1890.			
North'n, choice	16	@	18
do defective	14	@	16
Mountain Free	13	@	15½
S. Joaquin, def	9	@	11½
Southern do	9	@	11½

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Dec. 10, 1890.

Bananas, bunch	1 50	@	3 00
Cranberries	10 50	@	14 00
Limes, Mex	4 00	@	5 50
Lemons, Cal., bx	2 00	@	5 00
do Sicily, bx	7 00	@	8 50
do Malaga	7 00	@	8 50
Oranges.			
do Navels	2 50	@	3 50
do Vacaville	1 25	@	1 50
Pineapples, doz	3 00	@	5 00
Strawberries chest	10 00	@	16 00
Pears, bx	50	@	1 00
do Winter Nelis	1 50	@	2 00
Apples, com box	50	@	75
do good	90	@	1 00
do choice	1 10	@	1 25
do Mount'n bbl	—	@	—
do Red bx	1 25	@	1 75
Grapes, box	30	@	75
Lady apples, box	1 50	@	1 75
VEGETABLES.			
Okra, dry, lb	10	@	12½
Parsnips, ctl	1 25	@	—
Peppers, dry, lb	15	@	30
Turnips, ctl	75	@	—
Beets, sk	—	@	1 00
Cabbage, 100 lbs	50	@	60
Carrots, sk	30	@	45
Marrowfat, ton	12 00	@	15 00
Hubbard	5 00	@	20 00
Garlic, lb	8	@	10

Dried Fruits, Etc.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations.

Prices named, unless otherwise specified, are for fruit in sacks. Add for 50-lb. boxes ½c per lb., and for 25-lb boxes 1c to 1c per lb.

Apples, sun-dried, quarters, common	6½@ —
" " " prime	7 @ —
" " " choice	8 @ —
" " sliced, common	7½@ —
" " " prime	8 @ —
" " " choice	8½@ —
" Evap bleached, ring 50-lb. boxes	10½@ 11½
Apricots, sun-dried, unbleached, common	8 @ —
" " " prime	10 @ —
" " " choice	12 @ —
" " bleached, prime	16 @ —
" " " choice	17 @ —
" " " fancy	18 @ —
" Evap. choice, in boxes	18 @ —
" " fancy, "	19 @ —
Figs, sun-dried, black	3 @ 4
" " white	— @ —
" " " washed	@
" " " fancy	8 @ 10
" " " pressed	9 @ 13
" Smyrna boxes	12 @ 14
" do sacks	10 @ 12½
Grapes, sun-dried, stemless	3½@ 4
" " unstemmed	2 @ 3½
Nectarines, Red, sun-dried	10 @ 13
" evaporated, in boxes	13½@ 14
" white, sun-dried	12 @ 16
" evaporated	17 @ 19
Peaches, sun-dried, unpeeled, common, bleached	8 @ —
" " " prime, "	10 @ —
" " " choice, "	13 @ —
" " " fancy	14 @ —
" evaporated " choice	15 @ —
" " " fancy	16 @ —
" sun-dried, peeled, prime, bleached	19 @ —
" " " choice	22 @ —
" " " fancy	24 @ —
" evaporated, " in boxes, choice	25 @ —
" " " fancy	27 @ —
Pears, sun-dried, quarters	7 @ 9
" " sliced	9 @ 10
" evaporated, " in boxes	10 @ 11½
" " ring "	12 @ 13
Plums, pitted, sun-dried	9½@ 11
" " evap. in boxes, choice	11 @ 12
" " " fancy	13 @ 14
" unpitted,	3½@ 5
Prunes, Cal. French, ungraded sizes	9 @ 10
" " " graded " 90 to 100	8½@ —
" " " " " 80 to 90	9 @ —
" " " " " 70 to 80	9½@ —
" " " " " 60 to 70	10 @ —
" " " " " 50 to 60	11 @ —
" " " " " 40 to 50	12 @ —

Fancy sell for more money.

RAISINS.

Halves, quarters and eighths, 25, 50 and 75 cents higher respectively than whole box prices.

London Layers, choice ₱ bx	$1 75 @ 2 00
" fancy, "	2 10 @ 2 25
Layers, ₱ bx	1 50 @ 2 00
Loose Muscatels, common, ₱ bx	1 15 @ 1 35
" choice, "	1 50 @ 1 75
" fancy, "	1 80 @ 1 90
Unstemmed " in sacks, ₱ lb	4 @ 6
Stemmed " " "	4 @ 7
Seedless " " "	6 @ 7
" ₱ 20-lb bx	1 15 @ 1 25
" Sultanas, unbleached, in bxs	1 15 @ 1 25
" " bleached "	1 25 @ 1 30

CALIFORNIA HONEY.

Comb, dark, 2-lb. frames, 60-lb. cases, ₱ lb	5 @ 6
" amber, " " cs. new "	7 @ 8
" white " " " "	11 @ 13
" " 1lb " " "	13½@ 15
Extracted, dark, 5-gal. cans, 2 cans to case, ₱ lb.	4½@ 5
" amber, " " "	5½@ 6½
" white, " " "	6½@ 7
Comb, 2-tins, 2 doz. to case, ₱ doz	— @ —
Extracted, " " "	— @ —
" 4-lb. tins, 1 doz. "	— @ —
Beeswax, per pound	22½@ 25

Rope.

Baling, Duplex, lb	11
" Manilla, lb	14
Twine, for hops, balls, tarred, lb, Manilla	15
" " grape vine, balls, lb "	15½
" " " coils, lb "	15½
" spring, lb	1
" binder (65) ft. to lb), lb	15

Duplex twine 3c per lb less.

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PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by officer in charge of branch Signal office, Division of the Pacific.]

DATE. Dec 3 9	Olympia. Rain	Temp.	Wind	Weather	Portland. Rain	Temp.	Wind	Weather	Eureka. Rain	Temp.	Wind	Weather	Red Bluff. Rain	Temp.	Wind	Weather	Sacramento. Rain	Temp	Wind	Weather	S.Francisco. Rain	Temp	Wind	Weather	Fresno. Rain	Temp	Wind	Weather	Keeler. Rain	Temp	Wind	Weather	Los Angeles. Rain	Temp	Wind	Weather	San Diego. Rain	Temp	Wind	Weather
W.	.02	48	N	Cy.	00	48	E	P C	....	....	....	....	.14	50	S E	Rn.	1.00	50	S E	Rn.	1 16	52	SW	Rn.	78	52	S	Rn	16	48	S E	Cl	14	56	W	Rn.	.08	60	S	Cy.
T...	.00	46	Nw	Cl	.00	43	W	P C	....	....	....	....	.00	56	Nw	Cl.	.00	54	Nw	P C	.14	54	W	Cy	14	52	S E	Cy	.02	44	Nw	P C	68	56	W	P C	.16	58	Nw	Cy
F...	.00	42	N E	P C	.00	46	Nw	Cy.	....	....	....	....	.00	58	Nw	P C	.00	54	S	Cl	00	54	Nw	Cl	.00	54	Nw	Cl.	....	....	....	....	60	58	Nw	Cl.	04	58	W	Cy.
S..	.00	52	E	Cy.	.00	48	Nw	Cl.	....	....	....	....	.00	56	N	Cl.	.00	52	Nw	Cl.	.00	54	S E	Cl	.00	52	Nw	Cy	.00	44	SW	C.	00	58	W	Cy	70	66	SW	P C
S...	.00	44	S	Cl.	.00	40	E	Cl.	....	....	....	....	.00	58	N	P C	.00	56	Nw	Cl.	.00	54	SW	Cl	.00	44	E	Fr.	.00	46	N	C.	00	62	N	Cy.	.00	62	0	Cy.
M..	.00	42	S	Cl.	.00	36	S	Fy.	....	....	....	....	.00	62	N	Cy.	.00	49	S E	Cy.	.00	52	N	P C	.00	46	S E	Cl	.00	52	N	Cl	00	52	Nw	Cl.	00	64	NE	C.
T..	.00	48	S E	Cy.	.00	36	S	Cy.	....	....	....	....	.T	40	N	Cl.	.00	42	E	Cl.	.00	50	N	Cl	.00	40	S	Cl.	.00	46	E	Cl	.00	68	N E	Cl	.00	66	N	Cl.
	.02				.00								.14				1 00				1 30				.92				.18				1 12				.38			

EXPLANATION. Cl. for clear; Cy., cloudy; Fr., fair; Cm., calm; — indicates too small to measure. Temperature wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall. P C, partly cloudy. Rn., rain.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING DEC. 2, 1890.

442,003.—BOOT-CALK—A. J. Armstrong, Coronado, Cal.

442,006.—CRUSHING-ROLL—H. C. Behr, S. F.

441,863.—NIGHT DIRECTORY—Henry Bergstein, Reno, Nev.

441,937.—BURIAL APPARATUS—G. H. Clark, Sacramento, Cal.

441,869.—HOOP-COUPLING—L. R. Fulda, S. F.

441,871.—FRUIT-DRYING TRAY — Hammon & Sechrist, S. F.

442,088.—DOSE-MEASURING BOTTLE — H. S. Herrick, S. F.

441,763.—VAPOR BURNER—C. W. Ingraham, Eight Mile, Or.

441,690.—FUMIGATOR—A. McLain, San Diego, Cal.

441,965.—PROPULSION OF VESSELS—S. A. Owen, West Berkeley, Cal.

441,862.—STEAM BOILER—J. & W. Paterson, Stockton, Cal.

441,859.—FRUIT-GATHERER — Florian Stanke, S. F.

441,861. — COIN-ACTUATED LIQUID-VENDING MACHINE—Vansant & Eames, Dixon, Cal.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co, in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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TESTIMONIAL.

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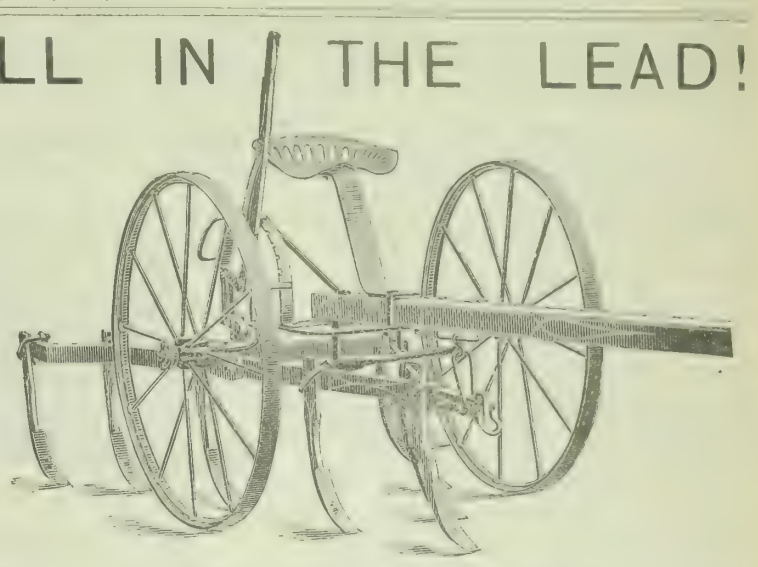
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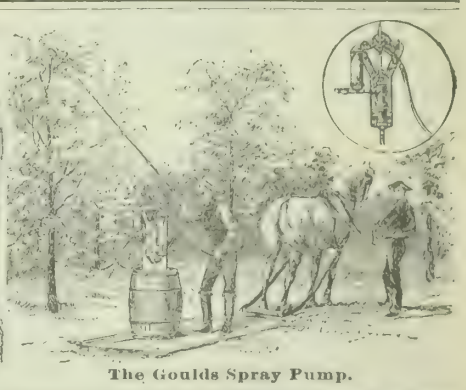
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At the recent National Exhibition of horses in New York, more good animals were brought together than were ever seen in one collection in this country. With this statement goes another fact, that some of the fastest horses in the world are produced in the United States, and that California is one of the foremost States in the matter of horse breeding. But there is much more than this apparent. The trotting horse is an evolution brought about in this country. Such horses make no prominent figure in England. The running horse is always in the lead. Now, one of the greatest gains in the evolution of the horse in this country is the production of a roadster. Racing is a mere incident. The runner is never a roadster, and is in no prominent sense a utility horse. But the trotter comes to this at last that he is a superb road horse. Beyond all other gains, this is the greatest. The best of these will go over the road at the rate of ten miles an hour for several consecutive hours. A mile in six minutes is fast enough for any horse not designed for the race-track, but the same roadsters will frequently do a mile in three minutes.

Some recent criticisms touching the evolution of the horse are to the point that the swift horse is no longer a handsome animal; that he is frequently under size and is far from the ideal of a symmetrical animal. The form has been sacrificed to speed. It is seldom that the winners of prizes on the race-track are 16 hands in hight or weigh much over 1000 pounds. They are comparatively small horses, and very few of them would be suitable for the road. The Kentucky horsemen produced two famous classes of horses. One was the saddle horse, which for pluck, speed and endurance probably never had a superior in this country. The other class was the road horse, which became famous all over the country. He was not a small horse, but was well up on the withers, high-spirited and of splendid action. Of course there was also the running horse, which was the especial pet of the Kentucky breeders.

But the evolution of the trotter has probably brought more wealth to the country by his general utility than any other class of horses. He is now everywhere on the road—high-spirited, strong and swift, he is the pride of thousands who take no interest in the race-track and care nothing for runners, because they are not adapted to the road. The road horse is an evolution which has been brought about by special training. There were never so many good ones in the country at any former period. Not one in a thousand of these ever makes any prominent figure on the race-track, but they figure as never before in the wealth of the country. That is by far the greatest gain which has resulted from this modern evolution of the horse.—*Exchange.*

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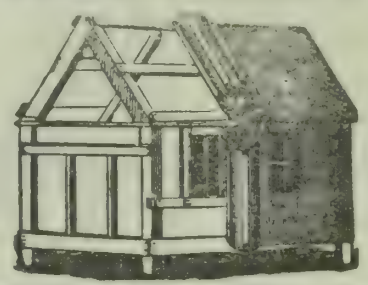
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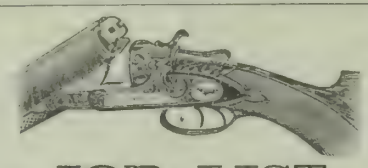
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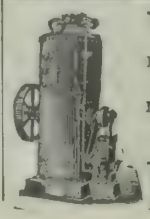


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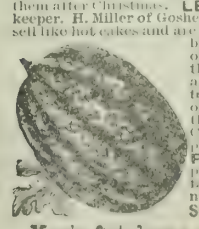
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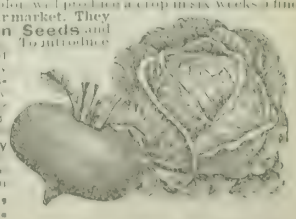
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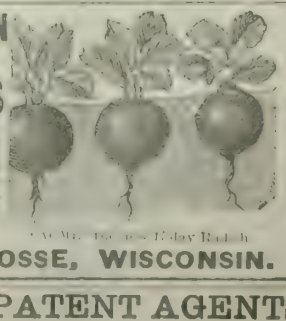
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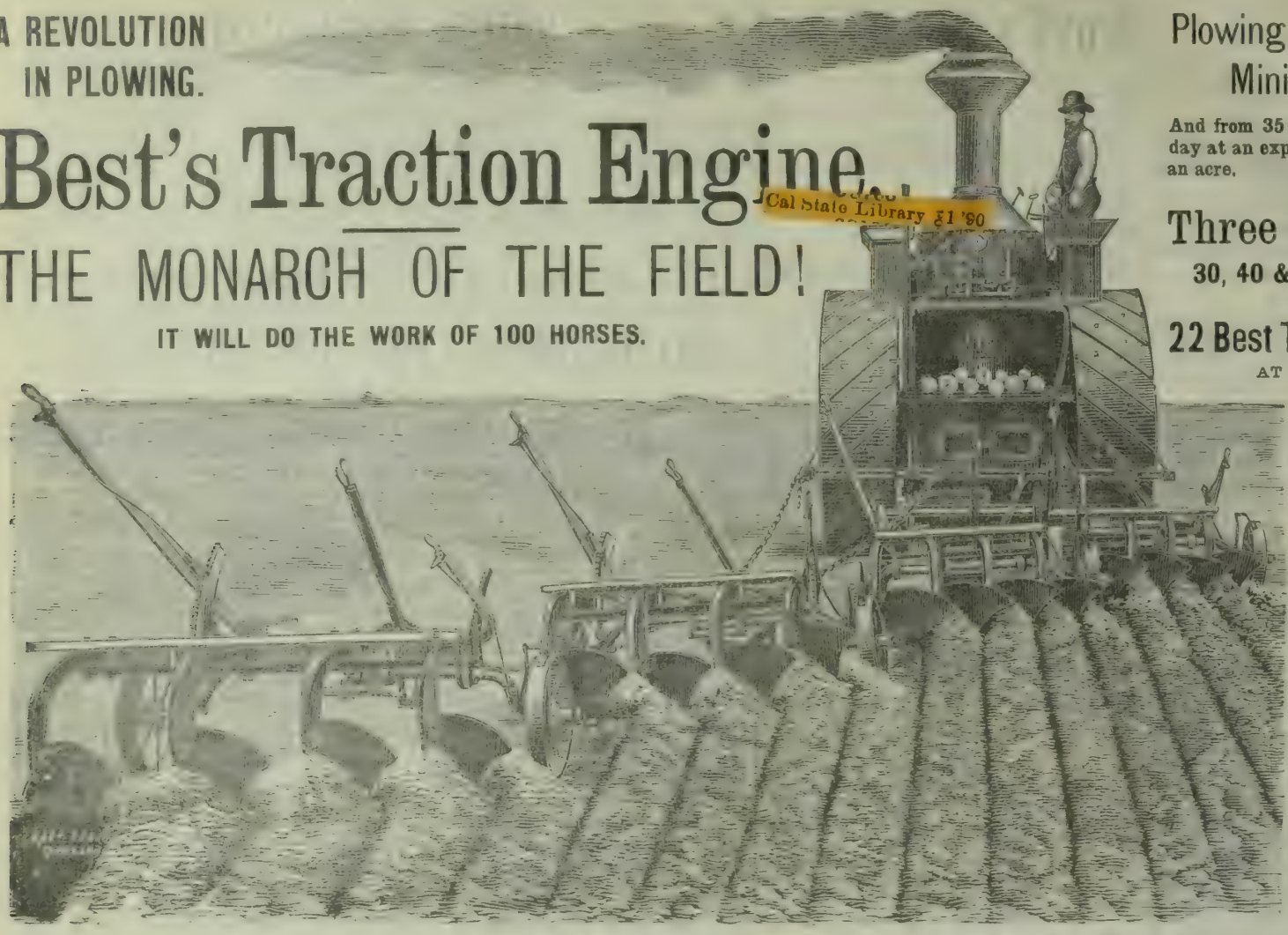
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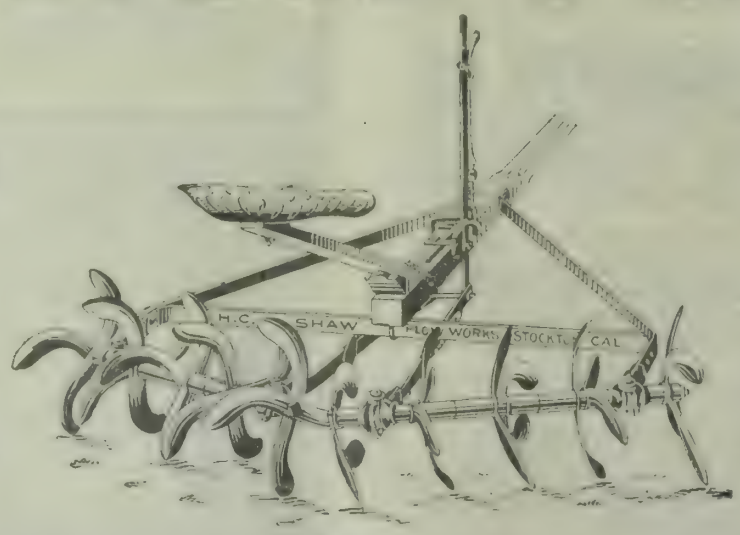
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PACIFIC RURAL PRESS

TWENTY-FOUR PAGE EDITION.

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THE CHRISTMAS SPIRIT.—"Inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto me."

Christmas Thoughts.

Again the merry Christmas season is at hand. Again the city streets are thronged with people speeding to and from the marts which have spread new and tempting wares in the service of Santa Claus. Again the country hillsides are made to yield their annual tribute of green and scarlet, that the homes may express in evergreen foliage and bright-red fruit the ever-living Christmas idea and the ever-warm Christmas emotion.

The condition of our people and our industries favor the free outflow of holiday spirit. Peace and prosperity rule in our blessed land, while turmoil and suffering are unfortunately too prevalent elsewhere. Though we have issues which stir and excite the public mind, their settlement no longer calls for conflict and bloodshed. We have had our evil hour; let it suffice for a thousand years or until war becomes a lost art in the history of mankind. It is fitting, then, that we should make merry and be glad. It is fitting that the gentle spirit of Him whose birth we commemorate should pervade the people, and that peace, good-will and earnest thanksgiving should everywhere prevail throughout our land.

But the Christmas spirit is not one of selfish joy or self-gratification. On the contrary, it is happiness through the rich rewards of self-denial; it is reaping peerless pleasure while sowing happiness for others; it is the blissful emotion of giving—greater than that of receiving. He who gathers the most precious blessings is he who gives to those whose need is greatest, and to those who can but bestow in return only the homage of thankful hearts. Thus Christ gave and thus in a finite degree may we give also.

Thus the day becomes one to be observed thoughtfully and inquiringly. Blessed is he who provides for his own, but it is Christ-like to give gifts to those whose lives are darkened by want and whose claims upon the giver are but the angelic warrant—good-will to all men. It is our wish to emphasize this idea, which is the mainspring of Christmas joy and the secret of true beneficence. Two Christmas stories in this issue of the RURAL enforce this idea and show how generous thoughts and deeds are gifts to the sum of the world's happiness. Our artist also accepts the same thought for his sketch upon this page. Into the humble abode where lies the invalid surrounded by loved ones, for whom merely scanty subsistence must suffice, there comes a joyous Christmas group laden with gifts which bring new light to the eyes of the sufferer and fill the hearts of the little ones with ecstasy of which they had hardly dared to dream, much less hope for. The brilliance of the invasion almost appalls the little ones, but fear is lost in admiration and the extended hand welcomes the proffered gift, and the face of the invalid is lighted with contemplation of the generous impulse which thus brings happiness to her household. The artist has done his work well. May the picture recall to many minds the injunction: "Go thou and do likewise!"

IT is reported that a number of wealthy Arabians purpose forming a fruit-growing and silk-raising syndicate in this country which will give employment to all immigrants from Arabia arriving in the United States.

HORTICULTURE

Cherry-Growing in Placer County.

The following essay was read at the Santa Cruz Convention by Robert Hector of Newcastle:

Early in the "fifties," the rich auriferous gravel deposits of that portion of the American River canyon about Manhattan, Rattlesnake and Horseshoe bars had attracted a large population of miners. Among others drawn by the common loadstone was Dr. L. E. Miller, a German of education and culture, who in the "Fatherland" had acquired a love and knowledge of gardening and tree-growing that here, in a sheltered nook on an alluvial bench near the river's edge, he found means to indulge in and carry into practice. Beginning as an amateur, he found that his favorite pastime was a profitable one, the mining camps furnishing a very convenient and remunerative market. His garden and orchard increased in size, and in the spring of 1854 he imported from France, and planted, the cherry trees which form the older portion of the orchard which I now own. Mr. J. Bost, at present a resident of Nevada City, a brother-in-law of Dr. Miller, dug the holes and otherwise assisted in the planting of the trees, and from him I learn that they were originally planted in squares 20 feet apart.

The gradual growth during the past 35 years has rendered necessary a gradual thinning out in the rows, so that now in places there is but one row occupying the space originally occupied by three.

Casual inspection would hardly determine which trees have grown to the greatest dimensions. Measurement shows, however, that the largest tree is 65 feet in hight, and the branches cover a space 60 feet in diameter. The trunk branches about six feet above the ground, and here has a girth of over ten feet.

This, being the largest tree, is the one I have naturally kept the closest record of as regards its crop. It is of the Black Tartarian variety. The crop of 1886 amounted to 200 boxes of ten pounds each; 1887, 180; 1888, 300; 1889, 220; and 1890, 300 boxes.

Prices have varied somewhat during these years. The tree matures its fruit early for a tree of its variety, and the prices received for its crop have been good, the first cherries picked from it for some seasons bringing as high as $4 per box. They have averaged, during the years mentioned, at least $1.50 per box of ten pounds. The crop of this tree for the past five years has therefore sold for a gross total of $1800. Inquiry made by me in France and Germany has failed to bring to light a single instance of a tree having a record at all comparable with this. Some of its neighbors will closely approximate it, but how nearly I have not kept the records so as to determine; the hurry of the picking and packing season rendering it a very difficult matter. As these results are exceptional, we shall of course look for exceptional natural causes, and we shall not fail to find them.

The trees grow in a bank of rich alluvial deposit, which may be described as a sandy loam. It is located above the north edge of the bank of the American river, which here in its winding, runs almost due west. It is in a valley formed by the depression between two spurs of the ridge which forms one side of the river canyon. This valley is sheltered by hills on the east, west and north, and opens to the river on the south. It is, therefore, protected from cold winds and has the advantage that southerly exposures always have.

The soil in its quality is exceptional and its depth is undetermined.

In the year 1852 or 1853 a test pit was dug to ascertain the possibility of reaching the gold-bearing gravel that might lie beneath it. The shaft was sank to a depth of 60 feet through sandy loam without reaching the desired material and was then abandoned.

The top of the bench or table upon which the orchard is situated lies about 40 feet above the level of water in the American river at its ordinary stage in summer. My records of temperature are somewhat meager, but sufficient to show the results of the protection afforded by the peculiar location. During the severe cold weather of three winters ago, while the thermometer on the hills, within a mile of this spot, registered a depression as low as 18° F., the temperature at my house did not go below 22°.

The treatment the trees usually receive during a season is as follows: Plowing begins as soon as weather will permit. The plowing is shallow, the furrows being from four to six inches deep, the cherry having many surface roots which I believe it best not to injure. The plow is followed by a disc harrow, and the latter by an Acme harrow. This finishes the cultivation. The trees were never fertilized until within the past 15 years. It is now my practice to spread common barnyard manure broadcast to a depth of five or six inches during the winter.

I doubt not it would be the better practice to plow under as soon as distributed, but this has not usually been done. Irrigating is begun immediately after the gathering of the crop; the rather severe handling that each limb receives at picking-time, in spite of extreme care, seeming to make water particularly acceptable as a tonic (if such a term be allowable in horticulture) at this time. It has the effect of strengthening the fruit spurs and invigorating the tree generally.

The picking is the most laborious as well as most carefully prosecuted work in connection with the tree. Ladders of extra length made portable by being attached in erect position to a stout pair of wheels are generally used. These are held in place and kept steady by a system of guy ropes. Directions to pickers call for extreme care that fruit spurs and smaller limbs be not broken, that the fruit prospects for ensuing seasons may not be jeopardized.

My old cherry trees are never pruned and young ones are not pruned after the third year. I prefer to have the limbs spread out in approximately horizontal position, my theory being that fewer blossoms have all their pollen washed out by driving rains than when limbs grow stiff and perpendicular. I also believe that I secure more air and sunlight in the center of the tree. Where growth is rapid, as it has been with my trees, I have found it advisable to slit the bark in the fall and spring to prevent the natural splitting which results sometimes from trees becoming hide or bark-bound.

In extending the original orchard, I planted seven years ago some cherry trees of the Black Oregon variety, which are now 35 or 40 feet in hight, whose branches cover a space 30 feet in diameter, and whose trunks are four feet and 10 inches in circumference.

I have at different times planted cherry trees in the granitic soil of the foothills farther up from the river's bank on my place here and they have done well and matured valuable crops, but I have never found the tree growth to be anywhere near as rapid or as vigorous as in my river orchard. ROBERT HECTOR.

Cherryvale, Newcastle.

Peach-Growing.

EDITORS PRESS:—One of the early emigrants to this State has been permanently located in and around Bakersfield nearly 30 years and quite extensively engaged in the breeding of fine cattle, horses, hogs and sheep, as well as the cultivation of the soil, who is favorably known here as Solomon Jewett. Parties have commenced an untried enterprise in opening up a large peach orchard upon a tract of very fine level and rich soil of loam within the facilities of irrigation, if necessary, and have contracted for plants sufficient to cover a quarter-section of 80 acres in one orchard direct from the nurseryman. Besides this, they have now on the grounds adjoining 20 sacks of peach-stones buried in the sack—in numerical count, say 120,000, to thus remain till the best time for planting. The parties engaged are desirous of obtaining general information from experienced cultivators of this kind of fruit, the proper methods of taking up the nursery trees and protection previous to transplanting, the distance as standard trees set and the most popular mode of training and protection from insects, etc., all of which will be pleasing to learn through your journal. INVESTIGATORS.

Bakersfield.

[These matters are fully discussed from time to time in our columns, and we shall always be glad to hear further concerning them. Our book, "California Fruits and How to Grow Them," is directly designed to meet just such needs as our correspondent desires and is especially full and explicit on all details of nursery work, orchard planting, pruning, cultivation, etc. The subjects are always open for discussion in our columns.—EDS. PRESS.]

THE COMING ORANGE CROP.—An indication of the coming orange crop at the south can perhaps be found in the estimates of the railway managers who have to provide cars. The estimate of the Southern Pacific Company for the Southern California orange crop is 3780 carloads. Of this San Bernardino county alone will require 2019 cars, Rivereide contributing nearly one-half of the county's product. Two thousand of these carloads are valued at $800 a car and the remainder at $600, so that the estimated value of the total shipment is about $2,608,000.

WHY LEAVES CHANGE COLOR.—The green matter in the tissue of the leaf is composed of two colors—red and blue. When the sap ceases to flow in autumn, and the natural growth of the tree is stopped, oxidation of the tissues takes place. Under certain conditions the green of the leaf changes to red; under different conditions it takes on a yellow or brown tint. The difference in color is due to the difference in combinations of the original constituents of the tissue and to the varying conditions of climate, exposure and soil. There are several things about leaves that even men of science cannot explain; for instance, why one of two trees of the same species growing side by side in the same soil should take on a bright red color in the fall and the other a pale yellow, or why one branch of a tree will turn a beautiful crimson, and the one just above or below it turn a dull brown.

COLOR OF PURE WATER.—It has been quite fully demonstrated that pure, distilled water has a bluish color, independent of its surroundings.

THE FIELD.

An Australian Report on California Industries.

The following report, published in Melbourne, Victoria, Oct. 21st, was made by Mr. John West, who was appointed early in the year by the Government of Victoria to visit the United States and report on the question of irrigation and fruit culture:

Sir: I have the honor to report that I have completed my investigations in regard to irrigation and its products in Western America, and am now returning home.

The progress of irrigation in Western America, originally confined to California, is assuming vast proportions in all the States west of the Missouri river. A national aspect, too, has been given to the question by the Federal Government, setting apart a sum of £75,000 for an irrigation survey of the Western States, and the appointment of a royal commission to investigate the subject. A great mass of valuable data has been made available by the Survey Department and the Commission. They show that over two-fifths of the area of the United States is arid and dependent upon irrigation for anything like profitable farming; and, indeed, it is an aridity for the most part that we have little conception of in Victoria.

You would have to go right out to the Barrier Ranges country and strip it of its salt bush to find a counterpart of much of Southern California in its natural condition, and the whole of Utah and Colorado. The soils, too, are in places largely impregnated with "alkalies" which rise to the surface with irrigation and kill off vegetation, and "hard-pan" causes serious saturation in others. In Utah and Colorado one is surprised to find, with all their elaborate and costly systems of irrigation, the farmers growing only such low-priced products as cereals, lucerne and potatoes.

To the query why a greater variety is not attempted, the answer comes with all its significance that the average elevation of the farming land is 3000 to 4000 feet above sea level! In addition to these natural disadvantages, endless difficulties have been caused by the utter absence of anything like comprehensive irrigation laws. These were felt more in California than in the other States, and there is scarcely a great scheme there that has not been subjected to litigation at some period of its history. This continual annoyance gave rise to the passage two years ago of the Wright Irrigation law—a measure constructed on similar lines to our own Irrigation Act. Since it became law, a great number of the irrigation colonies have banded together, organized corporate bodies, issued bonds, bought out vested interests and placed themselves on a similar footing to our irrigation trusts. Colorado, where the laws, though defective, were yet much better than previously obtained in California, has benefited by a large influx of British capital, which, in the shape of organized investment companies, has brought out established irrigation enterprises or originated new ones. Throughout the whole of the irrigating States, but more particularly in California, where most of the pioneering work had to be done, though the ultimate results have been great and far-reaching in their effects, there are not wanting evidences that these have only been attained at the cost of great hardship and suffering in the earlier stages of the enterprises which have made the desert to become so productive.

In regard to the practical details of irrigation, there are one or two points that are of interest to engineers as well as farmers, and may be mentioned here. Both in California and Colorado the alignment of the channels is now being run on comparatively straight, in preference to "contour," lines. At Bakersfield, in Southern California, where there is a very fine and a very extensive system of channeling, covering over 50,000 acres, they are going over some of the old channels and straightening them out, while all the new ones are being run on straight lines. The average fall of the land is 10 to 15 feet to the mile, but the channels are checked up so as to give a uniform fall of two to three feet to the mile. At Forts Collins and Greeley, in Colorado, on land with a fall of 12 to 15 feet to the mile, the same innovation has been adopted. The old channels follow with great persistency the "contour" levels, while those of recent construction are straight. The fall usually given there to channels 15 feet wide or over on the bottom is 15 to 20 inches; for smaller ones two to three feet per mile. It is claimed, and apparently with good reason, that the face of the country is not so disfigured by the straight as by the contour channels, that the farms and orchards are much more conveniently worked, that there is less erosion, and that the water travels more quickly between any two given points.

Preserving Green Grapes.

Your letter directing me to inquire into the methods of preserving grapes in their natural condition for long journeys led to very interesting results, although at first I almost despaired of getting any information worth recording. I learned that last season New York imported 140,000 barrels of grapes, weighing 40 to 45 pounds net, from Spain. They are invariably of the Muscat of Alexandria variety. The fruit is handled very carefully, being cut from the vine with a knife or shears when matured, but not overripe. It is then spread on benches to a depth of 12 to 18 inches in a close room, and there left for a couple of days to sweat. Then all bruised and defective berries are cut out with long-pointed scissors and the fruit packed in dry cork-dust in barrels made of hard wood and tightly put together. First a layer of cork-dust is put over the bottom of the barrel, then a layer of grapes; then another layer of dust, care being taken that it is well shaken into the interstices of the fruit; and so on until the barrel is well and tightly filled. The fruit is shipped in the ordinary hold (not a cool chamber) of the vessel, well ventilated, and generally goes by way of Liverpool, making the passage to New York in 20 to 25 days. The fruit is often stored for weeks in cool chambers after its arrival in New York before it is sent to the auction-room.

The Dried-Fruit Industry.

I had received an invitation from some of the Fresno raisin-packers to witness the processes of drying and packing raisins. I had the good fortune not only to see the raisin harvest at Fresno, but also the prune and dried peach and apricot crops, which have brought wealth to a large population in the Santa Clara valley. A volume could be written about these charmingly attractive industries.

They are a safeguard to the small grower against the caprice of the green-fruit market and the monopoly of the canneries. If the price from either of these sources does not meet his expectations, he can, without the expenditure of much capital, and with a large assistance from his wife and children, set to work and dry his crop and wait for his market. There were two points in regard to our treatment of raisins in Australia that I was anxious to clear up when I left home. The one was whether we were doing right in not providing for the escape of moist air from the drying kilns that are being built, and the other why our pudding raisins invariably turn out darker in color than the imported ones. The Californian experience returns a very complete answer to both these problems. It shows that we have blundered in the first case, and that the remedy in the second is exceedingly simple and remarkably effective.

In all the Californian drying kilns (and they have many patterns) ample provision is made for carrying off the moist air, and all the experts whom I consulted insist on this being necessary. For getting a bright color into all dried fruits where a bright color is required, the universal plan is to subject the fruit, immediately after it has been dipped in the lye, where dipping is resorted to (or after it has been divided and the stone taken out, as in the case of peaches and apricots), to the fumes of sulphur for a few minutes. This fixes the color and prevents the discoloration which otherwise takes place in drying, while it does not injure the flavor of the fruit.

Institutions which Aid the Horticulturist.

There are three institutions in California which have done an immense amount of good in aiding settlers to develop the natural resources of the State. These are the State Board of Horticulture, the State Board of Viticulture and the State Board of Trade. The two former are subsidized by the Government, the latter by the municipalities. The members of the first two bodies are practical fruit-growers and meet monthly, conduct experiments, publish information for the assistance of the farmers and convene annual conferences of the growers, just as has been done by our departments. The Board of Viticulture has a permanent exhibit of products in connection with the industry in San Francisco, attached to which is a restaurant where the public may at any time obtain samples of all wines grown in the State at a reasonable cost. This idea has done much to popularize the native wines. The State Board of Trade has its headquarters in San Francisco and branches in all the important rural towns. At the head office is a fine permanent exhibit of the natural productions of California and a vast quantity of printed matter dealing with these for free distribution to the public. There is a very intelligent staff of officers connected with the institution, who take great pains in aiding immigrants to settle in suitable localities. At the branch offices there are permanent exhibits of the productions of the particular locality where they are situated, and a local committee is carrying out precisely the same work as the parent institute.

But this is not all. It has remained for the Board of Trade to carry out a remarkably bold and successful enterprise. It fitted out three Pullman cars with a splendid display of California products and sent them out in charge of a good man to travel throughout the length and breadth of the United States. Whenever a city or town is reached, the cars are sidetracked and the public admitted free. During the first six months that the cars were out nearly a million of visitors passed through them. Abundance of printed matter setting forth the advantages of California as a field for settlement is distributed broadcast, a daily telegraphic report is sent to headquarters, and the cars are continually supplied with fresh specimens of perishable exhibits. "California on Wheels" is the not inappropriate title of this novel exhibition. It suggests an idea that Australia may some day use with great effect in advertising her natural resources in the mother country and Europe.

Agricultural Science.

Distribution of Seeds and Plants.

University Experiment Station Bulletin No. 89.

The heavy and continued storms of last winter interfered seriously with our seed distribution, partly because the stoppage of mails, in some places for long periods, discouraged applicants, and partly because even when seeds and plants were ordered and received, the unfavorable condition of the soil during the winter and the rush of other work in the spring precluded attention to experimental efforts. Still, considering the character of the season, the distribution was large and some supplies were exhausted before all applications were filled.

For this reason, and to accomodate newcomers to the State, and some older residents who are slow in hearing of or understanding this branch of our work, we are under the necessity of including in our announcement many things which have been distributed in previous years, as well as novelties. There is in our correspondence constant inquiry and demand for many seeds and plants which we had expected would before this have attracted the attention of commercial propagators, but apparently have not yet done so, hence they are continued in our distribution lists.

Terms.—As there is no appropriation available to meet the expenses of packing and postage, applicants are requested to send the amount specified in connection with each description below.

CEREALS.

The establishment of outlying stations for culture experiments has afforded opportunity for trial of our collection of cereals under climatic conditions different from those prevailing at Berkeley and in some respects more favorable to the growth of these grains. The following varieties have bad one year's trial at Tulare and Paso Robles, in addition to several trials at Berkeley, and in most cases have demonstrated their value in these three regions. We commend them, therefore, with considerable confidence to those who desire to experiment in the search for varieties more hardy and prolific than those usually grown. The seed we distribute this year was grown at the Tulare Station. The supply is not large; applications will be filled in the order received so long as the supply lasts:

Wheats—

1. Arizona Indian.
2. Archer's Prolific.
3. California Spring.
4. Greek Atlanti.
5. Michigan Mixed.
6. Missoyen.
7. Pringle's Best.
8. Pringle's Defiance.
9. Palestine.
10. Petali.
11. Whittington.
12. Volo.
13. Hybrid Dattel.

The last named, No. 13, Hybrid Dattel, is a variety just received from the Department of Agriculture. Its origin and history are given in a letter from Hon. Edwin Willits, Assistant Secretary of Agriculture, dated Oct. 17, 1890, as follows:

"This Dattel is a cross between the Prince Albert and the Chiddam d'Antome, both parents, without question, being of English origin, but acclimated after a long series of years to France. The Chiddam is a very productive wheat with a rather small straw. The Prince Albert has a very long, large straw, very high, very leafy, strong and stiff. It is a variety of great development, productive in grain, and especially in straw. The Chiddam, as above said, has a very small straw. It came from the county of Sussex, in England. It is adapted to strong soil, providing it has a calcareous element. It is claimed for the Dattel that it has all the advantages of the Chiddam, so highly esteemed, and has besides a better straw. The claim has been justified by its cultivation in France."

Barleys—

1. Himalayan.
2. Bluish.
3. Earliest Black-bearded.
4. Large Naked Two-Rowed.
5. Scotch Two-Rowed.
6. Kalina.
7. Manchurian.
8. Italian.
9. Nepaul.
10. Berkeley Hybrid.

The last-named, 10, Berkeley Hybrid, originated on the grounds of the Berkeley Station. It has been so favorably reported upon by our correspondents, and so highly approved in our own experiments in Berkeley and at other stations as an exceptionally good hay barley, that we repeat from a previous bulletin its history, as follows:

"Several years ago two heads were noticed in a plot of Scotch two-rowed barley, which differed from that variety by absence of beards and in having spoon-like appendages like the Nepaul barley, from which it also differs in being distinctly two-rowed and having the husk adhering to the kernel. This variety has been grown year after year, a continued effort being made to fix the type by eliminating all heads showing beards and those exhibiting a tendency to become four-rowed. In cleaning the seed, naked kernels have been removed as far as possible. The result is an approximation toward a fixed type which shall have the slender, leafy stem of the Scotch two-rowed, but beardless and with adhering husk. The primary object of the effort to fix this type has been to secure a variety suitable for hay like the Nepaul, but less liable to rust than that sort."

Ryes—

1. Spanish.
2. Saxon Perennial.
3. St. John's Day.
4. Excelsior Winter.

The increasing popularity of rye as a winter feed for dairy cows in the interior, foothill and mountain valleys warrants experiment to determine if other varieties are better than the one commonly grown.

Oats: Rust-proof—

1. Heavy Winter. 2. Mox Rust-Proof.

We have secured a supply of these varieties from a reputable source in Georgia to determine if the success which Georgia oat-growers have attained in avoiding rust by choice of resistant varieties can be reproduced here. The "Heavy Winter" is commended to us as a heavy, tall oat which resists rust if sown early. "Mox Rust-Proof" very seldom shows any injury from rust, grows to medium hight and is very productive. It is counted in Georgia as the "surest and only reliable spring oat."

Terms for Cereals.—Applicants for seeds of the cereals named above may order a single package of any one or of all varieties, but we cannot furnish more than a single package of one variety—15c. for each variety in 1 lb. sacks, postage paid.

TOBACCO.

In spite of the difficulties which have attended the curing and marketing of California-grown tobacco, quite encouraging progress has been made within the last few years, and it is possible that the crop may become of considerable importance. In view of this fact and to supply seeds of the best-known varieties to those desiring to experiment, we have secured from Major R. L. Ragland of Hyco, Virginia, seeds of his best sorts, viz.:

1—"Ragland's Conqueror"—a healthy, vigorous grower of the best form and texture and curing to the brightest color.

2—"Bonanza"—a superior variety for wrappers, cutters and fillers.

3—"Safrano"—yielding a product of a rich saffron color, soft silky texture and superior flavor.

4—"Gold-Finder"—a Yellow Oronoko crossed on White Burley, and held by some planters to be the most beautiful yet produced.

5—"Ragland's Improved Yellow Oronoko"—developed by careful, continuous selection from old standard yellow Oronoko.

6—"Long-leaf Gooch"—leaf longer and finer than Broad-leaf Gooch, and considered one of the best varieties.

7—"Lacks"—broad leaf, tough fiber; a good and reliable sort.

8—"Bradley Broad Leaf"—a popular variety both for manufacturing and for cigars.

9—"Connecticut Seed Leaf"—the largest and finest selected varieties of this indispensable kind,

10—"Big Havana"—the best Americanized Havana; the earliest cigar variety, a heavy cropper and of fine texture and flavor.

Of these ten varieties, the first seven are of what is called the "commercial-leaf class;" the last three are cigar varieties. Experimenters may order the whole or part of the collection, as they see fit, at the rate of 3c for each variety, postpaid. Instructions for growing will be mailed to each applicant for the seed.

TREES AND PLANTS.

Seedling Olives.—Trees grown from imported seeds of six European varieties, which were planted in 1882, have borne freely this year. Some of these seedlings promise to be of value, and we desire to send scions for grafting to those inclined to experiment in this direction. *We do not commend these varieties for planting*, but simply invite experiment to secure a wider trial of them with a view of approving or condemning them.

No. 1—Resembles Rubra, fruit good sized, pit small, growth and fruiting good.

No. 2—Resembles Nigerina closely, very productive.

No. 3—Resembles Præcox; large bearer and a strong, upright grower.

No. 4—Another strong, upright grower, and productive.

No. 5—Resembles Atroviolacea; early maturing, foliage rather open.

No. 6—Resembles Uvaria; good, compact grower, fruit-clusters large and abundant.

No. 7—Resembles Atroviolacea; very open grower and fair bearer.

No. 8—Resembles Rubra in leaf and growth; fruit of good size.

Packages of these scions will be sent at the rate of 4c for each variety, postpaid.

Date Palms.—Some confusion and misunderstanding have followed the announcement, in the newspapers, that we had received from the U. S. Department of Agriculture a collection of the best varieties of foreign date palms. We have received only a few such palms, and they have all been planted at our stations at Tulare and Pomona. In the future there will be distribution of these, when they produce suckers. We have, however, a few plants grown from the seed of the date of commerce, which we will send to applicants in localities where the date is likely to prove hardy, in order that the local climates may be tested in advance of the distribution of better varieties. Two plants to each applicant, so long as the supply lasts, for 25c, by express.

Carobs.—In view of the continued inquiry for this forage-producing tree of the Mediterranean region, we have grown a small lot of seedlings for distribution this year. The Carob tree (*Ceratonia Siliqua*) is the true "Algaroba," or St. John's bread of the Mediterranean region, and has been heretofore recommended for cultivation in the southern part of the State, on dry and otherwise unavailable hillsides as well as in richer and moister lands, for the production of an excellent milk-producing feed. (See report College of Agriculture of 1884, page 100, and report 1886, page 108.) The Carob is about as hardy as the orange, but owing to its drouth-resisting qualities when once established, is destined to have a much wider range than that tree. Four plants to each, it being necessary to make sure of having both staminate and pistillate trees together; 25c by express.

Kai Apple (*Aberia Caffra*).—The Kai apple is a native of Natal and Caffaria. It is a tall shrub, yielding an edible fruit of a golden yellow color, about the size of a small apple. It is commended as a hedge plant, as it is densely clothed with strong dry spines. The leaves are small and of a rich green hue. The plant grows readily from seed, but can also be multiplied rapidly by cuttings, using bottom heat. In this way plants can be secured for hedge-planting without waiting for the stock plant to reach bearing age. We send by express two plants to each applicant: 25c.

Caper bush (*Capparis spinosa*).—It is possible that the production of the "caners" of commerce, which are the pickled flower-buds of this plant, may become one of our minor agricultural industries. The plant is a free bloomer with us from June to October; the flowers are strikingly beautiful and the foliage attractive. It is of low habit, and plants should be set at least six feet apart. Three plants to each applicant by express: 25c. Larger quantities can be furnished at cost of packing to those desiring to plant for trial on a commercial scale.

English Oak (*Quercus robur, var. pedunculata*). Each year furnishes additional evidence of the exceedingly rapid and satisfactory growth of this tree in California. It can be earnestly commended for planting in most parts of the State, both upon lawns and in forest plantations. One-year-old trees by express, five to each applicant: 25c. Young trees should be guarded from gophers, squirrels and cattle—all these animals eat them greedily.

Black Wattle (*Acacia decurrens*).—This tree has demonstrated its adaptation to most California climates, is a rapid grower and very desirable as a shade or ornamental tree as well as for its economic importance as the source of the wattle-bark of commerce. Small trees sent out from the University are already bearing seed in several localities in the State. General success is reported with seed previously sent out where the seed has been put in boiling water and allowed to stand and cool 12 hours before planting. Otherwise the seed may not germinate until the second year. The seed is small, and a packet properly handled should give trees for a large plantation; 2c per packet by mail.

Licorice.—This important commercial plant has demonstrated its adaptation to California conditions, and offers inducements to those who have suitable lands. The importation of licorice from Europe to the United States is very large, and the market for the local product is promising. Mr. Isaac Lea of Florin, Sacramento county, our largest producer, obtains 14c per pound for dried medium-sized roots such as druggists use, and the manufacture of stick licorice would probably pay even better, if one would give the effort needed to succeed in its production. Licorice produces best on low, moist ground. Land that is overflowed in winter suits it well, and submergence does not injure the plant. It will, however, grow on almost any soil. The roots should be planted in rows four feet apart, the roots placed one foot apart in the row and cultivated like corn. Harvesting is done by plowing out with a strong team or digging with spades. The plants which we send to each applicant will soon give roots enough to plant a large area if desired. Let it be remembered, however, that licorice in land which is desired for other purposes is a troublesome weed and hard to eradicate. We send five root cuttings to each applicant: 10c by mail, postpaid.

CUTTINGS AND SCIONS.

Osier Willows.—The demand for the choice varieties of Austrian Osier willows which we grew from cuttings received from the U. S. Dept. of Agriculture soon exhausted the supplies available last year. We have therefore produced a larger supply for this year's distribution.

No. 1: "Smooth Golden" (*Salix viminalis*)—rather a small, slim growth; bark smooth, bright yellow.

No. 2: "Belgian" (*S. viminalis*)—a stronger grower; bark greenish yellow.

No. 3: "Hybrid Viminalis" (*S. viminalis var.?*)—very long canes; bark greenish yellow.

No. 4: "Improved Viminalis" (*S. viminalis meliorata*)—medium growth; bark greenish yellow.

No. 5: "Noble Viminalis" (*S. viminalis nobilis*)—a strong grower; bark greenish yellow.

No. 6: "Broad-leafed almond willow" (*S. amygdalina latifolia*)—rather a small cane with broad leaf; bark dark green; wood hard.

No. 7: "Yellow-branch almond willow" (*S. amygdalina vitellina*)—bark dark green.

No. 8: "Caucasian almond willow" (*S. amygdalina Caucasica*)—bark black or very dark.

No. 9: "Silver-leaf willow" (*S. hippophæfolia*)—a strong grower, with reddish bark.

Sent in lots of 10 of a kind; 10c. per lot, or one dozen assorted, 20c. by mail.

Mulberries.—Cuttings of the following kinds can be had: (1) Multicaulis; (2) Alba; (3) Russian; (4) Downing's Ever-bearing; (5) Lhoo; (6) Nagasaki. Sent in lots of 10 of a kind; 10c. per lot, or 12 cuttings assorted, 20c. by mail.

Resistant Grape Vines.—These vines are not desirable for fruit-bearing, but are offered to those desiring to test them as stocks for grafting. Cuttings of the following species of *Vitis* can be had: (1) Cinerea; (2) Aestivalis; (3) Cordifolia; (4) Candicans; (5) Riparia; (6) Arizonica; (7) Californica; (8) Monticola; (9) Novo-Mexicana; (10) Rupestris; (11) Vulpina (12) Romaneti; (13) Spino-vitis Davidii. Sent in lots of 10 of a kind; 10c. per lot, or a dozen assorted, 20c. by mail.

Fruit Tree Scions.—The University orchard contains upward of 500 named varieties of fruit, and our report on "Agricultural Experiment Stations," 1890, pages 182 to 187, contains a full list. This report will be sent to all applicants who may order any of the varieties named. We may not be able to supply all applications for some of the newer varieties, because the trees are small.

We do not furnish rooted trees, but scions, for grafting. We do not send large quantities of any variety, because the object is to test varieties and not to furnish material for commercial propagation. Send 10c. for each dozen ordered of a single kind, or 20c. if a dozen of assorted varieties is ordered.

FORAGE PLANTS.

Texas Blue Grass (*Poa arachnifera*).—This grass can now be commended as especially valuable in many parts of the State. Experimenters who have received roots from us or from other sources agree in its favor. An interesting statement furnished us by Mr. Austin J. Roberts of San Leandro, Alameda county, after three years' growth of the grass, contains these points:

"It stands our warm dry summers without dying out, and springs into vigorous growth as soon as the rainy season commences. It has r own with me successfully even on a gravelly soil without a drop of water from May until October, yielding a crop of hay the ensuing summer at the rate of 2½ tons to the acre. Planted on good soil and occasionally irrigated during the summer, its growth is luxuriant, affording many cuttings and producing an enormous yield of feed. It is highly relished by stock both in its green state and as hay. The roots planted in rows 18 inches apart and 12 inches apart in the rows, soon spread and form a matted turf."

We can furnish root-sets in 8-oz. packages for 8c. each by mail. By planting a small plot, the grower will soon have roots to plant a large area if the grass commends itself.

Other Forage Plants.—There is still demand for the forage plants which we have formerly distributed. Some of them have proved very successful and valuable. It is desirable to have as wide trial as possible of all of them:

Japanese Wheat grass (*Agropyrum japonicum*), 4-oz. packages, 4c.

Tall Oat grass (*Arrhenatherum avenaceum*), 4-oz. packages, 4c.

Schrader's Brome grass (*Bromus unioloides*), 8-oz. packages, 6c.

Hungarian Brome grass (*Bromus inermis*), 4-oz. packages, 4c.

Hairy-Flowered Paspalum (*Paspalum dilatatum*), 2-oz. packages, 2c.

Millet grass (*Milium multiflorum*), 2-oz. packages, 2c.

Snail clover (*Medicago turbinata*), 4-oz. packages, 4c.

Esparcet or Sainfoin (*Onobrychis sativa*), 4-oz. packages, 4c.

Jersey Kale—a tall-growing collard producing a vast weight of feed on moist land. Plants should be grown and set out like cabbages; 2-oz. packages, 2c.

FIBER PLANTS.

Cotton.—Cotton was more widely distributed in California last year than ever before, and excellent samples were produced. We have seed of two leading Texas varieties: "Big Boll" and "Poor Man's Relief." Seed in 8-oz. packages, 8c. each by mail.

Jute.—Adapted to moist lands away from the coast and should be sown after the ground is well warmed in the spring and danger of frost is over. Seed in 4-oz. packages, 4c. each.

New Zealand Flax (*Phormium tenax*).—Grow well in the coast regions of the State. Valuable for tying plants, vines, etc. Five plants to the lot; 25c. per lot by express.

Esparto Grass (*Stipa tenacissima*).—Grows well on sandy beaches within reach of salt water, and in some other situations. Used for cordage, basket-weaving and paper-making. Ten plants to the lot; 25c. per lot by express.

Ramie (*Boehmeria candicans*).—The famous "China grass." Several processes are now being advocated as successful in extracting the fiber, and some foresee an important industry resulting therefrom. Ten plants to the lot; 25c. per lot by express.

Flax.—Four varieties of the best European fiber flaxes, which attain about twice the length of stem of the variety grown for seed in this State. No. 1, White-flowering French; No. 2, Royal of Germany; No. 3, Russian; No. 4, Yellow-seeded; 4-oz. packages of each or all, 4c. each.

MISCELLANEOUS.

Beans.—"Tall Mont d'Or," an excellent variety; 4-oz. packages, 4c.

Beets.—"Eclipse" and "Osborn," very early and excellent; 4-oz packages, 4c.

Sugar Beets.—In view of the renewed interest in the beet sugar industry, we will furnish seed of approved varieties in 4-oz. packages to those who desire to test their local conditions with reference to the production of beets acceptable to the sugar-makers. Growers of such trial beets can have the product assayed at the Station laboratory. Seed for large plantings can of course be obtained through commercial channels.

Spinach.—New Zealand (*Tetragonia expansa*); described by Von Mueller as a good culinary herb and as useful for restraining drifting sands. Seed in 1-oz. packets: 2c.

Chapman's Honey Plant.—A "globe thistle," much liked by bees and suitable for planting in waste places. Seed in 4-oz. packages, 4c.

Pyrethrum (Insect Powder plant).—The Dalmatian (*cinerariæfoleum*) and Red (*roseum*) in 1-oz. packages, 2c. each.

Bamboos.—A few applicants can be furnished with rooted plants of the *Metake*, one in a lot; 25c. per lot by express.

Reports from Recipients.—Those who receive seeds and plants are expected to report results to us, that the data may be embodied in our publications. A large number of such reports is now being prepared for printing, and we earnestly request those who have not yet complied with our desires in this respect to do so at once. We wish to hear of failures as well as successes, that the exact standing of each plant may be ascertained. In reporting failures, please state from what apparent cause, if possible.

N. B.—All applications for seeds and plants should be made as early as possible. We expect to send out *seeds about January 1st, and* PLANTS ABOUT FEBRUARY 1ST. All applications should be addressed to

E. J. WICKSON,
Berkeley, Cal.

December 10, 1890.

Patrons of Husbandry.

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

To the Officers of the State Grange.

We are now entering on the last half of our official term. Though we may not have won the laurels for the Order that we each expected to win, or that the Grange expected us to win, yet the race is not lost, nor is the time to win it passed. Won't each one of you try to organize a new Grange this coming year? If you are unable to do that, then make a terrible effort to reorganize some dormant Grange. Please remember that the springtime insures new life. Now to the work of scattering Grange thought, influence, purpose, and work. Who will come and keep the fires burning bright? Let's all rally to the work of the Grange.

Attention, Deputies!

All Deputies now holding commissions (whether General, County, District or Special Deputies) are by this notice reappointed. You may each of you consider this your authority to act till the meeting of the State Grange in October, 1891, at which time my official term will expire by limitation.

You did well by the Order last year, and for that service in my own behalf, and for the Grange everywhere, I sincerely thank you. But the work of another year demands our attention. Please renew your efforts, and, if possible, *doubly increase* them, in behalf of an Order and for a people actuated by the highest and noblest of purposes. Join, with bright eye, willing hands, fleet feet, attentive ear, instructive tongue and honest heart, in planting, in California's thrifty, sunny farm homes, "Peace on Earth, Good-will toward Men."

The fee for membership in a Juvenile Grange is so small that any child would soon save the amount. *Fifteen cents* could not be expended by a child when a greater return for good in after-life would be sure to follow. Encourage the Juvenile Grange, and the subordinate Grange will soon reap an extra harvest.

By the action of the recent session of the National Grange, Organizing Deputies will receive $5 from the *National* Grange fund for every charter list of a new subordinate Grange. This sum, in addition to the sum allowed by the Executive Committee of the California State Grange for a new Grange organization, will surely pay any live, wideawake organizer to make a house-to-house canvass for the Grange. The principles of our Order are so pure, and the purposes of the Grange so noble and helpful, that if they are fairly and intelligently explained to the farmers there ought not to be, and I believe there will not be, much difficulty in organizing 50 or more new Granges in this State during the new year. The demands of the farm are so reasonable, and the legislation asked for by the farmers is so fair and forcible, that all required to insure success is a thorough organization and hearty co-operation among those who till the soil. The Grange offers to farmers and to their families, for a small fee, all these glorious opportunities. Where will the first Grange be organized in the new year? Who will secure the first list?

The Journal of Proceedings of the National Grange will soon be here, so I will say little of what was done.

By the next issue of the Rural, the names of the Committee on Experimental Stations, Co-operation and Farmers' Institutes will be announced. The trip to the National Grange, and the work of answering accumulated mail during said absence, have absorbed all "spare time" since my return; therefore your indulgence for another week is asked.

As per request of the State Grange of California at its late session, I have the honor to submit the following as the result of labors in the direction required. The Committee on Constitution and By-laws of the National Grange, after hearing your representative, considered the argument worthy the action of the National Grange, and as a result has submitted to all State Granges the following proposed amendment to the Constitution of the National Grange:

Amend Section 1, Article I, under the head "State Grange," by inserting between the words "Matron" and "provided," where they occur in the third line of said section, the following: "And such fourth-degree delegates as may be found necessary to secure to each subordinate Grange two representatives. The fourth-degree members above provided for to be chosen in such manner as the respective State Granges may prescribe."

Which subordinate Grange in California will be the first to organize a Juvenile Grange? The ritual for Juveniles contains but one degree. It is now in the hands of the printer, and will soon be ready for distribution. Children of the farm between the ages of 8 and 14 years are eligible. The Juvenile Grange is under the direction of the subordinate and of the State Grange. Remember, Patrons, that little Grangers will soon be big Grangers. Encourage the girls and the boys.

The Legislature soon convenes. See that your Assemblyman and your Senator do their duty. They *know* what we need. See that they vote accordingly.

If the officers whose duty it is will forward the result of the election in each subordinate Grange, *at once*, to the Worthy Secretary, it will materially assist the Master in communicating the Annual Word. The new word is ready and will be communicated to the *Master elect* as soon as he is installed and the *December quarter's* dues are paid. Let all be prompt, and the *new word* will soon be yours.

Sacramento County Pomona Grange expects to install officers on Saturday, Jan. 10, 1891. The Legislature will be in session at that time, and it will be a good opportunity to see two attractive bodies, viz.: The Pomona Grange and the Legislature.

Bro. H. E. Hayes, Worthy Master of Oregon State Grange, has promised to "stop over" in California on his way home from the National Grange. We may be able to get him to do some Grange work for us. An effort will be made; we hope success will follow.

E. W. D.

Bro. Flint at San Jose.

At the meeting of San Jose Grange on Saturday morning the members considered it fortunate that they could have so thorough a Granger as Daniel Flint of Sacramento to act as temporary presiding officer. A class of four received the last chapter of instructions, and can henceforth be observant Grangers as well as active members of the Order.

The illness of W. A. More of Los Gatos was announced. Among the customs of the Grange is the very pleasant one of celebrating the graduating of a class of candidates, or some other appropriate event, with what is known among them as a "Harvest Feast." Such a feast was had on Saturday at the close of the regular business meeting, and the long tables in the smaller hall were loaded with good things and surrounded by hearty farmers, their wives and daughters. One of the peculiar California features of the occasion was a fair-sized squash neatly hollowed out, and from its cavernous depths fair hands drew forth squash pies sufficient to supply the multitude there assembled, and some believed that it was like a conjurer's box—inexhaustible. Apples, pears, figs, grapes and plums, all fresh and nice, were the representatives of the horticultural products—a wonder indeed to some from the East who were present.

Assembling again in open meeting after the feast, Dr. and Mrs. Mintie, who were present by invitation, favored all with a finely rendered duet. This was followed by an essay by Mrs. Lillian Jones and a song by Mrs. Frost, also one by Mr. Morgan.

Daniel Flint of Sacramento made rather a pointed address, alluding incidentally to Congressmen who cannot write their own speeches, much less deliver them, and the further fact that with money a man of very few brains may make a pretty fair intellectual show in this world by purchasing the brains of others for the purpose. Mr. Flint favored the Grange as tending to promote and favor the pursuit of happiness, one of the inalienable rights of man. He was himself greatly interested in Grange-work and expected to die in the service. The address was full of encouragement, and will do much to promote the popularity of the Patrons of Husbandry.—*San Jose Times.*

Wheat Prices Since 1864.

We are indebted to Albert Montpellier, Manager of the Grangers' Bank, for the following very important table showing the

PRICE OF WHEAT IN THE SAN FRANCISCO WHEAT MARKET FOR 26 YEARS FROM JUNE, 1864, to DEC. 15, 1890.

Year	Highest.	Lowest.	Difference.	Average.
1864-65	$3.30	$2.30	$3.00	$4.15
1865-66	2.15	1.40	.45	1.97
1866-67	2.22	1.25	.97	1.76
1867-68	3.10	1.50	1.60	2.31
1868-69	2.50	1.17½	1 32½	1.71
1869-70	1.95	1.05	.90	1.70
1870-71	3.15	1.55	1.60	2.25
1871-72	2.85	1.52½	1.32½	2.29
1872-73	2.16	1.25	.91	1.95
1873-74	2.37½	1.60	.77½	2.02
1874-75	1.85	1.30	.55	1.60
1875-76	2.32½	1.65	.67½	1.96
1876-77	3.00	1.45	1.55	1.93
1877-78	2.45	1.82½	.62½	2.10
1878-79	1.77½	1.57½	.20	1.63
1879-80	2.15	1.45	.70	1.81
1880-81	1.67½	1.25	.32½	1.40
1881-82	1.75	1.30	.45	1.62
1882-83	2.05	1.60	.45	1.73½
1883-84	1.87½	1.42½	.45	1.64½
1884-85	1.50	1.17½	.35	1.32½
1885-86	1.50	1.25	.25	1.36
1886-87	2.10	1.22½	.87½	1.62
1887-88	*2.12½	*1.22½	.90	1.37½
1888-89	1.63⅝	1.25	.38⅜	1.43
1889-90	1.38½	1.25	.13½	1.29½
Crop 1890	1.40	1.27½	.12½	...

*Wheat collapse.

Not Professor Linscott.—Editors Press: The Linscott on whom our Grange passed resolutions was not Prof. Linscott who welcomed the State Grange when here (as erroneously mentioned in the Rural), but a cousin of his and the Principal of Public Schools at Scquel for a number of years.—J. C. Drew, *Watsonville, Dec. 15th.*

A Word to California Patrons and Farmers

From Past Master Hale of Connecticut.

Editors Press:—Here I am at home once more, and while I feel like writing a personal letter to each one of the many dear Patron friends of the Pacific Coast who helped to make my business trip there so extremely pleasant and satisfactory, a press of work here prevents my doing so, and as I know that your bright paper will (or at least ought to) reach the home of every good farmer in the Pacific States, this letter will have to answer for all at present and later on I will try and write some personal letters, at least to those who care enough about it to punch me up in the matter, for, as a matter of fact, I am a "poor shiftless critter" like all the rest.

After leaving the northern central part of California early in November, I thought I should get out of the range of Patrons, but while making a three-hours' wait at Sanger for train to Santa Barbara, I met an active member of Carpenteria Grange who, when he learned I was a Patron, treated me like an old friend and gave me much valuable information. Somehow, that "I am a Patron" is a passport to the hearts and homes of people that can be reached in no other way, and later on when I went to San Diego, and bright and active Mr. Frank Kimball, after showing me all about and furnishing me many points in the line of my investigations, drove me to the home of Mr. Warren Kimball and turned me over to that true woman and loyal Patron Mrs. Flora Kimball, with the request that they look after me as long as I was in that part of the country on business. Her greeting was a most cordial one to a stranger, but a little later on when she learned I was a Patron and was with the National Grange party when there last year, you may rest assured that we soon had many things to talk about just as all do who are interested in the same line of thought, and the time spent at that delightful home, where we all had the "rosebud lunch" after our return from Tia Juana on Dec. 4th of last year, will be long remembered by me. It is too bad that such good Patrons as the Kimballs are at heart cannot be kept in the Order.

I found many old Patrons from the East all through Southern California, and some way should be devised by your State Grange to start a *live* Deputy at work down there; then, when they have enough sub Granges, organize a Pomona and bring the Patrons of that part of the State together at least four times a year. You see, about the only chance that old National City Grange members had to see other Patrons of the State was to travel once a year 400 to 600 miles to attend the State Grange sessions. No wonder it could not live. The average Patron is "a mighty sociable critter" and must be given a chance to touch elbows now and then if the Grange is to thrive. Now, Bro. Davis, put some one on this track and you can have 25 new Granges in the southern counties during the next year. Then wake them up with one of your live State Grange sessions and "the thing is did."

From San Diego county I made a jump back up to Tulare and Merced for two public meetings. At Tulare, we talked of Farm Institutes. The Grange and Alliance people there evidently believe in a better understanding of the science of agriculture, and propose to build up from the bottom on educational lines. I would be glad to take up a whole letter on this one subject, but suppose long ere this you have printed a full report of the meeting. I will get at it some day, but for the present the Rural Press is filed away along with a host of other unread papers that have accumulated here for me.

From Tulare I went up to Merced (where, by the way, I had hoped to meet some of your State Grange workers, as the meeting had been advertised two weeks), and was taken in hand by Bro. Smith and driven all about the place, then out six miles to the home of Bro. and Sister Atwater, where I found a ten-acre orange and lemon orchard two years planted that has made such a grand start as to give one great faith in citrus-fruit culture in that section of the State, especially after seeing the fine oranges that are ripening on the dozen or more trees in the courthouse yard. In the evening we had a very pleasant call from the bright Secretary of Merced Grange and her father and mother, all of whom are very earnest Patrons. You have been wonderfully fortunate in California to secure so many bright women for Grange Secretaries, and I am of the opinion that much of your success is due to their promptness and efficiency. Any way, Merced is a very bright Grange and conferred the third and fourth degrees in very good form, after which we had the usual feast—just such as only the Matrons of our Order can furnish. Then for an hour and a half I gave them a rambling talk on Grange and farm work, and then by fast train made a bee-line for Arizona, where I spent a few days looking up the orange and lemon lands and trees along the Salt and Gila River valleys. There being an abundance of water and plenty of cheap lands there ($10 to $30 per acre), the prospects are that both these fruits, also the raisin grape, will be very largely planted there the next few years.

Passing on across Texas, I spent some little time in and about the quaint old city of New Orleans and then home via Atlanta and Washington. It was two weeks or so after the close of the sessions of the National Grange, but I was fortunate enough to meet a number who had been in attendance, and all were loud in their praises of good Bro. Davis, the bright representative from California. I spent a few hours at the home of Bro. Whitehead in Washington, and as he is one of those bright men who know and remember every one, we just sat and talked you all over and our pleasant trip of a year ago. He is a true-blue friend and Patron sure. To attend a three-days' Farm Institute at Worcester, Mass., I had to just make a call at home and then skip out again, but was just in time to catch Bro. Hayes of Oregon visiting Mrs. Hale (who, by the way, I found fat and "sassy" as ever), Sister Hale I mean, not Bro. Hayes—he is the same good fellow as ever, and if Sister Hayes does not send for him to come home, will attend our State Grange the middle of January. I reached Worcester in time for first evening meeting, and you know how it is where two or three are gathered together in the name of agriculture, there will the Patrons be found also, so I was not much surprised on entering the hall to see on the stage Bro. Rice of Worcester and Sister Wasson of N. H., and bless my heart if she didn't sing "The Farmer Feeds Them All" just as bright and happy as at Sacramento one year ago; then in the audience were Bro. and Sister Draper and Bros. Putnam, Hartshorr, Ware and Hadwin—all of our Grange party last fall. Somehow, even though I was in Massachusetts, the whole thing carried me back to California, and as soon as the good friends had a chance at me, we had to talk it all over once more.

This is a big old world, Bro. Dewey, but somehow such meetings bring us all nearer together, and California is not half so far away to most of us since our visit last fall; and I shall feel mighty homesick if I cannot get over there at least once more before I die. I am now settled down at home, and find any amount of work that has accumulated during my absence. It had been a lovely fall up to December 1st; then it started in for a real old-fashioned winter, and I at first thought this was no place for Hale and his summer pants. However, I did not pucker up much, and now really enjoy the clear dry cold. Find all my trees and plants went into winter quarters in fine shape, and so I had much rather have the snow and ice than the previous two warm winters. The children are having lots of fun skating and sliding down-hill, and I rather think we "old folks" will have to take a hand in it just for fun. You will remember how I told the National Grange last year of our inspection service. Well, this year we have so many Granges, that aside from the regular Deputies, Worthy Master Bowen has appointed seven others, two of whom are ladies, and the work of inspection is now going on so as to be able to report at State Grange in four weeks. I had been home just one day when I received marching orders to go out on this inspection work. I inclose you one of the blanks showing the 22 questions covered in our work. To get at these to my satisfaction and then go through the unwritten work once will keep a Grange on the jump for about three hours; but it stimulates the work all along the line, especially if a Deputy is bright and crowds in instruction at every point. Each one of the questions furnishes a text for a good Grange lecture. Possibly if you can spare the space some time, you will copy the blank which I inclose. Some folks know enough to "run down," but I never do when talking to or of Pacific Coast Patrons. I know this letter is much too long. Still, where could I stop before? and even now I have a dozen things I would like to say to or of a host of good friends whose names and faces are with me now and always will be through life. I am a good deal like Bro. Overhiser—have to scold some when attempting to do good. So as this may be my last kick, I must say for such good Patrons you are all mighty careless about giving a fellow "the grip" or any "sign" when on the road, and so no doubt in my travels over the State I missed many Patrons, whom, had I known, it might have been handy to borrow a little cash of or beat out of a good "feed," as I did many of you who could not escape "the tramp Deputy" Patron. Fraternally, J. H. Hale.

South Glastonbury, Conn., Nov. 10, '90.

Alive to Work.

Past Master I. C. Steele writes from Pescadero, Dec. 12th, to the Secretary of the California State Grange as follows:

Pescadero Grange is in condition to do effective work, and I am desirous of aiding our Legislative and Congressional Committees as best I can. Would like a few copies of the Australian Ballot law and two or three blank petitions, and any other petitions that it is desirable to have signed and returned, with any information that will be of use to me in making the most, or rather the best use, of our power.

My confidence in the Grange is as strong as ever. I feel that it has a mission that no other organization can fill. [We have complied with Bro. Steele's request, and would gladly respond to other wide-awake Patrons accordingly.] Fraternally yours, I. C. S.

Eden Grange.—Sister Sharai, Secretary, writes that the invitation of Temescal Grange to meet in Oakland for joint installation of officers, Jan. 3d, was unanimously accepted at the last meeting of Eden Grange.

FARMERS' ALLIANCE.

National Farmers' Alliance and Industrial Union.

President.....L. L. POLK, Washington, D. C.
Vice-President.....B. H. CLOVER, Cambridge, Kan.
Secretary.....J. H. TURNER, Washington, D. C.
Treasurer.....H. W. HICKMAN, Puxico, Mo.
Lecturer.....BEN TERRELL, Washington, D. C.
Executive Council—R. A. Patty, Macon, Miss.; Isaac McCracken, Ark.; Evan Jones, Dublin, Tex.
Executive Committee—C. W. McCune, Washington, D. C.; Alonzo Wardall, Huron, South Dakota; J. F. Tillman, Palmetto, Tenn.

Cal. State Alliance Officers for 1890-91.

President.....MARION CANNON, Ventura
V. Pres't.....PETER ROTH, Black's Stat'n Yolo Co.
Secretary.....C. W. PEDLAR, Gilroy
Treasurer.....J. W. HINES, San Jose
Chaplain.....MRS. J. KENNEAR, Modesto
Lecturer.....J. L. GILBERT, Fresno
As't Lecturer.....P. K. WOOD, Los Angeles
Door-Keeper.....J. B. JOHNSON, San Jose
As't Door-Keeper.....MRS. M. A. TALCOTT, San Jose
Serg't-at-Arms.....C. W. MARTIN, Santa Barbara
State Bus. Man'g'r, J. M. MOORE, 297 Linden Ave., S. F.

EXECUTIVE COMMITTEE—JNO. S. DORE, Fresno; JESSE POUNDSTONE, Grand Island (Colusa Co.); JAS. MORGAN, Santa Barbara; E. M. WARDALM, Monrovia (Los Angeles Co.); DAVID REED, Monterey.

NATIONAL DELEGATES—J. S. BARBEE, Santa Barbara, and D. C. VESTAL, San Jose. [Session of 1890 opens at Osceola, Fla., Dec. 2d.]

Organizing Deputies.

J. B. RIGDON for Alameda and San Benito counties.
KATE L. SQUIRE for Santa Cruz and Santa Clara counties.
F. P COOK for Merced and Stanislaus counties.
H. W. RHYNE for San Luis Obispo county.
J. W. HINES, San Jose—Deputy-at-Large.

Selling and Purchasing Depot.

The Farmers' Alliance movement is certainly growing in this section, and judging from present indications is bound to be a power which, if properly controlled, will do a world of good.

In this county there are at present upward of a dozen sub-Alliances, having a membership, in round figures, of one thousand, and scarcely a week passes but some new Alliance is reported. The organization has finally got into good working condition, and is bending all its energies to the commercial side of the "agricultural depression" bugaboo that "bobs up serenely" at every election. At its last meeting R. Sherer of Compton was appointed as its business representative, with headquarters at 245 South Main street, with full power to buy and sell farm produce and farm supplies.

The main feature of the Alliance movement in commercial matters is to find new markets for Southern California farm productions, and so far as practicable, sell direct to the Eastern buyers, thereby saving to the producers the margins of the middleman. By shipping in carload lots the Alliance also expects some concessions from the transportation companies. Implements, seeds and general farm supplies will be bought by the business representative of the Alliances at different points, in large lots, and furnished to the farmers at cost.

We understand several sales have already been made, while purchases are quite extensive in the way of seeds and implements.

So far as could be learned the Alliance in this State will take no independent action in politics so far as candidates are concerned, contenting itself rather with matters of business and legislation calculated to be of benefit to its members. In so far as supporting any political party, it will rather aim to support the best candidate in the field of either party. It is pretty well conceded that the California Alliances condemn the political move that has evidently captured the National Alliance. The California farmers as a class do their own thinking, and are not to be cajoled into any third party movement.

The County Alliance meets in secret session on the first Saturday of each month in the Chamber of Commerce rooms in this city.—*L. A. Express.*

Alliance Resolutions.

At a convention held at Oakdale, the State Farmers' Alliance passed the following sensible resolutions:

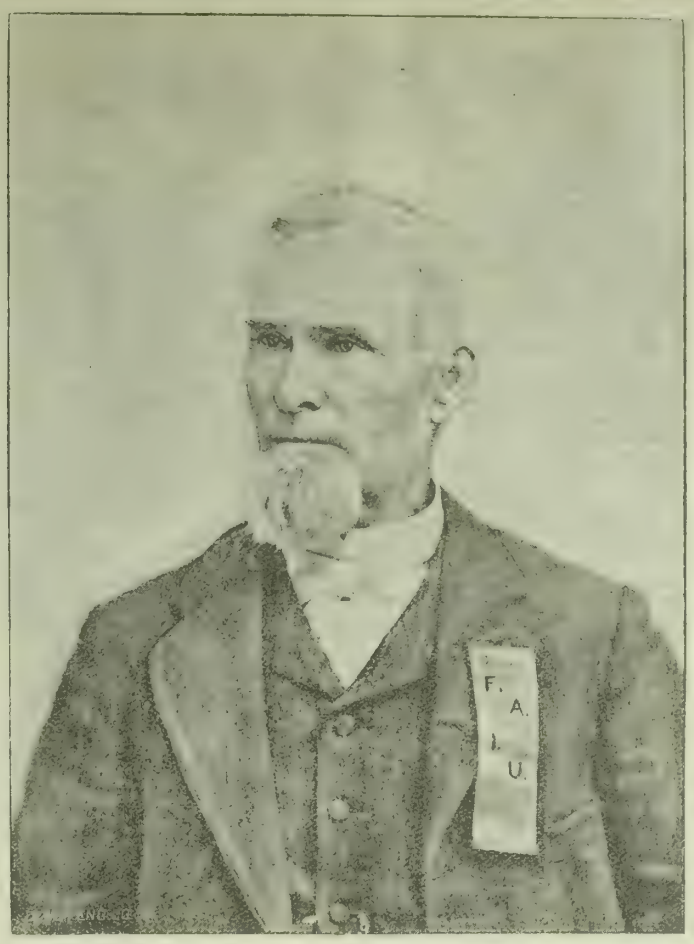
That we are in favor of the next Legislature establishing a Railroad Commission whose duty it shall be to regulate and control freights and fares, said Commission to be chosen by the Governor and composed of three members, all of said members not to be chosen from any one political party, said Commission to serve until the next general election, when such Commission shall be elected in the same manner in which the State officers are elected. No elector shall place more than two names on his ballot.

This demand is one that the farmers should push until their wishes are acceded to. A Railroad Commission is a necessity.—*Goldendale (Wash.) Courier, Dec. 13th.*

To Kern and Fresno Counties.

Without solicitation, the undersigned has been appointed a Deputy Organizer of the Farmers' Alliance for Fresno and Kern counties. Being willing to give some time to the work of organizing, I shall be pleased to correspond with any persons who desire lectures in their schoolhouses with a view to organizing sub-Alliances. J. W WEBB,

Box 76, Fresno, or Box 66, Hanford.



MARION CANNON, PRESIDENT CALIFORNIA STATE FARMERS' ALLIANCE.

Marion Cannon.

The President of the California State Alliance is a man of no ordinary quality. Coming to the late meeting in San Jose for organizing this State Alliance, unacquainted with and known to but few delegates, he shrank from the appointment of temporary chairman. Finally accepting the charge, he used his best unbiased judgment in the appointment of assisting officers and committees for the session. The work of organizing proved his good judgment and gave great satisfaction to the very earnest members of the meetings. During the labors of the session, he gave abundant proof of his large perceptive faculties, keen, quick discernment of character and ability and adaptability. For the position of permanent officer, he was elected with great unanimity after frequent requests to be excused from that important position.

The S. F. *Examiner* has given the following pen-picture of Mr. Cannon in its issues:

"Born in Virginia in 1834, he removed here in 1852, and has been for the past 16 years a resident of Ventura county, where he is engaged in conducting a large ranch. President Cannon is a man of great force of character, a good speaker, and of pronounced executive ability. He is a prominent Mason.

"He is a typical California rancher. This afternoon, when the correspondent met him under the arcade porch of the Revere house, Ventura, he was smoking a large cigar and had just finished a substantial noonday meal. He had on a black slouch hat that effectually concealed his gray hairs and his rather broad forehead, a suit such as a man might wear to go a-plowing, or to come to town for his mail, and the lack of a vest showed that he wore a brown cheviot shirt with white pearl buttons in front, with collar attached to the shirt and with no necktie."

It is the intention of the PRESS to print from week to week the portraits and lives of other men who from their natural worth have brought themselves before the public in the interest of true reform.

A Colusa Farmer's Ideas.

I wish to assure you and the readers of the *Sun* as well, that the aim and object of the Farmers' Alliance is not to obtain or advocate female suffrage or prohibition, though any member or body of its members can believe and advocate such measures. The constitution of the Farmers' Alliance plainly declares that "There *shall* not be any political or religious test for membership," and if any "stuff" makes its appearance, remember, "It is human to err," etc., and don't blame the Alliance—National, State and subordinate—for it. The Alliance, politically, is not in any way sectional, State or local. Sectionalism shall suffer, for its constitution declares: "To suppress personal, local, sectional and national prejudices, show any broader or higher aim." You caution the farmers to "go slow," a fact that you must know they have been doing, since you have been telling them for "years and years" of the very evils they now complain. The farmers need encouragement, not censure or criticism. Our interests need not nor do not antagonize. The prosperity of the farmer measures the prosperity of the country, one and all. If the farmer fails to look out for his own interest, who will? In unity there is strength; so let the farmers unite and pull together for their good and the good of our common country, and let it not be said that any man raised his hands to retard the farmer in his honest effort to free himself from the unequal and unjust burdens now bearing on his calling.—*Cor. Colusa Sun.*

Farmers' Alliances.

P. T. Durfy of Monte Vista, who was a delegate to the Farmers' Alliance meeting at San Jose, says that new Alliances are being formed right and left, while the membership is increasing with marvelous rapidity. Organizers are out all over this lower country forming new Alliances at many points.

Mr. Durfy thinks the future of the organization depends mostly on maintaining its purity of elements and of purpose. One of the great troubles is to keep the membership confined strictly to farmers, to those who are directly interested in the cultivation of the soil in some shape. The great success of the organization is attracting attention, and all sorts of combinations seem anxious to get into the new Order. Many labor organizations are coming to the door to make inquiries as to terms of affiliation, and the Nationalists are asking for direct admission. While the labor people are practical, their interests are not by any means identical with those of the farmers, and the Nationalists are mostly theorists. To let in all sorts of people means to complicate the aims and workings of the organization. Antagonisms and divisions, misunderstandings and strife will ensue.

As it is desirable to keep the membership free from entangling alliances, so is it to preserve the Order from the interference of the old political parties.—*L. A. Herald.*

Seaside Alliance.

EDITORS PRESS:—Your request in issue of 6th inst. to give names of officers of sub-Alliance Granges is herewith complied with. We will be pleased to see our Alliance in your directory.

Seaside sub-Alliance, No. 87, Ocean View District, Ventura county: Pres., J. D. Goodyear; Vice-Pres., F. Petit; Sec., L. W. Gray; Treas., G. E. Kaltmeyer; L., W. E. Goodyear; Doorkeepers, Z. E. Goodyear and R. Phillbrook; S., Fanny Goodyear; C., G. W. Wolff. Total number of members, 56—38 males and 18 females. Yours truly, L. W. GRAY.

Hueneme, Cal., Dec. 8th.

RIGDON AT WORK.—Deputy Organizer Rigdon organized a sub-Alliance at Irvington last Saturday afternoon with 20 members. G. W. Huff was elected President and C. C. Chase Secretary. He later organized the third Alliance in Alameda county at Pleasanton. Mr. Rigdon is now up at Lodi, where we expect to hear of some more good work.

ALLIANCE MEETING.—The Farmers' Alliance held a meeting at Garden Grove on Saturday. Visitors were treated to a great spread by the Grove people. The next meeting will be held at Tustin some time next month. The Tustin folks have promised to provide dinner for all visiting Alliance people. There are four hundred members of the Alliance in the county, and new members are constantly being added. —*Anaheim Gazette, Dec. 11.*

Alliance Items.

The Soquel Farmers' Alliance held an open meeting Tuesday evening. The National and State Organizer, Mrs. Squire, being present, addressed a large and interested audience. The remarks were received with applause, and at the close of the lecture a number of new names were added to the list, and some candidates were initiated by the Organizer. The Soquel Alliance meets every Tuesday evening, and all farmers and others interested in that locality are invited to join them.

Aptos Alliance has grown rapidly, and has quite a list of names to be admitted at its next meeting.

Corralitos Alliance initiated about 30 members at its last meeting, having 64 members, with a good prospect of more.

The County Alliance will meet in Watsonville, Saturday next, for the purpose of electing a County Business Manager.

The Watsonville sub-Alliance is rapidly increasing in membership, and is very enthusiastic.—*Santa Cruz Sentinel.*

J. W. HINES, publisher of the *Pacific Union*, is an able and zealous worker in the cause. He elicited the enthusiasm and praise of all for the able and fraternal manner in which he presided at the State Alliance banquet at the St. James hotel, San Jose. President Cannon has appointed Mr. Hines a General Organizing Deputy, and he is to go forth into those counties where no Alliances have been organized, and establish new altars, and if possible, secure good workers to light the fires on many other living altars of the good and helpful faith. We hope he will give us good reports of progress for publication from time to time.

To Organizers and Secretaries of Subordinate and County Alliances.

I desire that each organizer will send me the name and P. O. address of the President and Secretary of each Alliance organized as soon as possible. Also that the Secretaries of County Alliances will forward a full list of all Sub-Alliances in their county, with the name and P. O. address of the President and Secretary, so that I may be able to prepare a directory for my use and have the list published in the RURAL PRESS for the benefit of all.

As I will have many circulars of information to send out soon, it is very necessary that I have the list immediately.

I am prepared to fill orders in the line of general groceries, and some lines of building material; also some other things now, and will add new lines to the list every week. It will be of advantage to members of the Order to be in communication with me soon, for I must have the P. O. address of Secretaries before I can send price lists, etc.

Address all letters at present to me at No. 433 California St., S. F.

J. M. MOORE, State Bus. Agt.

The Raisin Industry.

We had the pleasure of announcing, some months ago, that Dr. Gustav Eisen had in preparation a book on the raisin industry, a work for which he is especially fitted by years of research, observation and practical operation. It is a matter of general satisfaction that the undertaking has been most successfully prosecuted, and that California is thus enabled to give to the world the first comprehensive work on this special subject that has ever appeared in any language.

The title of Dr. Eisen's work is "The Raisin Industry," a large octavo of 225 pages fully illustrated. The book opens with a very interesting historical study of the raisin and its production, followed by descriptions of the districts of the world, where the product is of importance, including of course those of California, which are sketched with much skill from full personal acquaintance therewith. Next come discussions of climatic conditions, soils, location and irrigation, as related to raisin-growing. Diseases and insect pests follow, and then the author begins his treatment of the actual production, the planting of the raisin vineyard, cultivation, grafting, pruning and the best tools for all parts of vineyard work. Drying and curing, packing and the packing-house and all devices used therein—all these are treated in detail and constitute a practical guide by which any intelligent man, though inexperienced, may proceed safely and successfully in the building up of a raisin enterprise. Statistics of the raisin of California, brief sketches of leading producers and a carefully prepared outline of the fragmentary literature of the subject, complete the volume.

Dr. Eisen's work is broad and scholarly, and yet compact, and definite in the development of the subject. It should find a place on the book-shelves of all California horticulturists, and will no doubt go to the uttermost parts of the world, where there is much curiosity to know how California is proceeding to turn back the tide of European raisins from the profitable market which they have so long enjoyed in this country. Dr. Eisen's book is sold only by subscription. James A. Johnson agent, with H. S. Crocker & Co. of San Francisco.



"Inasmuch."

An Incident of an Early California Christmas

THEY say that you want a meetin'-house for the boys in the gulch up there,
And a Sunday-school with pictur'-books? Well, put me down for a share.
I believe in little children; it's as nice to hear them read
As to wander round the ranch at noon and see the cattle feed.
And I believe in preachin', too—by men for preachin' born.
Who let alone the husks of creed, and measure out the corn.
The pulpit's but a manger where the pews are gospel-fed;
And they say 'twas to a manger that the star of glory led.
So I'll subscribe a dollar toward the manger and the stalls.
I always give the best I've got whenever my partner calls.
And, stranger, let me tell you; I'm beginning to suspect
That all the world are partners, whatever their creed or sect;
That life is a kind of pilgrimage, a sort of Jericho road,
And kindness to one's fellow's the sweetest law in the code.
No matter about the 'nitials; from a farmer you understand,
Who's generally had to play it alone from rather an or'nary hand.
I've never struck it rich, for farming, you see, is slow,
And whenever the crops are fairly good the prices are always low.
A dollar isn't very much, but it helps to count the same;
The lowest trump supports the ace and sometimes wins the game.
It assists a fellow's praying when he's down upon his knees—
"Inasmuch as you have done it to one of the least of these."
I know the verses, stranger, so you needn't stop to quote;
It's a different thing to know them or to say them off by rote.
I'll tell you where I learned them if you'll step in from the rain;
'Twas down in Frisco, years ago—had been there hauling grain;
It was near the city limits, on the Sacramento pike,
Where stores and sheds are rather mixed, and shanties scatterin' like.
Not the likeliest place to be in, I remember, the saloon,
With grocery, market, baker shop and bar-room all in one.
And this made up the picture—my hair was not then gray,
But everything still seems as real as if 'twere yesterday.
A little girl with haggard face stood at the counter there,
Not more than ten or twelve at most, but worn with grief and care;
And her voice was kind of raspy, like a sort of chronic cold—
Just the tone you find in children who are prematurely old.
She said, "Two bits for bread and tea. Ma hasn't much to eat;
She hopes next week to work again, and buy us all some meat;
We've been half starved all winter, but spring will soon be here,
And she tells us, keep up courage, for God is always near."
Just then a dozen men came in; the boy was called away
To shake the spotted cubes for drinks, as Forty-niners say.
I never heard from human lips such oaths and curses loud
As rose above the glasses of that crazed and reckless crowd.
But the poor, tired girl sat waiting, lost at last to revels deep,
On a keg beside a barrel in the corner, fast asleep.
Well, I stood there, sort of waiting, until some one at the bar
Said, "Hello! I say, stranger, what have you thar?"
The boy then told her story, and that crew, so fierce and wild,
Grew intent and seemed to listen to the breathing of the child.
The glasses were lowered. Said the leader, "Boys, see here;
All day we've been pouring whisky, drinking deep our Christmas cheer;
Here's two dollars—I've got feelings which are not entirely dead—
For this little girl and mother suffering for the want of bread."
"Here's a dollar." "Here's another." And they all chipped in their share;
And they planked the ringing metal down upon the counter there.
Then the spokesman took a golden double-eagle from his belt,
Softly stepped from bar to counter and beside the sleeper knelt;
Took the "two bits" from her fingers, changed her silver piece for gold.
"See there, boys; the girl is dreaming." Down her cheeks the tear-drops rolled.
One by one the swarthy miners passed in silence to the street.
Gently we awoke the sleeper, but she started to her feet
With a dazed and strange expression, saying, "Oh, I thought 'twas true!
Ma was well, and we were happy; round our door-stone roses grew.
We had everything we wanted, food enough and clothes to wear;
And my hand burns where an angel touched it soft with fingers fair."
And she looked and saw the money in her fingers glistening bright,
"Well, now, ma has long been praying, but she won't believe me quite,
How you've sent 'way up to heaven, where the golden treasures are,
And have also got an angel clerking at your grocery bar."
That's a Christmas story, stranger, which I thought you'd like to hear;
True to fact and human nature, pointing out one's duty clear.
Hence to matters of subscription you will see that I'm alive;
Just mark off that dollar, stranger; I think I'll make it five.

—Wallace Bruce in Harper's Magazine.

Mending.

[Written for the RURAL PRESS by MAUDE S. PEASLEE.]

In a family of children this becomes a very important part of the week's work; heavier and more burdensome if allowed to accumulate from week to week, only reduced as a garment is needed.

Much annoyance will be saved if one day is set apart for this especial work, or if this may not be, it might be well to devote one or two evenings to such duties.

Just as soon as possible after the washing and ironing are over is the best time, as it is well to get the clothes out of the way—repaired and in their proper places—as soon as convenient.

The rest of the week is then left free for other mending, and there are no piles of mending, no baskets of undarned hose to appall the weary housewife on Saturday evening.

The socks and stockings can be paired and sorted out when taken from the line, and those that need mending put into a convenient basket or box.

Oh, the delight of a basket well stocked with darning material, needles, scissors and darning-ball! When carefully attended to, week by week, a pair of stockings can be so quickly disposed of that one can mend a pair or two while waiting for the potatoes to boil or while, perhaps, hearing Harry recite his "piece" before starting for school Friday morning.

This kind of mending may be picked up and speedily accomplished in odd moments, if one has the faculty of dovetailing her work, one part into the other.

Some people, however, prefer to take up such a task as a burden and rush it through in an afternoon, thus relieving the mind of it.

Sometimes a patch is needed in the knee or heel of an otherwise good stocking, and it would be well to keep tops of half-worn stockings to be used in this way.

A very neat patch can be put in at the knee, or one may darn a thin knee over a patch, thus saving the stocking much longer.

I remember an aunt who used to darn the toes and heels of new stockings with a fine thread run back and forth. I have no doubt it strengthens them very much. I would not treat the knees of stockings so, however, till they needed it, as it makes an unsightly looking thing of a new stocking, especially on a child whose clothes are short.

It isn't worth while to throw the pile of mending down anywhere, or even to pile it up loosely on a table. It is much better to have a basket or box where it may be protected from dust, and run less risk of having school books and toys piled on top of it.

If buttons show signs of pulling loose, the best way is to sew a strong patch under the button and sew on again strongly.

It is quite an art to be able to sew on a good patch, and every girl should learn how to do it well, principally because such work is likely for a good many years yet to fall to her share.

In mending a slit in underclothing, nothing will be gained by sewing it up, since the additional strain will only cause more.

Instead, sew a rather large patch directly under it and darn back and forth, drawing the edges together.

In mending silk or woolen goods in this way ravelings of the goods may be used with excellent effect especially if the work is well pressed after being finished.

It is very important to look over the pockets carefully and stay them where needed with strong thread and perhaps even a patch.

It is of great importance to accustom a girl to like to wear whole, carefully kept clothing. Nothing that I know of will do more toward giving an awkward growing school-girl self-possession than such knowledge.

It leads, as all good habits do, onward and upward to better and higher tastes and inclinations.

Mrs. Westlake's Christmas Experience;

OR,

Charity at "The Knolls."

[Written for the RURAL PRESS by L. H. S.]

PART I.

"It is more blessed to give than to receive."



CELIA Westlake, who had been married two years and a half, was as charming and sweet a young matron as ever trained flowers around a California home. Besides a fair allowance of beauty, good taste and good temper, she had everything to make her happy. Her home, small but tasteful, stood on an elevated spot known as "The Knolls," on a wheat farm of 320 acres. Her dearest friends in California—Mr. and Mrs. Burdick—lived but a pleasant walk from her home on a large and well-cultivated wheat ranch.

Dick Westlake was a devoted husband, and he was learning to be a model farmer despite the predictions of some people around there who had said that so fine a scholar and gentleman would make a failure raising wheat and horses. Better than all, the sweetest baby boy in the world was "drumming with his silver spoon" on the snowy damask of the dinner-table. The baby was about a year old and not so badly spoiled as would have been expected; and Celia being well and so blessed withal, was looking forward to Christmas with the feeling that this was the happiest time of all her life.

She knew that her husband was a little short of money, as nearly all "ranchers" are about tax-paying time, so she prudently subdued a strong desire to send some handsome remembrances back to her old school friends in Vermont. Yet she felt that she ought to do something for somebody on Christmas to manifest to her Maker her sense of thankfulness for all her blessings; but it was something of a problem to know just what to do.

She had dined Thanksgiving Day at the Burdicks' with a number of other friends of this genial couple, all of whom were as well provided for and seemingly as happy as she herself. She did not wish to give these people presents, as they would each return the compliment, and that was not the effect she wished to produce. Mrs. Burdick was already provided for with a handsome table scarf.

In Vermont, where she had lived until recently, there were many open opportunities to make the poor glad and grateful Christmas-time. There were widows and children of sailors, war widows living on small pensions, and many poor left needy by changes and failures among factories. Mrs. Westlake had been educated at a seminary on a small allowance left her by her mother, but the mother's will had provided that Celia should have a small sum for charity purposes each Christmas-time, so that Celia's mind naturally turned to this pleasurable recreation at this time of year.

So she spoke of this Eastern custom of hers at the breakfast-table one morning and asked her husband if he knew of any real poor people in the neighborhood.

Dick arched his eyebrows at her and tried to blow some curls out of the baby's hair, in a reflective manner, before he replied in a chaffing way:

"There's the Methodist minister's family, Celia; try them. Preachers are always poor in this country, so they say."

The minister's fat horse and well-dressed wife and rosy little girls did not fill Celia's idea of poor people.

"Now, Dick, do be serious; I don't mean that way at all. I mean people who have no coals, or shoes, or turkeys for Christmas."

Dick brightened up.

"That's like us, wifie. The coyote took our last turkey this morning. I suppose coyote breakfast or Christmas dinner is all the same to him, poor fellow! He's gone, anyway."

Here Celia fell into a sad vortex of regrets. Out of six turkeys hatched out by the old yellow hen, who had to sit a week over her time, here was the last one gone. Three were killed by the horses when young, and the last three, after thriving all summer, had taken to roosting on the barnyard fence and had disappeared one at a time, like the remnant of an Indian race. This one was particularly fat and fine, and now she had no Christmas dinner after all her trouble.

In the midst of her reflections, Dick kissed her, tossed the baby, and was off to his work, for he was anxious to get his place all in by midwinter. Mrs. Westlake broached the subject again after tea. Dick looked thoughtful a few moments, but he could not keep serious long.

"Things are different in California, I can't tell exactly how or why. Never mind the presents this year, Celia. Make me a dressing-gown or baby a cap, or me a cap and baby a gown, for we don't need either, do we, Tommy, old boy?" And he snatched the rollicking baby and held him high overhead.

"Do quit calling that baby Tommy, now do stop, please, Dick," protested Celia.

"Get him a better name, then."

"Dick, you know there isn't any name good enough for that precious child; don't scold."

"Call him Richard, and this renowned Richard will be himself again."

Celia flew at him, administered the punishment he deserved, and rescued the baby; and thus ended one of a series of skirmishes frequent in this otherwise happy family.

Mrs. Westlake concluded by this time that her husband did not have much sympathy with her charity scheme, so she said no more about it to him, but the idea still expanded in her own mind. One day, driving home from town, a daring thought came to her.

On the road to town, some distance from the main road, in a low, mean-looking collection of cabins, lived a family named Graber. Mrs. Westlake had driven out to this place one day in the spring to purchase turkey eggs, and had then remarked to her husband that it was the most wretched-looking habitation she had ever seen.

First, there had been a cabin of one room built when the entire valley was one stock ranch; then a room of undressed lumber had been built on to this with an open porch on the side; later, the porch had been inclosed with rough lumber, and another porch had been added, which now was inclosed with sacking and strips of old machine belting. This motley collection of huts, looking like a nest of old boxes, had once been whitewashed, but now this dressing remained only in spots and patches. The barn, larger than the dwelling, was much more rickety and was liable to be laid in ruins any time by the winds, only for its usual winter stuffing of hay and straw, which made a very good support. The only good improvement on the place was a new barnyard fence of redwood and barbed wire, which was the only fencing to be seen.

Chickens and turkeys ran unrestrained about the buildings, roaming at will into the wheat in summer and picking worms far out in the wet furrows in winter. These fowls, doing credit to their unfettered lives, were renowned for excellence and beauty. Of no breed in particular, the hens were most prolific layers, and the turkeys—very common and runty fowls several generations back—now strutted around undisputed champions of the entire turkey neighborhood.

None of the fowls were ever sick, and though the chicken-house was too small, and the surplus roosted anywhere and everywhere, yet they were boycotted by the coyotes, and no varmint of any kind ever disturbed their repose.

It was the fame of this hardy stock that led Mrs. Westlake out there to purchase eggs for setting the previous spring.

No fences preventing, Celia drove her horse to the entrance of the house, and Mrs. Graber received her standing in the open door. She was a gaunt, tired-looking woman, with good features, but from which the play of joyousness and hope seemed entirely stamped out. Through the open door behind her, Celia could see an utterly bare and cheerless room, furnished only with a table, chairs and benches.

Two little children in coarse clothing, wretchedly made, clung to her skirts, while an older boy and girl, at a sign from the mother, flew off like deer to look for eggs.

Mr. Graber, a large man in dirty clothes and hat pulled over his eyes, was working around an old wagon at the barn, and did not look up or notice her presence.

Celia thought this a very miserable family indeed, and drove away, thankful that she did not have them for near neighbors. She never spoke of them, and it chanced that she had not happened to hear the family spoken of by any one else.

And now with her Christmas thoughts her mind reverted to the meager and joyless life of the Graber family as she saw them that spring morning. She thought that with a little effort she might give this apparently poverty-stricken family a Merry Christmas. Her benefactions must be in gifts—she knew no other way. She gave much care to the maturing of her plans, deciding to give practical and useful presents. She said nothing about her purposes to her husband, who was out of the house all day, because she felt that as he had not taken any interest in her original idea, it would be best to wait and tell him only of her success and pleasure.

First, she made a dainty collarette of lace for the mother, then, taking two fine steel engravings, she set them neatly in frames of pasteboard covered with crimson plush. Out of an old dress she fashioned a stylish little wrap for the little girl. She knit a soft zephyr cape for the older girl, made fine wool shirts for the boys and pretty lace-trimmed aprons for the girls. Story-books from her own childhood treasures and handsome Christmas cards completed her generous list.

The two weeks before Christmas were fair and warm, and a rich blue sky bent over green fields and grassy lanes. Celia packed her gifts neatly in a long pasteboard box, saying over to herself with a happy heart, "It is more blessed to give than to receive," forgetting, however, to thank her Heavenly Father that it was she who was giving and not accepting.

She had been so busy, withal, that she decided not to have a special dinner on Christmas. If Dick would rest that day and spend the day with her, it would be sufficient.

A few days before Christmas, Dick came

home from a trip to town with a troubled face.

"Wifie, here's everything in a tangle. The first mortgage on our place is due to Goldstine & Co. next week."

Celia came to his side anxiously.

"And here's a letter from father. He says everything is behind in the mines, and he can't meet the note he owes me for six months yet. I expected to have it to pay this mortgage. This is too bad. I will have to borrow the money somewhere."

"Won't Goldstine & Co. wait?" suggested Celia.

"They might, but they are charging me too much interest. Put on your hat, Celia, and bring the boy, and we'll go over and see Burdick before I put out my horse."

"He'll help you if any one can; he's a friend worth having," said the wife, wrapping the baby in a shawl and tying on his warm blue hood.

And so it proved. Tom, always ready and kind, thought the money could be readily borrowed somewhere among his friends, and he volunteered to give his influence and sign as security for Westlake.

And so it happened that early in the afternoon, the day before Christmas, Tom Burdick called with a lively young horse harnessed to a breaking cart, and the two friends went off together.

This was just the opportunity Celia wanted to make her visit alone to the Graber family; so she put a clean dress on the baby, who cooed a loving approval to all she did, then left him in a safe place while she harnessed gentle old Dolly to the buggy. Then she tied the baby in beside her with the robes, put in her box, and drove off in good spirits on the hard, smooth road—her top buggy bright and clean, the spokes of the wheels glistening in the sun.

All was quiet at the Graber house when she drove up. The older boy and girl were far out in the field herding a few horses, and the younger ones were far away down another road with some young turkeys. This was not just as she had planned it, but there was the mother. She tied her horse to the wheel of a heavy wagon, left the baby asleep in the robes, took the box, and knocked at the open door.

She heard the slamming of an oven door. The door from the low kitchen opened, and Mrs. Graber came out surrounded with a cloud of sweet odors from baking mincemeat. Her calico dress was plain and ill-fitting, and her face wore a look of cold surprise.

"How do you do?" said Celia, sweetly. "I am Mrs. Westlake. I live at 'The Knolls.' Do you not remember me?"

"Yes'm. How de do?" and the woman stood before her, her apron over her arm, her look of surprise unmoved.

After Celia had peered into the room and made a motion as if to enter, Mrs. Graber stood back and placed a chair, but still stood, as if waiting.

"This is a pleasant day," ventured Celia, smiling and seating herself.

"Yes'm; getting kinder dry."

Here Mrs. Graber looked about as if she meditated sitting down.

"Are your children well?" continued her caller.

"Oh, yes. They're never sick. Herding turkey's healthy work."

She moved across the room and seated herself, watching her stove.

Celia's heart began to fail her; there was nothing approachable in this stolid woman. But she went on bravely, tapping the box nervously with her fingers.

"I suppose the children are quite impatient for Christmas to come."

Mrs. Graber shook her head calmly.

"No ma'am; we never make no fuss on Christmas except what we have to eat. Them pies are done now;" and she darted out into the kitchen, and Celia thought she never smelt such delicious mince pies in her life.

When she returned, Celia thought she looked a little more friendly and the conversation continued more easily. In a short time Celia hastened to her point. She untied the box and laid off the cover.

"Mrs. Graber, I always try to do something for Christmas, and as I am not much acquainted here, I thought of you and your children."

Mrs. Graber rose from her chair, advanced to the middle of the room and stood looking at her curiously.

Mrs. Westlake went to the table and began to take the things out of the box, speaking nervously as if she had begun to feel that all was not right.

"These aprons, I hope they will please the girls, and that the shirts will fit the boys; and this collar of lace I made for you, and the pictures are for you. How do you like my original frames?" and she held one of the engravings at arm's length looking at it.

Suddenly she felt a hard, labor-worn hand fall not softly on her arm.

"Did you bring them things for us?"

Celia turned and looked into a hard face where scorn was now mingled with the surprise.

"We ain't poor. What do you take me for? I can get things for my young 'uns!"

Poor Celia's arms dropped nervously at her side, and a multitude of confused thoughts rushed with the blood to her heart.

"But this is for Christmas," she stammered.

Mrs. Graber, cold and cool, lifted up the garments and laid them back into the box.

"You come to the wrong house. We ain't charity folks," she said, and walked out of the room.

Celia only saw her through a mist of tears; she grew weak and trembling all over; she dropped into a chair and hid her face in her hands on the table. This was dreadful. The misery of her chagrin could not be expressed. She thought slow and fast, then did not think at all. She only wished she could be transported in forgetfulness back to the seclusion of her own room. Before she had succeeded in thinking out just what to do, Mrs. Graber came back, and Celia looking up, saw a softer expression on her face.

"Well, I reckon you didn't mean no harm," she said not unkindly, looking down upon the young woman in tears, "but you won't get into no such scrape again."

Poor Celia dropped her head with a fresh burst of tears. Kindness was more than she could expect.

Mollified more by such complete subjection, Mrs. Graber continued:

"I won't say anything outside to nobody, Miss Westlake, and if you don't care, I'll keep the books for Jim and Meg. They like books, but the old man thinks it's all foolishness." Then she placed her hand gently on Celia's shoulder, and said kindly: "You needn't mind, anyway."

Mrs. Westlake rose up and took the woman's hand bravely.

"You may be sure I meant no offense, Mrs. Graber. Only forgive me, will you?"

It would have taken a very hard heart indeed not to have forgiven such a lovely, impulsive young woman, and Mrs. Graber grew even friendly under the influence of Celia's pure and gentle spirit. They were feeling very kindly toward each other as they went out together to the buggy; and when the elder woman saw the sweet, clean baby sleeping like a rosebud among the robes, she grew more womanly and tender and kissed the little pink fingers, and was so sorry Meg was not there to see it.

When Celia reached home, feeling quite as weak as if she had just come out of a steam bath, she saw that Dick and Tom Burdick had just driven up to the house, and that Sallie Burdick had walked over and was on the steps waiting for her return.

Three such bright people could not fail to see that Celia had been on some tiresome journey, and coming together in the cosy sitting-room, questions began to fall thick and fast around her. Where had she been? why had she gone alone? and what did she have in her box?

Thinking it better to tell her error than to be found out, and trusting her friends as she did her husband, she stammered out her miserable experience, smoothing it over with Mrs. Graber's good nature at the last.

All at once, Tom and Dick, who had been looking strangely at each other, burst out into paroxysms of laughter.

"Shake, old friend," cried Tom; "the joke is on your side of the house now."

They shook hands and walked around each other, like dizzy minstrels. Dick threw himself on to the lounge, making the house shake, and Tom took a turn in the kitchen. Their laughter was uncontrollable.

The wives were amazed. Mrs. Burdick was angry.

"Tom, don't be a fool!" she exclaimed. "Do stop, both of you; you will make Celia cry. There's nothing to laugh at, anyway."

"Yes there is," groaned Dick. "That old Graber is a mean old money-bags to keep his family that way. I just borrowed two thousand dollars of him in town. He said he was glad to lend it. Oh dear! what a blunder you made, Celia!"

"Oh! he will be so angry! What have I done?" gasped poor Celia, rising. She held out her hands to her husband, who, seeing her white face, came to her, and in a moment she had fainted in his arms and out of her misery.

PART II.

"Peace on earth, good-will to men."

That evening, Mr. and Mrs. Westlake discussed the situation seriously. Celia lay on the lounge weak and tired. Dick walked the floor or knelt beside her to comfort her. The dilemma was, that the insulted woman would tell her husband, and he, if he did nothing more disagreeable, would tell the story in town and it would go the rounds of the neighborhood. For ambitious young people who wished to be well regarded, the situation was certainly serious.

"There is one thing certain," said Celia at length; "this teaches me that we are not doing our duty by our neighbors to be so ignorant about them. What that woman needs is a good, kind woman to visit her as a neighbor, and influence her by example how to live."

"Possibly that is true," returned her husband; "and Mr. Graber also—he seems like a good-natured man at heart, but he is rough and ignorant, and no one notices him in particular. No doubt he thinks he does all that is needful for his family. I hope he won't do anything savage. Anyway, he ought not to live like a beggar when he has all his debts paid and money ahead."

"I know, Dick, it is too bad. But I was to blame. I gave a stone for bread. I offered common charity where I might have offered sympathy and friendly interest. I am rightly punished. Hereafter I will look into people's needs before I try to do anything for them. We have lived here two years and over, and what have we done to improve the spiritual condition of that family?"

"There, there, don't preach, wifie. Anyway, we have thrown away our chances now."

It was yet early in the evening, and Dick, seeing that Celia was nerving herself and feeling better, left her and went out to the barn to do his evening's work among his horses.

Celia, lying alone thinking, was startled by a step on the front porch and a light knock at the door. She was not afraid, her husband being so near; so with the lamp in her hand, she opened the door. In the bright flood of light streaming out, stood Mrs. Graber.

"My dear Mrs. Graber!" ejaculated Celia, much surprised, "are you here, and alone? Come in."

Mrs. Graber pushed back her bonnet and lifted up her face with a kindly smile.

"No; Johnnie's out there in the cart. I want to see you alone, can't I?"

"Why, certainly. Do come in, come into the parlor and sit down." And she led the tall, awkwardly clad woman into the pretty room, and placing the lamp on the piano, turned about to give her visitor her easiest chair. But Mrs. Graber gave a nervous grasp at the long sleeve of Celia's soft blue wrapper, and began to talk hurriedly.

"I came over to ask your pardon for what I said to-day. The old man made me come right over. I didn't get the sense of what you wanted, but the old man said, as soon as he came home, that most like you wanted to sell me the things. He gave me a going over about it. If you had a told me out plain you wanted to sell the things, I would have bought the shirts anyway. Graber, he says you've grit to start out peddling, but he says there's too much money in the country for a lady like you to be doing that kind of work."

Mrs. Westlake felt revived as with a dash of cold water. She gently pressed Mrs. Graber into a cushioned chair while she recovered herself. The trouble was righting itself. Mr. Graber had placed a man's construction on her visit, after the loan he had made in town, and not wishing to offend a good money borrower, he had sent his wife over to apologize for her rudeness in refusing to buy anything.

Celia remembered that she had not made herself very plain, and Mrs. Graber had been easily convinced by her husband that her supposed gift-bearer was in reality a peddler. But Celia was not willing to have herself cleared by this rough guess ng. She could not add deceit to ignorance and misery; besides, to be known as a peddler was nearly as bad as being known as a blunderer. In a moment she had knelt down at the feet of the elder woman, who never in her life had seen so lovely a picture, and made a full confession of her experience. She plead her ignorance of her neighbors; she explained that a poor shabby house was most always a sign of poverty in the East; she told of her longing to enjoy the pleasure of giving, and dwelt on her real wish to be a friend to those she could help in any way.

Her confession completely exonerating herself and winning the heart of this uncultivated woman was also an unspoken prayer that these people would hereafter spend more of their money for the pleasures and comforts of life.

"I would do anything for you, Mrs. Graber," she said, "to make you more happy. Not but what you are already happy, but to help you to enjoy life more, and to make your children as happy as other children."

Mrs. Graber was silently weeping.

"The old man says nobody ever comes to see us, and nobody cares for us hoosiers; so it don't make no difference how we live."

"No, no, you are wrong," cried Celia, rising and sitting beside her. "Somebody does care for you, and we will come to see you, and then he will find out the difference."

Meanwhile Dick came in and would have gone to bed but for his curiosity, and poor Johnnie was fast asleep in his cart, and yet these two newly made friends talked interminably, and the conclusion of the matter was that Mrs. Graber consented in good spirit to take the box and its contents home, and her husband never found out whether she bought them or received them as gifts; but the children enjoyed them.

Before her caller went out, Celia slipped in and whispered the pleasing sequel to Dick, who at once gave her a practical idea.

"Why not invite them all over for Christmas? The old man has done us two good turns, and we ought to show our appreciation."

Celia shrank from the thought. She was so tired, and there was no turkey, and nothing ready.

"Never mind," whispered her husband; "we must try, anyway."

Mrs. Graber was very willing to come. No one had ever invited her to dinner before since they had lived in California.

"And don't you go to killin' no chickens," she remarked as she woke up Johnnie and climbed into the cart. "We folks like bacon, and we'll have a good enough time without stuffing ourselves. Suppose I send Meg early in the morning to help you," she continued. "Meg will be tickled to death just to hold the baby."

Celia could not refuse so friendly an offer, and the cart rattled away.

She thought long and earnestly before she slept. A Christmas idea had taken possession of her that was a life work.

"'Love thy neighbor as thyself.' Love him with my heart and soul, not alone with goo gifts which are a sign of unpaid favor. 'For God so loved the world that He gave His only begotten Son.' And should I not give the best I have—my trust, my companionship, my sympathy, my helpfulness. *Good will*—this is the gift that must be offered."

How trifling seemed her presents when she thought over the greater needs of this peculiar family. How much she could do for them now with the friendship and co-operation of the mother! She could teach that tall girl how to sit, to stand, to walk, to sew, to love books and music; and the father, seeing her home, would perhaps be willing to make his own home more comfortable. And the shy boy with an intelligent face—something could be made of him.

She was dreaming of all this at seven in the morning, when her husband woke her suddenly.

"Sleeping all day on Christmas, wifie? Merry Christmas to you! and get up quick and see what Santa Claus sent you."

"O Dick! you're fooling. You didn't get me anything."

"Well, you dress and come out in the kitchen quick."

Wide awake and wondering, Celia hurried out. There sat Maggie in the dim light with the long box in her lap. Celia's heart fell; what change had come now? But on the table lay a large fat turkey, picked and dressed, his head and feet stretched out showing his great size.

"Mother sent the pies and pap sent the turkey," explained the girl simply. She opened the box and revealed two of those wonderfully odorous mince pies.

Celia stood puzzled. The tables were turned. Her husband stood back enjoying her confusion. He was quietly laughing at her. But she gave him one saucy glance and paid no more attention to him. She took the box, untied the girl's lank bonnet and kissed her white forehead.

"Thank you, Maggie; these are splendid Christmas presents. But did you carry the box and the turkey too?"

"No; Jim packed the gobbler."

"But where's Jim?"

"Oh, he scud back across the fields. I come to stay to help. We're 'fraid you'll work too hard."

Maggie was not a bashful girl, and she was soon blissfully happy learning to dress the baby, and she only unwillingly parted from him, while he sat up to the table and pounded his plate and upset his milk in lieu of eating breakfast.

It proved a jolly Christmas for all. The Burdicks were invited over and let into the spirit of the occasion, and Tom Burdick behaved very well for a mischievous man, except that he and Dick suffered from smothered fits of laughter whenever they saw the turkey.

So Celia stuffed it with a savory dressing and put it out of sight in the oven.

Under the curious eyes of Maggie she made a handsome cake and a delicate pudding. She brought out her best silver and glass, her jellies and condiments. She spread the table with her best cloth she had never used before, and stripped her garden of flowers for decorations for house and table.

When the Graber family appeared in rather unique dress-up, everything was bright and shining.

Mr. Graber created a drawback at first by insisting that the "painted up" steps were good enough for him to "set on;" but Mr. Burdick finally coaxed him into the parlor when no one else was looking.

Celia made no attempt to talk to him, but she sat merrily at the piano and sang old ballads such as "Coming Through the Rye" and others.

Before the day was over, Celia could see the fruit of her Christmas idea. Not an item of that cosey home was lost on that beauty-starved family. Mrs. Graber asked questions about her carpet, her home-made curtains, and many of her little devices for beauty and comfort.

The boy Jim, having taken an old RURAL PRESS out on the porch and read a short sketch of the life and works of Edison, held a long consultation with Maggie, after which the two came boldly and asked permission to name the baby Edison.

"I don't see how we can refuse them anything to-day," said Mr. Westlake. "Besides, this is a long quarrel settled for us, wife. The children are right; that is a good name."

The entire company agreed with him, and Edison Westlake was passed around for kisses and congratulations.

As Mrs. Westlake sat alone in the gathering dusk, she felt that she saw many new meanings to the celebration of Christmas Day.

If there is anything to forgive, let it be forgiven; what there is to forget, may it be forgotten. Let the needy be clothed and fed. But they who are ignorant, neglected and forgotten, they who are "poor in spirit," let the blessed spirit of Christmas hover around them and lead them into light and happiness.

California is not a land of poverty. Unnumbered acres lie untenanted, and it is the children of our neighbors who will grow up to tenant those barren hills. Love them, educate them, give them culture and truth, and we will clasp hands under the Star of Bethlehem, and we can sing together: "Hosanna in the Highest—*Peace on Earth, Good will to Men.*"

"OUR YOUNG FOLKS" will be found upon a subsequent page of this issue.

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Seeds—D. M. Ferry & Co., Detroit, Michigan.
Nursery Stock—F. Luc emann.
Grape Brush Rake—Truman, Hooker & Co.
Meeting Notice—Grangers' Bank of California.
Cattle and Hogs—J. P. Thompson, Napa.

See Advertising Columns.

The Week.

Before another issue of the RURAL could reach readers in more distant parts of the coast, Christmas of 1890 would be gathered among other pleasant memories. Therefore we present this week our usual entertainment of fact and sentiment pertinent to the joyful Christmas season. With this also goes our sincere wish that to all the homes to which the RURAL is welcomed there may come that old and honored blessing, a "Merry Christmas."

We could have wished that before this another good rain could have fallen to assure all that the precious water will not be withheld, and consequently that no anxiety would arise in any mind during the holiday season. But there is still time before Christmas for such a gift, and even a later dispensation will answer growers' purposes. Another good rain is the earnest desire of all.

HOMESTEADERS TO DOUBLE THEIR AREA.—It is announced by telegraph from Washington that the Senate Committee on Public Lands has authorized Senator Dolph to report favorably the bill introduced by Senator Mitchell to permit a person who has taken up 80 acres of surveyed lands under the homestead laws to extend the claim over 80 adjoining acres of unsurveyed land. An amendment was inserted to include settlers who have taken up land under the pre-emption law. Settlers may therefore look about them to see in which direction they can best extend their fences.

Christmas in California.

Can this be Christmas, sweet as May,
With drowsy sun and dreamy air,
And new grass pointing out the way
For flowers to follow, everywhere?

Has Time grown sleepy at his post,
And let the exiled summer back,
Or is it her regretful ghost,
Or witchcraft of the almanac?

While wandering breaths of mignonette
In at the open window come,
I send my thoughts afar, and let
Them paint your Christmas Day at home.

Sweet eyes with home's contentment filled,
As in the smoldering coals they peer,
Haply some wondering pictures build
Of how I keep my Christmas here.

Before me, on the wide, warm bay,
A million azure ripples run;
Round me the sprouting palm shoots lay
Their shining lances to the sun.

With glossy leaves that poise or swing,
The callas their white cups unfold;
And faintest chimes of odor ring
From silver bells with tongues of gold.

A languor of deliciousness
Fills all the sea-enchanted clime;
And in the blue heavens meet, and kiss
The loitering clouds of summer-time.

This fragrance of the mountain balm
From spicy Lebanon might be;
Beneath such sunshine's amber calm
Slumbered the waves of Galilee.

O wondrous gift, in goodness given,
Each hour anew our eyes to greet!
An earth so fair, so close to heaven,
'Twas trodden by the Master's feet.

And we—what bring we in return?
Only these broken lives, and lift
Them up to meet His pitying scorn,
As some poor child its foolish gift:

As some poor child on Christmas Day
Its broken toy in love might bring;
You could not break its heart, and say
You cared not for the worthless thing.

Ah, word of trust—His child! That child
Who brought to earth the life divine
Tells me the Father's pity mild
Scorns not even such gift as mine.

I am His creature, and His air
I breathe, where'er my feet may stand;
The angels' song rings everywhere,
And all the earth is Holy Land.

—*Edward Rowland Sill.*

Honors for the California Poppy.

On Friday of last week the State Floral Society held an interesting meeting which was well attended. An item of the proceedings which will attract widest attention was the adoption of the Eschscholtzia as the State flower of California, so far as it is within the province of the society to accomplish such adoption. No doubt if this action by the State Society is ratified by other floral societies throughout the State, the selection of this popular favorite will be made sure. We hope such action will be had, and take this occasion to urge it upon our readers who have membership in such societies.

Those who desire to add to their own observation of the honored plant some facts on its history and occurrence should read again the charming essay by Miss Pratt which was published in the RURAL of November 29th ult., page 459. We trust some enterprising art publisher will bring out a brochure with a portrait in colors of this distinguished plant and accompany the portrait with Miss Pratt's essay. Such a publication should be popular.



A CHRISTMAS SERVICE IN THE OLDEN TIME.

Christmas Observance.

Though truth is always the same, methods of its presentation vary. We have thought our readers might like to contrast with the forms of worship with which they are familiar the homage of the early Christians when in the very caves of the earth they gathered to declare their trust in the Savior even at peril of their lives. We live in a freer, happier age, but do we remember our duty as well as they? Christmas is a day of deep religious significance. Let this fact not be forgotten in the joys which come to us with a "Merry Christmas."

FARMERS' INSTITUTE.—A report of the interesting meeting held last week at Tulare has to be laid over for our next issue. Santa Claus rules the roost this week.

Sugar and Syrup.

This ought to be a proper Christmas subject, even though we intend to give its treatment an industrial bent, for sweets are trumps in the holidays, if at no other time. The fact of the matter is that sugar affairs, because of the bounty outheld by the Government, are brightening considerably, and general interest in them is awakening. On this coast most interest pertains to beet sugar, for it has been clearly shown that, with our peerless conditions of climate and soil for the root, the beet is the best source of sugar. It is time that this should be recognized, and that we should receive the money now going abroad for beet sugar. It is telegraphed this week from Washington that H. F. Merritt, United States Consul at Chemnitz, in his report to the State Department, says that $16,000,000 were paid by the people of the United States to the beet-sugar makers of Germany within one year. This sum, Mr. Merritt says, is nearly three times as much money as our people pay for any other given article imported from Germany. It is time this outgo of American money was stopped, for Germany scouts our pork and taxes other articles which we export, and yet we pay vast money for German sugar.

The latest beet-sugar enterprise is one in which Californians take a leading place, but the scene of which is not within our borders. We find in the *Louisiana Planter and Sugar Manufacturer* the following:

Messrs. E. H. Dyer & Co. of Alvarado, Cal., are now building near Salt Lake City, Utah, a 350-ton daily capacity beet sugar factory. The factory is owned principally by capitalists of Salt Lake City, and the machinery is all American, being built by the Kilby Manufacturing Company of Cleveland, Ohio.

Among the practical manufacturers of the beet sugar, in fact, the pioneers of that industry in California, the name of Messrs. E. H. Dyer & Co. is well known. Having made a thorough study of the beet industry, especially as to the methods practiced in France and Germany, and having their own experience in successful manufacture in California, they are perhaps the best-informed men in the United States on the subject of beet manufacture. Appreciating the grand impetus and development that this industry will now receive here in the United States, they have concluded to extend the scope of their usefulness, and are now offering their services as consulting engineers and draughtsmen for the erection of beet-sugar factories.

We are glad to see that the skill and energy of the Dyers is so widely recognized. In our advertising columns they make an announcement offering their services as sugar chemists, engineers, etc., to all who desire such information as they can furnish in these lines. Readers of the RURAL will remember the Dyers as the first parties who made beet sugar in California on a successful commercial basis. Their establishment and their enterprise have been frequently alluded to in our columns and we are interested to learn of the extension of their field of operations. We trust, however, that their engagements outside of the State may not interfere with their California work. We desire to see the beet-sugar interests of this State extended as they should be, and such progress will require all our experts in that line.

Another saccharine line which seems to have scored progress during the year is the manufacture of sorghum syrup. This is, of course, chiefly an individual undertaking and requires very little capital. The article produced has been in some cases notably fine, and though the great city markets do not, as yet, offer much opening for it, because, perhaps, of the volume of refinery syrup which offers, the sorghum syrup is finding quick sale at interior consuming points and is there making such a name that producers contemplate extending their operations another year. In our next issue we will give some notes on sorghum syrup as gained from letters from several producers,

ENTOMOLOGICAL.

Insect Friends and Foes.

[An essay read at the Santa Cruz Fruit-Growers' Convention by ALEXANDER CRAW, Entomologist of the State Board of Horticulture.]

Entomology is a very important study for the fruit-grower, for nearly every branch of his industry is more or less affected by injurious importation and distribution of that wonderful insect, the *Vedalia cardinalis?* Fig. 1. I am positive nothing could; for money was expended without stint by fruit-growers, not in a spasmodic way, but with a determined effort to gain the mastery over the "cottony cushion scale" (*Icerya purchasii*).

This is a very good argument in favor of the introduction, propagation and distribution of parasites and predaceous insects, as suggested by President Cooper in his opening address before the Thirteenth State Fruit-Growers' Convention, held at Los Angeles, March 11, 1890. If the insects to which he called the attention of the convention were introduced into California they would be of immense benefit, not only directly to the fruit-grower, but indirectly to the other industries of the State. So let us persevere in our search for insect friends, and not relax our efforts in securing from the State or National Government laws and appropriations for the carrying out of this grand work.

Foes.—These are innumerable, but I shall only mention those that to-day are attracting the most attention.

"*Red Scale,*" *Aspidiotus aurantii, Maskell.*—Fig. 2. This foe to citrus trees is to-day the most serious pest the orange-growers of the State have to contend with. In the absence of internal parasites, recourse for their suppression has been had to the application of rosin washes, and also to fumigating the trees with hydrocyanic acid gas. Improvements have been made the past season in the manner of applying the latter remedy and in reducing the expenses, that will aid in keeping this scale in check until an effective natural remedy can be found, a full account of which will be found in the reports of the State Board of Horticulture for 1889-90. The twice-stabbed ladybird, *Chilicorus bivulnerus*, Fig. 3, and its larvæ, and various other species of coccinellidæ feed upon this scale. The larvæ, Fig. 4, of the lace-winged fly, *Chrysopa Californica*, Coquillett, also destroy great numbers. Fig. 5 shows the mature insect.

"*The Yellow Scale,*" *Aspidiotus citrinous, Coquillett.*—This scale (formerly known as the red) is found in the San Gabriel valley, and has been for years a very serious pest in that section, and caused a great loss both in quantity and quality of citrus fruits. Since the discovery of an internal parasite (Coccophagus) which attacks this scale, the growers have done very little spraying in that district, and the good work of this parasite is very noticeable in a number of groves, where not over three years ago it looked as if the growers had a long fight before them. The parasite is so small it can hardly be detected with the naked eye, and parties undertaking the colonization of it upon Aspidiotus aurantii should select a tree or trees remote from large groves, so that the trees can be left without having to disinfect them for at least two years; in that time it can be determined whether it can be bred on the aurantii.

In order to stock trees with this parasite, scale-infested branches should be obtained from an orchard known to contain them. It is not necessary to place the branches on the trees; the best way is to fill boxes with wet sand or earth and insert therein the ends of the branches and place them under the tree in the shade (and on this account a low tree would be preferable); in this way the branches remain



FIG. 1.—Australian Ladybird. *Vedalia Cardinalis.*



FIG. 2.—Red Scale—*Aspidiotus aurantii.*



FIG. 3.—Twice-stabbed Ladybird. *Chilicorus bivulnerus.*



FIG. 4.—Larva of Lace-winged Fly or Aphis Lion.



FIG. 5.—Lace-winged Fly. *Chrysopa Californica.*



FIG. 6.—San Jose Scale. *Aspidiotus perniciosus.*



FIG. 7.—San Jose Scale on Fruit.



FIG. 8.—Parasite of San Jose Scale.



FIG. 9.—Black Scale. *Lecanium oleæ.*

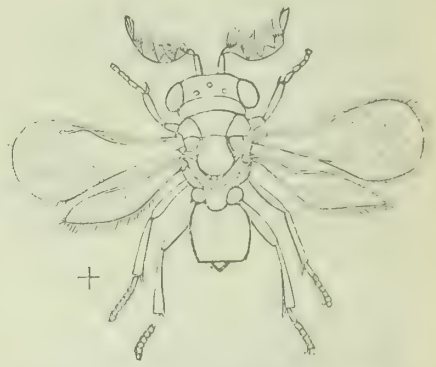


FIG. 10.—Parasite of Black Scale.



FIG. 17.—Woolly Aphis of the Apple.



FIG. 11.—Soft Orange Scale. *Lecanium hesperidum.*

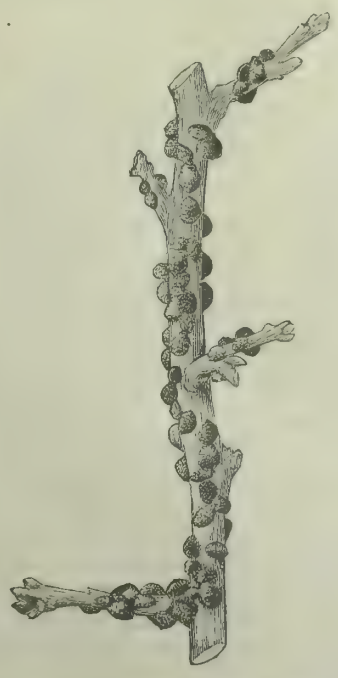


FIG. 12.—Brown Apricot Scale. *Lecanium sp.?*



FIG. 14.—Cottony Grape Scale. *Pulvinaria innumerabilis.*

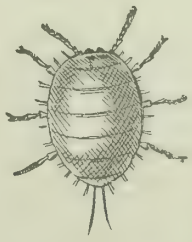


FIG. 13.—Mealy Bug. *Dactylopius adonidum.*



FIG. 15.—Twelve-spotted Diabrotica. *Diabrotica soror.*



FIG. 16.—Syrphus Fly, Larva, Pupa and Imago.

longer fresh and allow the parasites to mature and hatch. As the branches dry up, more should be secured, and the operation repeated a number of times so that it may prove a success.

A great many conflicting reports have been circulated about this parasite, but as I am conversant with the condition of the groves in that section for the past 14 years, I know that the present healthy appearance of the trees is due to the work of this little parasite.

Pernicious Scale, Aspidiotus perniciosus, Comstock.—Figs. 6–7. This scale is also well known, and like the preceding species has an armored hard shell; but it confines its attacks to deciduous trees, and is a very serious pest. The remedies given in the Reports of the State Board of Horticulture are so cheap and effective, if properly applied, that no excuse can be tolerated for a seriously infected orchard.

About ten years ago a parasite, *Aphelinus fuscipennis*, Howard, Fig. 8, a minute four-winged fly, made its appearance in the Santa Clara valley on the so-called San Jose scale, *Aspidiotus perniciosus*, but so far very little good has been observed from it in that section. A few years since, this same parasite was found to be doing effective work in subduing this pest in an orchard in the neighborhood of Los Angeles, and from personal knowledge of the facts, I am confident that the restoration of that particular orchard is attributable to this parasite—Nature's remedy. Scales can still be found on the trees, but not in such numbers as to cause any damage.

Black Scale, Lecanium Oleæ, Bernard—Fig. 9. This scale is too well known in California to require any extended notice. Attention is again called to Mr. Cooper's address at the last convention, wherein he quotes from the report of Mr. Henry Tyron of Queensland of the existence of a highly beneficial moth, *Thalpochares coccophaga*, the larvæ of which prey upon the black scale and destroy them in great numbers, and have been known to free trees of the scales. Public attention was first called to this moth by G. Masters at a meeting of the Linnean Society of New South Wales, in 1885. The larvæ feed at night and form coverings for themselves with the empty skins of the scales. In this connection, I may state here that I have taken the proper steps to have this moth introduced, and hope, through the assistance of Mr. Tyron, to be able to establish such a friend in our California orchards.

Upon this scale we have a native internal parasite, *Dilophogaster Californica*, Fig. 10 (male), that assists very materially in keeping this pest within bounds. From 30 to 75 per cent of the black scales are annually destroyed by them. From the fact that only one generation is produced each year, and that this parasite only attacks the mature scale, the 25 per cent that escaped, each containing eggs, are sufficient to again cover the trees.

Soft Orange Scale, Lecanium hesperidum, Linn.—Fig. 11. Previous to the introduction of this scale in the early fifties, the orange trees in California were bright and clean, as I have been informed by Mr. J. W. Wolfskill of Los Angeles. The scale spread so rapidly, even killing some of the large orange trees, and for a few years was such a serious pest, it was then thought that orange-growing would have to be abandoned. Insect warfare in those days was not understood, and instead of spray pumps or fumigating tents, the trunks and branches of the trees were scrubbed with soapsuds and sand. This had a beneficial effect upon the trees. After a few years the scales diminished in numbers, and it was thought they had run their course and would finally die out. This scale still exists, but not in such numbers as formerly, and with them we find the probable cause of their decrease. This is a small four-winged chalcid fly, *Eucyrtus flavus*, one of the most beautiful of this important family. The female is furnished with a sharp stinger ovipositor with which she pierces the scale and deposits from one to seven eggs in each. In three or four days these hatch into small, footless, blind grubs that eat out the scale, and the dead scale answers as a covering for the naked pupæ. This parasite can be found all over the State. Wherever the soft scale is numerous, it is owing to the fact that numbers of ants are continuously around them, preventing the parasites from depositing their eggs. To remedy this, a band should be placed around the stem of the tree, and over this tie a piece of rope, previously saturated in coal oil; this will prevent the ants from ascending and give the parasites a chance. Another chalcid parasite is found in numbers upon this scale. It is the *Coccophagus lecani*, Howard.

Brown Apricot Scale, Lecanium (species unnamed).—Fig. 12. This is another of the scales that infest deciduous fruit trees, especially the apricot and prune, and cause great damage from the amount of honey dew it excretes, and the consequent black smut that covers the foliage and fruit. Like other lecaniums, the greater period of its existence it is soft and easily destroyed by the washes recommended for deciduous trees.

Mealy Bug, Dactylopius Adonidum, Linn.—Fig. 13. The climate of California is too dry for this family of scale insects to ever become a serious pest. Where they appear to thrive is in a warm, moist situation, and on this account are very troublesome in hothouses. The fact that we have three native species in this State, and not in very great numbers, would indicate that the conditions are not altogether suitable for their increase, for otherwise I believe it would be as troublesome a pest as the woolly aphis. I have found plants, the roots of which were covered with them. Among garden plants, where it is moist and sheltered, they are occasionally found.

In my experience with this pest I have found whale oil soap the safest and most effective remedy. Use one-fourth to one-half pound of soap to each gallon of water, according to the class of plants to be treated; dissolve by boiling, and apply at a temperature of 100 to 130 degrees.

About five years ago I discovered an internal parasite preying upon this coccid that was then new to science—*Rileyia splendens*, Howard. This was a case of complete extermination, for I have been unable to find either mealy bugs or parasites in that place since.

Cottony Maple Scale, Pulvinaria Innumerabilis, Rathvon.—Fig. 14. This is the cottony scale that infests grapevines, more especially those growing upon arbors, and has frequently been taken for and reported as the "cottony cushion scale," *Icerya purchasi*. It differs from the latter in having a plain egg sac instead of being corrugated, and the female resembles a lecanium and loses all power of locomotion as soon as the cotton appears. There is only one generation a year.

In some portions of the State, this scale has been practically exterminated by an internal parasite, *Eucyrtus flavus*.

Diabrotica soror, LeConte.—Fig. 15. This is one of the most destructive leaf-eating beetles we have to contend with, and from its great numbers and migratory habits it is a very formidable pest to fight, for when disturbed it will drop from the leaf and fly to some other plant. Nearly all our fruit trees are subject to its attacks, and it also eats into and damages ripe apricots. Melons, cucumbers, beans and other soft-leaved plants suffer severely from them. They also destroy rosebuds, carnation and pink blooms.

As a remedy, when the insects first appear, spray the foliage with Paris green, one pound to 200 gallons of water; or take five ounces of Paris green and 20 pounds of sulphur, mix well and dust on the trees or plants. But in no case should either remedy be applied to vegetables.

This is one of the very rare instances where a beetle is attacked by a Dipterous parasite, and not as an entomological curiosity, but one of great economic importance; as last season I found one-third of the diabroticas were destroyed by an internal parasite which I discovered in Los Angeles. Prof. D. W. Coquillett found it to be a new genus and named it *Celetoria crawii*.

Orange Aphis, Siphonophora citrifolii, Ashmead.—This is the green fly or louse of the young shoots of the orange tree, and at each of the three growing periods of the tree every season they appear in great numbers, and in some instances have checked the development of the leaves. If they become serious upon young trees, I would advise spraying with a weak rosin solution. They are preyed upon by an internal chalcid fly, and also by a green grub that upon first sight you would be tempted to destroy. It is blunt behind and pointed in front. This is the larvæ of the Syrphus fly, *Catabomba pyrastri*, Linn. Fig. 16 shows the larvæ, pupa and imago. The female deposits an oval, light-colored egg in the midst of a colony of aphis, from which the grub hatches and immediately proceeds to work. It will seize an aphis and lift it clear off the shoot, and after extracting the juice will drop the skin, and in a short time will entirely rid the tree of aphis.

Woolly Aphis, Schizoneura lanigera, Hansen. Fig. 17. This is one of the most troublesome insects that infest apple trees, both from its great fecundity and its ability to exist and propagate under ground, secure from the attacks of predaceous insects. This pest can readily be detected by the woolly-like secretions from their bodies, and also from the knotty or warty appearance of infested shoots. When young trees are infested they can be kept comparatively free by brushing kerosene over the infested parts, or equal parts of turpentine and water, applied in the same manner. Mix well while using.

When the roots of the trees are infested, there is no remedy so efficacious and inexpensive as gas lime, spread on the surface of the ground around the tree as far as the branches extend. Use one to two shovelfuls, according to size of tree. As this substance is of a caustic nature, great care must be taken not to allow it to come in contact with the trunk. To prevent the aphis from ascending or descending, remove the soil from the collar of the tree and place therein some wood ashes or air slacked lime. The various coccinellidæ and their larvæ, also the larvæ of the lace-winged fly, assist very materially in the fight against this pest.

While upon the subject, I would like to call particular attention to the danger of introducing other species upon trees from other States and countries.

Make a thorough and careful examination of all trees and plants that have recently been imported. If you have a County Board of Horticultural Commissioners, invite them to assist, as from their knowledge of the insect pests in their districts they will be better able to detect any new insect upon the plants. This is a question there should be no effort to evade, for the sooner the owner is aware of the existence of an injurious insect upon his place, the less expensive will be its extermination, and the prosperity of the district will not be menaced.

I would also state that my object in speaking of the various predaceous and parasitic insects is not to discourage spraying or fumigation, but to call attention to and encourage a study of this very interesting branch of entomology.

Agricultural Notes.

CALIFORNIA.

Butte.

First Carload of Oranges Shipped.—Oroville *Mercury*, Dec. 12: Last night the first carload was sent East by the W. R. Strong Co. Its destination is Chicago and it contains 300 boxes of Oroville oranges. This is the first carload of oranges that has been sent out of California this year. The fruit was picked from 90 trees, or a one-acre grove, owned by Joseph Gardella in Oroville. They are seedlings. The price paid was $1.40 per box on the trees, and therefore Mr. Gardella received $420 for one acre's production without turning over a finger or bothering his head about the marketing of the crop. The crops from trees in the yards of Mrs. Clara Freer and Major Marion Biggs, Jr., were being picked this morning. Several hundred boxes were taken from the former place and many from the latter, where the reporter saw some of the finest and largest seedling oranges that have been produced in Oroville this season. When the fruit is taken from the trees it is hauled to the depot, where the W. R. Strong Co. has established a packing-house, and the oranges are sized, wrapped, packed and put in cars, and sent direct East. The boxes are made with two compartments, and hold, at the greatest, about 125 oranges. Of the oranges picked from Major Biggs' trees, about 100 filled a box.

Fresno.

Oleander's Raisin Pack.—Fresno *Expositor*, Dec. 10: A. C. Bryan, vice-president of the Fresno Raisin Company of Oleander, said: "The raisin pack in our district amounts to about 125 carloads this season, of which we put up 60 carloads. The Curtis Fruit & Raisin Company packed about 50 carloads, and Mr. Cook and Napoleon Vieu seven and nine carloads respectively. Our packing-house closed down last Friday and the Curtis establishment on Wednesday. The quality of this year's crop is better than last year's, and the last of this season's crop was in better condition than the last of the season of '89 There was a ready sale for raisins and the prices received were good. Our company will declare a fat dividend."

Kern.

Diversified Fruit Growing.—Bakersfield, Dec. 11: Localities that have heretofore planted nothing but raisin grapes are now to include several varieties of stone fruits, and places that have raised principally peaches or prunes will henceforth grow other kinds of orchards as well as vineyards. This result is brought about largely by the experiment work that has been going on of late years. While our farmer has been trying a few trees of this, his neighbor has been doing a little something with something else. There is money in raisins, but there is also money in peaches, apricots, prunes, nectarines, almonds and figs.

Tree and Vine Planting.—Bakersfield *Echo*, Dec. 11: The amount of orchard and vineyard planting that will be done on the dry or unirrigated plains this winter will be surprising to those who have not kept track of things in that direction. From 10 to as high as 80 acres of trees or vines will dot the plains both north and south of here in another year. Conversation with the people living on these plains reveals this state of affairs: They expect to be able to irrigate their land some day from canals, but they cannot say just how soon that day will arrive; in the meantime they can be bringing their orchard or vineyard to a bearing age, and if it should reach that point before the canal reaches them, they will still be able to supply the needed moisture. The *Echo* has long contended that 20 acres of trees with a well was better than 160 of grain with six inches of rain.

Rye a Good Crop.—Bakersfield, Dec. 11: Several farmers have recently been heard talking about sowing rye instead of wheat or barley on land that is not irrigated. Two or three farmers in Linn's valley tried it last year and were well pleased with the result. They sowed it on the hillsides and got good returns. Some on the plains west of Rosedale will sow it this year. They say that in addition to the yield of grain or hay, it may be pastured off for some weeks, thus affording much good feed for cows or horses. If cut for hay, it should be cut when quite green.

Farm Notes.—Editors Press:—We have had a glorious rain and the farmers and stockmen are all jubilant over the prospect.—W. S., *Onyx, Dec., '90.*

Los Angeles.

Grain Seeding.—Pasadena *Star*, Dec. 10: A gentleman who returned from San Jacinto last night reports grain-planting in that valley and vicinity very active. About 15,000 acres have already been put in, and probably 50,000 acres more will be planted. One man is sowing wheat and barley on 2000 acres. In plowing this field a team makes a circuit of it once in half a day.

Persian Grapes.—L. A. *Express*, Dec. 11: Sec'y Hanchette of the Chamber of Commerce has received a letter from H. E. Van Deman, Pomologist in the United States Department of Agriculture at Washington, stating that he has sent seven varieties of the very best grapes grown in Persia, as follows: Askaree, White Shahanee, Chavooshee, Dizmar, Black Shahanee, Paykanee Razukee and Shiraz. The cuttings will be distributed among fruit-growers.

Vegetable Farming.—Los Angeles, Dec. 11: The Cahuenga farmers are turning the country upside down, putting in tomatoes, peas, beans and all winter vegetables for the New Year's dinner of the frozen Easterners.

Thoroughbreds to be Sent East.—L. O. *Herald*, Dec. 13: Billy Appleby has been secured by L. J. Rose to train and manage a string of race-horses for next season. The horses now in training at Agricultural park will be divided. Billy Gardner will have charge of the Eastern string, which will include the Flying Fairy and a number of aristocratically bred two-year-old colts and fillies. The string will perform at Westchester and vicinity. The second string will take in the California circuit and will then be shipped to Chicago for the Washington park meeting, and will, in all probability, wind up at Saratoga. Among them will be the black filly Leola by Eolus; the bay colt Bon Voyage by Argyle; the brown colt Mulatto by Argyle, and the bay filly Arnica by Sam Brown. Conrad will also be included in the Western string.

Napa.

Vintage of '90.—George Husmann in *Register*, Dec. 12: This has been the best in quantity and quality out of nine consecutive ones, since 1881. Of course this can only be taken with qualifications, as many vineyards in our valley are devastated by phylloxera, and others are so badly neglected by their owners that they could not be expected to yield a fair crop. No vintage in this State is exactly like any other. This last one, setting at naught all predictions of the weatherwise, proved to be rather earlier and higher in saccharine than that of last year. The grapes ripened fully as early and ripened at once, so that it pushed operations and confined them to a few weeks. White varieties had a fuller crop and suffered much less from coulure than red varieties, and red wines may, in consequence of this, be more sought after than white. While all wines are of excellent quality, if they were handled right, they show very high color, which is an advantage to red while rather a disadvantage to white, where the trade seems to prefer a greenish-yellow color to a golden tint. The cause of this was the sudden ripening of the grapes, and the proper preventive will be the earlier picking of the white grapes when they are not dead ripe, but just ripe enough to impart that sprightliness and flavor so much desired in our white wines. The acreage is decreasing instead of increasing, by the ravages of phylloxera, Anaheim vine disease and neglect. Are we going to wait for the day when the demand for our wines will exceed the supply? or will we take time by the forelock, like thoughtful and provident men and plant resistant vines to be grafted with the best European varieties? I think that but few will see their golden opportunity, while the majority will fold their hands in idleness and see their vineyards go down. We know we have the remedy; will we apply it?

Olive Culture.—Napa, Dec. 12: In the Napa Land Co.'s show window there is a potted branch from an olive tree loaded with berries of the Mission variety. It is from Mr. Vincent Smith's Glen Olive Farm southeast of town, and is a sample of what was to be seen on 500 trees in his orchard before the work of gathering was commenced a few days ago. The trees are five years old, and from one he has picked 20 pounds of berries. He will pickle most of these olives and crush the balance for oil. Mr. Smith has also 500 Picholine olive trees. They are four years old from the planting and are in thrifty condition.

Nevada.

Skinker Pears.—Nevada City *Herald*: Some years ago John Skinker was in the mountains, and seeing a pear tree near a cabin, which looked large and fine, he requested the owner to send him the crop to San Francisco, which in due time was done. The fruit was pronounced by fruitmen and experts to be the finest ever seen. Mr. Skinker then went up to the place and paid the man $150 for the tree, with the understanding that no slips be cut from it except by himself. The tree has been yearly pruned, and the slips grafted upon other trees in different sections of the State, and the fruit is known as the Skinker pear. A large number of trees has been grafted in this county from that stock, and the owners place great value upon the trees.

Sacramento.

The Grapes Wanted.—Sacramento *Union*, Dec. 12: John McNie of Florin permits us to make the following extract from a letter received by him from one of the great fruit houses of New York City: "The season having virtually closed, we find that between Sept. 4th and Oct. 23d we received from your association 13 carloads of grapes which sold gross for $17,692, or an average of $1360; the best sale brought $1523 and the poorest $1203 for the car, and as we have said above, the average was $1360. We think we have demonstrated that New York is the best market to receive such grapes as those packed by the members of your association, especially the Tokay, because that is the grape of all others fancied by our people. It is an attractive-looking grape and takes the fancy of our people, who in the past have been accustomed only to grapes of a green

or black color. Of course you know that enormous quantities of grapes are produced in this State—Concords, Catawbas and Isabellas, the former decidedly predominating. This is the large, round black grape, which sells well at low prices—three to five cents per pound. We have hardly any green-colored grapes excepting those that come from Spain, but they are usually in heavy supply during the fall of the year. The Muscat grape is not fancied by our people, and although a few may do well, we think it will be two or three years before our people will take to them. There are other grapes, like the Emperor, Cornichon, etc., which may do pretty well, but the Tokay is the grand grape for New York."

San Bernardino.

EARLY VEGETABLES GOING EAST.—Chino *Champion*, Dec. 12: California early vegetables and strawberries are now being shipped by Wells-Fargo to Eastern cities at a large profit to the producers. Assistant Superintendent Pridham, at Los Angeles, says: Green peas and beans are bringing from $6 to $8 per bushel; tomatoes are scarce and selling at $2.50 per box of 15 pounds in New York, and strawberries are quoted at from 45 to 50 cents per pound in Kansas City.

San Diego.

TREE PLANTING.—*San Diegan*, Dec. 11: It was supposed that the tree-planting record of last year would stand as the banner record for a number of years, but the inquiry now made shows that last year's record will be doubled and may be increased in even greater proportion. The rains have come, and the soil is now in fine condition for planting, which, of course, is the immediate cause of the activity, but the all-inspiring cause is the enormous demand experienced during the past year for California fruits. That demand is now having its general effect. One of the results will be the planting of a larger area of deciduous fruits—especially prunes—this year. Last year the great demand was for citrus fruits, lemons having an especial boom. Oranges and lemons will be planted this year in large quantities, but with them will also be planted large areas of apricots, prunes, peaches and other deciduous drying and canning fruits.

San Joaquin.

A PARADISE ORCHARD.—Lodi *Sentinel*, Dec. 12: P. B. Armstrong, who arrived last week from New York on a visit to his large orchard in Langford Colony, was so much pleased with the appearance of his property that he has purchased 253 acres adjoining his orchard. The land is known as the Wilson place, consisting of 160 acres, and the Dustin ranch of 93 acres. The latter will be planted with Mission olives, which adjoins 18 acres in the same fruit owned by Dr. E. Armstrong, thus making a 121-acre olive orchard, the largest in the State. The Wilson ranch will be planted with different fruits as follows: Prunes, 30 acres; vines, 20; pears, 10; peaches, 45; apricots, 10; oranges, 10; and cherries, 15. The remaining 20 acres will be transformed into a tropical garden, in which will be planted every known tropical fruit, such as bananas, oranges, lemons, limes, pineapples, date and cocoa-nut palms, etc. The entire garden will be laid off into drives, lawns and walks and made as near a paradise as it is possible. Mr. Armstrong's 640-acre orchard, together with his recent purchases and that owned by his brothers, aggregate 1015 acres, which by next spring will all be in trees, both fruit and nut. Through the center of this immense fruit farm two 50-foot avenues will run at right angles to each other, and will be lined on either side by the choicest of shade and ornamental trees. The road on the west side (1½ miles) of the farm will be bordered on either side with cypress hedges.

San Joaquin.

THE WOODBRIDGE CANAL.—Stockton, Dec. 11: An agreement between the Woodbridge Canal and Irrigation Co. and Frank P. Bell, for the construction of about 13 miles of canal, has been filed. The work must be commenced within 15 days from the time of the execution of the contract, and be finished on or before April 1st next. The contractor is preparing to commence work in earnest next Monday and rush it as fast as possible. The canal is to be extended from Woodbridge in a southeasterly direction to the Cherokee lane road, and thence southerly to the Calaveras river.

MUSHROOM GROWTH.—Stockton *Independent*, Dec. 9: The strangest evidence of the strength of vegetable life is to be seen at Russell's stables, where mushrooms are pushing up through three inches of concrete and two inches of bituminous rock covering which was laid hot and rolled smooth with heavy iron cylinders. In the rear portion of the stables, where vehicles are kept, the concrete and bituminous rock flooring was laid over ground which was at one time used as a corral. The floor was laid more than a year ago and has been dry and solid until the past week, when mushrooms began to push through and finally break the bituminous rock. Half a dozen mushrooms have come up since the bumps were first noticed in the flooring, and as many more have raised what look like large pustules in the black surface.

Santa Cruz.

POTATO NOTES.—Watsonville *Pajaronian*, Dec. 11: The potato-growers of this valley are not anxious to sell their crop. Prices are going up, and the chances for an "invasion" of Eastern potatoes are very slim, as the Eastern crop is light. The outlook appears very good for higher prices. In the meantime the Pajaro potato-grower serenely waits for a higher market and stores his product with the narrow-gauge railroad.

Solano.

ALMOND PROFIT.—Davisville Cor. Dixon *Tribune*, Dec. 13: Mr. Treat sold $12,000 worth of almonds this season from 40 acres of land, or a gross yield of $300 per acre. Place his expenses at $100, we have $200 profit from each acre, thus making it a paying investment at $2000, or $80,000 for the 40 acres. The orchard is not more than 10 years old, and it requires no great mathematical skill to show that by planting this tract in almonds (allowing its original worth to have been $100 per acre) its value has been enhanced at the rate of $7600 per annum. This is not taking into consideration his income from it for the past seven years, which would alone repay the original investment and ten times the expense of planting and cultivating.

Tulare.

IT RAINED BUGS.—Tulare *Register*, Dec. 6: This morning, when C. Bertram climbed to the top of the Kessing building in order to measure the rainfall, he found the entire roof covered with what looked like grains of wheat. An examination showed that the objects were bugs. Here and there among them were large beetles. The small bugs looked, under the magnifying glass, like young grasshoppers, most of the legs being knocked off by the force with which they struck the tin roof. The adjoining roofs were covered in the same way, but the rain of bugs was not wide in its extent, as a visit to the roof of the *Register* building failed to result in finding any bugs. The insects are there yet and may be seen by any one who will climb the ladder. There are millions of them and it is a strange sight.

PROSPEROUS CREAMERY.—Visalia, Dec. 4: The Visalia creamery stockholders held a meeting last Saturday. After deducting current expenses, the stockholders were paid 92¾ cents profit per hundred pounds for the month of September. This is a gratifying showing, especially when it is stated that the plant was only put in operation in September. During that month, 274 large and 142 Young America cheeses were made and sold. There is a good demand for the product of the creamery, and the cheese brings 13¼ cents in San Francisco.

TIMBER-LAND REFORM WANTED.—Traver *Advocate*, Dec. 12: The Directors of the Kaweah Colony were recently arrested and taken to Los Angeles to be tried for cutting timber on Government land. If the Government officials would be half as active in exposing the thieving corporations who gobble up thousands of acres of the best timber land in the State as they are in persecuting honest settlers, they would receive the plaudits instead of the condemnation of our citizens. The policy of the Land Department seems to be to strain at a gnat and swallow a camel.

WHEAT PLOWING.—*Advocate*, Dec. 12: Teams loaded with plows, hay, etc., are going through Traver every few hours of the day now, bound for the wheat-fields between here and the foothills, where their owners are going to put in crops of the cereals. Plowing and seeding is going on at a lively rate, and although each year shows a decreased acreage seeded to wheat and an increase in the acreage set to vineyards and orchards, the 76 country still has charms for the wheat grower, and wheat land hereabout—especially that owned by non-residents—is eagerly sought after.

PLOWING BY STEAM.—Visalia *Times*, Dec. 11: A telegram from Benicia states that a new traction engine, weighing 20 tons and competent to propel 40 plows, has just been turned out at the agricultural works in that city. The telegram further states that it "is the only straw-burning machine made for plowing." This latter statement is an error, as G. S. Berry of this county several years since invented and constructed a traction engine with which he levels and plows his land and harvests his crops. The engine is at work to-day, drawing 20 plows and traveling over 60 acres of land daily. He uses locomotive headlights at night and keeps his machine in operation day and night. J. J. Cairns, the largest wheat-grower in this valley—cultivating from 14,000 to 16,000 acres—also uses one of Mr. Berry's engines.

VINE PLANTING.—Traver, Dec. 11: A large acreage will be set to vines in the vicinity of Traver the coming spring, as numerous contracts are being made for plowing and leveling. The tracts will vary in size from a few acres to a whole section. The setting out of several tracts of the latter size is on the tapis. Most of them are colony schemes, many people clubbing together and taking as much land as they choose, while others show the investment of large amounts of money by capitalists. Many of our own people, being personally cognizant of the profits made at fruit-growing, are investing in colony tracts for fruit culture.

Yolo.

COTTON-GROWING.—Knight's Landing Cor. Woodland *Democrat*, Dec. 4: W. C. Curtis contemplates planting his ranch in cotton the ensuing year. Should this prove a success (and there is no obvious reason why it should not), it would surely be a great benefit to Yolo county in general and the vicinity of Knight's Landing in particular. It has been proven that cotton can be successfully grown in this neighborhood. A sample of cotton as grown on a ranch above town was to be seen on the showcase of F. A. Grimes for the last two weeks. It was literally loaded with pods of a fine quality of cotton, and was a specimen that would be a credit to the greatest cotton State in the Union.

NEW ORCHARDS AND VINEYARDS.—Knight's Landing, Dec. 1: The planting of orchards will soon commence. Among the many varieties of fruits that bring the better prices are the French prunes and the Seedless Sultana grape, but like all other industries, it can be carried to the extreme. Some of our enterprising farmers are contemplating the setting out of orchards and vineyards instead of the old-fashioned wheat-field. Among those who are going into the business on a large scale is Mr. Peart, whose ranch is about two miles south of town. He intends to plant 40 acres in French prunes and 40 acres in grapevines. This gentleman will be about the largest planter, but quite a number will try some fruit on a smaller scale.

Yuba

NOW FOR THE FAIR.—Marysville *Democrat:* The question is now settled that we are to have the citrus fair in this city, and it will probably be held early in January. The best of all kinds of fruits should now be selected and kept for the fair, and then all the nice movable shrubbery and flowering plants should be put in good condition to decorate the pavilion, for these decorations are a great help in showing off the fruit to advantage. It is an important matter that the committee at once look after the business of railroad transportation for those visiting the fair, and to make the best possible excursion rates, for this is essential to the success of the undertaking. Yuba and Sutter counties, through their supervisors, have authorized an appropriation of $500 each for the expenses of the fair, and there will be about $2000 more required, the larger part of which has already been guaranteed. Now let everybody resolve himself into a committee of one to make the fair a grand success.

DRIED-FRUIT SHIPMENTS.—Marysville *Appeal:* Within the next 30 days all dried-fruit shipments will cease in this section. This has been a good year for dried fruit of all descriptions, the demand in the Eastern markets far exceeding the supply, and the price has been fair. The shippers claim that there is more profit and less risk in handling dried than green fruit. Dried grapes have sold well this year, and a very extensive market seems to be opened up for this comparatively new product. The chief expense in producing dried grapes for the market is the picking. It is a very desirable production both for the grower and the shipper.

HISTORIC TREES.—Marysville *Democrat*, Dec. 12: We stated in a recent issue that the historic fig trees at the Hock Farm had all been cut down and that the grove would never be used again as a picnic ground. Those trees were planted by Gen. John A. Sutter many years ago and were admired by all visitors to that lovely grove. The high water last winter caused ten of the trees to turn over, and Mr. Holmes ordered all the others to be cut down.

RAISIN SHIPMENTS.—Marysville *Appeal*, Dec. 12: The last of five cars of raisins sent by Messrs. Kells, Carpenter, Green and Williams left here recently for Chicago. These consignments consist of over 7000 boxes, and have been sent to Chicago, New York and New Orleans. The quality has been pronounced equal to the best in the State, and they have commanded the highest price. This has been an unusually good grape year, and the success the raisin men have achieved will greatly encourage the planting of vines. Though it is not expected that the yield per acre will be as large next year, there are many new vines coming into bearing, and the crop will probably exceed that of any other year.

BROOMCORN FOR FEED.—Wheatland *Four Corners*, Dec. 12: A. W. Oakley, for several years past, has raised a large crop of broomcorn. From the sale of the brush he realized a handsome profit. Until this year he has counted on only the brush for profit, but now he has procured a crusher and will feed his stock with a mixture of cracked wheat and broomcorn. He will, in this manner, reap a benefit from the corn and the wheat which has been the stamping-ground of weevils since 1885.

ARIZONA.

CATTLE FOR CALIFORNIA.—Tombstone *Star:* Geo. W. Lang of Los Angeles, Cal., has left with 1000 head of cattle, which he recently purchased from Slaughter's Ranch, southeast of Tombstone. The cattle were driven to this city yesterday, and are now at the Silver Lake corral. Mr. Lang proposes to feed these cattle through the winter and put them in the market next spring. He will drive them over the old emigrant trail, and says he will reach the Colorado river in about 30 and Los Angeles in about 40 days. By doing this he will save about $4000, which he would have to pay the railroad company if he shipped by train. The railroad rates are $90 per car, and it would take from 50 to 60 cars to move this number of cattle, and the freight bill would be between $5000 and $6000; hence there is a saving in driving them overland, when the same number of cattle can be driven to California at from $1 to $1.50 per head, paying all expenses.

FRUIT CULTURE.—Phœnix *Gazette:* The disposition and determination of the men of this valley to plant more fruit trees and vines is highly commendable, both as a business proposition and as an enterprise in developing the Salt River valley. The planting of a few thousand increased acres means a long stride in the advancement of this valley, and we were credibly informed yesterday that a proposition is now under advisement for the planting of four sections in the high-grade fruits.

Cough-Cures

Are abundant, but the one best known for its extraordinary anodyne and expectorant qualities is Ayer's Cherry Pectoral. For nearly half a century this preparation has been in greater demand than any other remedy for colds, coughs, bronchitis, and pulmonary complaints in general.

"I suffered for more than eight months from a severe cough accompanied with hemorrhage of the lungs and the expectoration of matter. The physicians gave me up, but my druggist prevailed on me to try

Ayer's Cherry Pectoral.

I did so, and soon began to improve; my lungs healed, the cough ceased, and I became stouter and healthier than I have ever been before. I would suggest that the name of Ayer's Cherry Pectoral be changed to Elixir of Life, for it certainly saved my life."—F. J. Olliden, Salto, Buenos Ayres.

"A few years ago I took a very bad cold, which settled on my lungs. I had night sweats, a racking cough, and great soreness. My doctor's medicine did me no good. I tried many remedies, but received no benefit; everybody despaired of my recovery. I was advised to use Ayer's Cherry Pectoral, and, as a last resort, did so. From the first dose I obtained relief, and, after using two bottles of it, was completely restored to health."—F. Adams, New Gretna, N. J.

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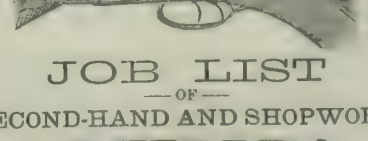
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Young Folks' Column.

A Shop-Girl's Christmas.

[Written for the Rural Press by Fannie Isabel Sheerick.]

"PLEASE tell me the price of this lace?" Mrs. Perry had asked this question 3 times of the shop-girl behind the counter.

The big dry-goods store of Ames & Co. was thronged with people in haste with their Christmas shopping. It was growing dusk. It would soon be the fashionable dinner-hour. Mrs. Perry, whose carriage was waiting without, was very impatient.

"Such impertinence!" she said to her daughter, a tall, slim young creature clad from head to foot in costly furs, and speaking loud enough to be heard by all around. "I declare, I shall certainly report her. Next time she'll pay attention to such customers as we are."

Just then some one nudged the pale little girl behind the counter, who was distracted with the bustle and confusion and trying her best to attend to three people at once.

"Mary, quick," the kind voice whispered—"that lady in the sealskins—attend to her; she is very angry."

Mary Whiting turned her big brown eyes toward Mrs. Perry.

"I beg your pardon, madam," she said politely; "I did not hear you."

"You'll hear next time," Mrs. Perry said angrily. "I'll teach you a lesson that will make you keep your ears open."

Mary's lips quivered and her cheek flushed painfully, but she said nothing.

With a disdainful whirl of her magnificent sealskin, Mrs. Perry turned on her heel and went straight to the head floor-walker, pouring out her plaint in that gentleman's attentive ear.

"Of course," she said in conclusion, "you'll not expect me to trade longer with a house in which I can be treated with such incivility."

Mr. Reed was not a hard-hearted man in the main, but it was always business before clemency with him. He could not afford to lose one such customer as Mrs. Perry for half a dozen girls like Mary Whiting. In his smooth-tongued way he soon adjusted the matter with Mrs. Perry.

"The girl shall be dismissed at once," he said. "She is a new hand, or she would have known who you were instantly and not neglected you. I beg of you, Mrs. Perry, not to withdraw your trade from our house. You certainly shall not have cause to complain again."

"Very well," Mrs. Perry said haughtily, and motioning her daughter to follow her, she threaded her way carefully through the crowded aisles to the street.

"Drive fast, Tom," she said to the coachman, sinking back in luxurious ease on the soft cushion, without a thought of that poor girl out of whose mouth she had taken the very bread and butter this night.

On the way home, she discussed with her daughter the matter of new costumes, and so engrossing was this talk of silks and laces that the episode at the store was entirely forgotten.

But not so with Mary Whiting. Her heart sank within her as she waited on her last customers and placed her goods neatly on the shelves at the close of the day's work, for momentarily she was expecting the summons to appear before Mr. Reed. It did not come until she had donned her wraps and was ready to go.

She stood before Mr. Reed with downcast eyes, scarcely daring to hope for leniency.

"Miss Whiting," he said, "your services are no longer required in this house. You will find the amount due you at the cashier's desk. You have been guilty of rudeness to one of our best customers."

Bitter words rose to the girl's lips, but she swallowed her pride and offered an explanation. The loss of this position meant absolute destitution, but her entreaties fell upon dull ears. Mr. Reed knew that a dozen girls were waiting for her place. He had turned a score away that very morning. Customers like Mrs. Perry were not so easily replaced. He was quite obdurate.

At last Mary turned away. Though she knew nothing of the great issues between capital and labor and had never heard of monopolies, she felt that this was one of the conflicts between the rich and poor, and she needed no great wisdom to tell her which must win.

She choked back her tears and went for her money. It was a mere pittance. A wave of despair crept over her. She had faced starvation before, but oh not at Christmas—not at this glad, beautiful time when every one was so gay and happy and the world was so full of bright things. Eager, cheerful faces had passed before her all day. Girls and women had crowded each other out in front of her counter to get pretty baubles for the ones they loved. Gentlemen in great warm coats had waited patiently for their wives, whispering about presents for the children; even some shy young men had asked her advice about gifts for sweethearts. Yes, every one was remembered but her. She did not know of one solitary soul that would think of a gift for her.

Slowly she went out of the great store so brilliantly lighted, so warmly heated.

What should she do? She pondered the question as she crept along the streets, drawing her shawl closely around her and staring vacantly into the dazzling shop windows.

"Move on!" a policeman said gruffly as she hesitated at a crossing.

It was beginning to rain a little. She did not mind the rain-drops very much; they touched her face gently like messengers from that far-away heaven of which she had heard.

Heaven! That word recalled her mother—the dear mother laid under the sod only a few months before, whose grave and coffin she had starved herself to pay for.

Now she knew what to do. She turned the corners swiftly, facing the west; quickly she sped through the bright streets, soon leaving them behind her. She did not lessen her pace until the suburbs were reached; then she paused.

In front of her rose the spectral cross of Lone Mountain; around her lay the cemeteries.

The streets were quite deserted here—now and then a lonely pedestrian casting a huge shadow under the electric lights; but it did not seem half as lonely to Mary Whiting as the busy streets in the heart of town where she had been jostled hither and thither by the careless crowd.

Her heart throbbed painfully now that she was so near the last resting-place of her mother. She knew that the great gates of the cemetery were closed for the day, but she remembered a small gate in an obscure corner through which she had passed and which was often left unlatched. She soon reached it.

Ghostly as the place was, she felt no fear. Her one desire was to get away from that unfeeling humanity which had been cruel to her. Her one refuge on earth seemed the grave of her mother. Here, no breath of the world's unkindness could reach her.

With a moan of pain and longing she threw herself face downward upon the soft grass-covered mound. Her lips uttered no words, but in her heart was the deep, unspoken prayer which God always hears and answers.

The rain beat upon her, but she did not heed it. Her tired form was wrapped in a sleep which even the storm could not awaken. It seemed as if that mother whose presence she had invoked must be watching over her child.

An hour afterward, the clouds began to break; the rain ceased.

Just then a lantern might be seen moving slowly among the headstones. Several people followed it—two men and a little girl, all warmly clad and protected from the weather. Great drops splashed in their faces from every dripping tree and shrub, but they did not mind it.

They appeared to be hunting for some article that had been lost. At last the rays of the lantern fell upon something shining in the grass. The little one sprang to pick it up.

"I've found it, papa!" she exclaimed; "I've found it! I knew I lost it here."

But her exclamations of joy were cut short by a stifled cry from the sexton. His foot had stumbled against something lying across one of the graves. The moon now breaking through the clouds showed him what it was—the insensible form of a girl clad in the poorest of garments, now drenched through and through by the rain.

The prayer of the outcast had been answered.

When Mary Whiting again opened her eyes, it was in bewilderment and surprise. She thought at first she must be in the heaven of which she had dreamed. All around her was warmth and light and fragrance. The walls were covered with tinted paper. A bright fire blazed in an open fireplace. She was undressed and lying on a pretty brass bedstead. She had never seen one before, and she thought it must be of gold, it glittered so in the firelight.

She tried to move, but found that it hurt her head and made her limbs ache; so she sank back on the pillow, wondering vaguely how it had all happened.

"Don't move, dear lady," a gentle little voice cried as its owner emerged from a shadowy nook near the bed. "Mamma said you were to be very quiet and not talk. I'll talk to you."

The quaint little speaker sat down by the bed and took the girl's thin hand in her own.

"Mamma says you've been delirious, and that means to be out of your head; so I suppose you don't know how you came here. We found you night before last in the cemetery, lying across a grave. Papa and I and the sexton went to hunt a ring of mamma's that I lost. It was a very old ring—been in the family I forget how many years and years.

"I often go into the cemetery to play—it's so quiet there, and I love to watch the sparrows and the ground squirrels. They are so funny in their antics. That afternoon I had mamma's ring on and lost it. I would not let papa rest that night till he went with me to find it, because I knew how much mamma prized it. We thought you were dead at first, but mamma called a doctor when we got home, and now he says you'll be all right in a few days. You had a high fever yesterday, but it is all gone to-day. Now be quiet, dear lady this is my room that I gave up to you, and I'm going to take care of you all afternoon, because mamma and Lucille are busy fixing the Christmas things."

So saying the self-constituted little nurse settled herself sweetly in her corner and took up the doll clothes she had been making.

It was so luxurious to be there in that warm room. It was so comforting to feel kindness and love once more around her, that Mary had no desire to break the spell. She watched the deft fingers of the little seamstress at her side until her eyelids drooped and she fell into a sweet, refreshing slumber.

It was dusk when she awoke. Her little nurse gave her some supper on a silver tray.

It seemed to Mary that she must still be dreaming. She sat up for a little while and then fell asleep again. She was awakened by some one moving. It was midnight, as she saw by the bronze clock on the mantel, and this is the scene that met her eye:

A pair of small stockings hung over a chair in front of the fire and this chair laden with the most beautiful gifts that Santa Claus could bring to delight a child's heart. Over this chair a lady was leaning, all a mother's devoted love shining in her face, as she carefully arranged gift after gift and filled the stocking to overflowing.

Mary started as the lady turned her face and she beheld to her amazement, Mrs. Perry, the author of all her woes, and as she afterward discovered, the author of her happiness as well.

Seeing that she was awake, Mrs. Perry finished her work quickly and came toward her.

"I am not your enemy, child," she said, kindly, seeing how the girl shrank from her, "but your friend, although I gave you reason to think otherwise. Let me explain."

She sat down upon the edge of the bed and began to speak.

"I have a violent temper, which I have never been able to curb, and when I am angry I often do things for which I am afterward sorry. I did not really mean to make you lose your place, but I was impatient, angered and tired, and I made my complaint very strongly to Mr. Reed. I had no idea he would be so severe.

"When we reached home I found my youngest daughter had been playing in the cemetery and lost a valuable ring, given to me by a brother long since dead. After dinner, when the storm had somewhat abated, Florence insisted upon going after the ring, for she declared she knew where she had left it. She was so grieved about it that her papa, to pacify her, went for the sexton, and together they made a search for the missing ring.

"They found not only the ring, but you. When they brought you in and I looked upon your face, my heart smote me. I knew then the cruel wrong I had so thoughtlessly done you. We cared for you, and Florence, who is the most tender-hearted little creature in the world, gave up her room to you and has kindly watched over you ever since."

Mary's tears were falling upon the pillow.

"Dear angel," she whispered softly, at remembrance of the soft little hands stroking her own.

"The next day," Mrs. Perry continued, "I went to see Mr. Reed. When I found your name was Whiting, I began to trace you up, for that is my family name.

"Do you know, dear child, what was the result of my search after your history and antecedents? Could you ever guess?"

Mary shook her head mutely.

"Well, child, the brother who gave me that ring was your father."

"And you—you are my aunt!" Mary's eyes opened wide with the eager question.

"Yes; your father married greatly against the wishes of his family. After his marriage we lost track of him. I myself married and lived in the East a number of years. When I came back here a few years since, I deemed all traces of him lost, but I treasured the ring carefully. I had given him the mate to it. That mate I found upon your finger."

"Yes; my mother was married with it and it was her dying gift to me."

"Well, to cut the story short, you are my niece. I have plenty of money and shall adopt you. You have a refined air and a pretty face. I shall not be ashamed of you. You shall be educated as becomes a lady, and shall receive the same advantages as my daughters."

Mary was about to overwhelm her with expressions of gratitude; but Mrs. Perry, who dreaded a scene and who made light of all her benevolent deeds, silenced her gently, but firmly.

"Now," she said, "the clock tells me that the Christmas morning is upon us. I will wish you a Merry Christmas, and hope you will forgive me for giving you such a terrible heart-break."

Mary's heart was too full to answer. She could only press her lips gratefully to the plump white hand outstretched to her.

Mrs. Perry kissed her lightly on the forehead, and turning down the light left the room.

Mary, feeling that she had reached the seventh heaven, again fell asleep, after much wondering over the fate that had befallen her.

When she awoke for the third time, it was bright daylight. The Christmas bells were



CHRISTMAS MORNING—TRYING THE NEW PAINT-BOX.

ringing. The yellow sunlight was streaming through the windows.

All the pain was gone from her head. Her limbs ached no longer. She felt so well and so happy she would have leaped from the bed and dressed herself instantly, but upon reflection she found that all her clothes were missing.

But just at this moment the door opened noiselessly and Florence appeared, holding a big doll affectionately in one arm and a large package in the other. She laid the bundle on the bed, crying gleefully, "Merry Christmas!"

"Here are your new clothes," she said, "that Santa Claus sent you. Mamma has told me all about you. I am so glad you are my cousin and are to live with us. I think you are very sweet, and I shall love you very much."

"God bless you, little one," Mary cried, her eyes filling. "You are the angel He sent to answer my prayer."

Looking on this tender-hearted little Florence, Mary felt intuitively that here was the mainspring of all her aunt's benevolent deeds. Like some beautiful flower, the fragrance of her life permeated the lives of all around her.

While Mary dressed, Florence chatted merrily, showing her all the pretty toys Santa Claus had brought.

"I'm so glad it's Christmas, ain't you? Lucille is to be married to-night. When she's gone away you'll play with me, won't you? We'll have real good times. My! how pretty your new dress is and how sweet you look. Your eyes are so big and black, just like Lucille's. I noticed you looked like her the first night I saw you—every one thinks she's awful pretty. Now come; breakfast is ready."

Blushing under these compliments, Mary allowed the new little cousin to take her hand and they proceeded to the dining-room.

The house seemed very grand and magnificent to Mary, who had been living in an attic, and at first she felt a little awed; but she received a kind welcome from her aunt, and even from the stately Lucille, and she soon began to feel at home.

After breakfast, Florence took her in to see the Christmas tree. There, she pointed out a package marked "From Santa Claus to Mary." Mary opened it eagerly. It was a beautiful book full of lovely pictures and pretty poems. Between the leaves she found a worn photograph, which she kissed lovingly. It was the portrait of her father. On the title-page of the book was written "Merry Christmas."

"Yes!" she cried, "this is the merriest Christmas I have ever known," after which she immediately sat down and cried as if her heart would break.

Florence shook her little head sagely. She could not see how any one could be merry and yet cry. She looked at Mary very much grieved.

Mary threw her arms around her little cousin.

"They are tears of joy, dearie!" she cried. "This *is* the merriest Christmas I have ever known."

Newhall and San Fernando.

EDITORS PRESS:—The lovely Newhall valley is situated in the northern part of Los Angeles county, and is surrounded by lofty mountains on all sides. The little town of Newhall nestles amid a grove of oaks at the foot of the lofty Sierra San Fernando, and although having less than 100 inhabitants, ships an average of 100 tons of freight per day, consisting largely of crude petroleum.

The number and variety of the resources of this section are really wonderful, consisting of both mineral and agricultural—there being large orchards as well as extensive mining interests. A few miles south of town is situated the extensive orange orchard of the Porter Land and Water Co., consisting of 170 acres; also, the fig orchard of J. P. Widney, consisting of 45 acres. To the northwest is situated the extensive orchard of Mr. Cook, consisting of over 800 acres of deciduous fruit trees. In the immediate vicinity of Newhall, the Newhall Land and Farming Co. annually cultivate about 15,000 acres for wheat, and raise thousands of cattle, horses and sheep on their extensive domain.

In the San Fernando valley there is a wheat-field consisting of 50,000 acres in one unbroken field, controlled principally by the Lankershim Land and Farming Co. Seven miles to the west of Newhall is situated the Pico Oil wells, consisting of about 50 wells, producing several hundred barrels of crude petroleum per day. It is estimated that these wells have yielded about 4,000,000 dollars' worth of oil to the present time.

To the northward of Newhall valley several hydraulic placer mining companies are now operating, and in the Casteca mountains the Silver Mountain mining company are operating a galena mine. Three miles from Newhall is the historic spot where Francisco Lopez first discovered gold in California in 1842, as the old archives of Los Angeles prove, and many thousand dollars was sent from here in gold dust to the United States Mint at Philadelphia, by the late Don Abel Stearns, long previous to the discovery of Marshall at Coloma in 1848.

W. A. BROPHY.

Nearly all colds are slight at first, but their tendency is to so lower the system that the sufferer becomes a ready victim to any prevalent disease. The use of Ayer's Cherry Pectoral, in the beginning of a cold, would guard against the danger,

DOMESTIC ECONOMY.

CRABAPPLE PIE.—Make some puff paste and line deep tins; fill with the pulp after it has been sifted, season with nutmeg, and sprinkle thickly with flour and sugar. Bake with an upper crust, or when done, add a meringue of the whites of two eggs and one cupful of sugar. Brown slightly in a hot oven.

CREAM CAKES.—Have one-half pint of boiling water in a kettle, put in two-thirds cup of butter or lard, add 1½ cups of flour, let it cool a little, add five eggs well beaten, and beat up well; drop a spoonful at a time on a hot tin, and bake quickly. For filling, make a rich cornstarch with eggs, and flavor.

EGG PUDDING.—Four eggs, well beaten, four tablespoonfuls flour, one pint milk, one pinch salt, add all together (the milk last and slowly), put in well-buttered dish, and bake in slow oven. Eat with sauce made of buttor and sugar, beaten together into a cream. Flavor this sauce with a few drops of vanilla or lemon.

CREAMED APPLES.—Select thin-skinned apples, such as the "Fameuse," or snow, core, without paring; fill with sugar and bake. While cooling, whip 1½ cups cold, sweet cream till smooth and firm; add two tablespoonfuls powdered sugar, a little vanilla or lemon. Place apples in sauce dishes, cover with cream and serve at once.

HEAD CHEESE.—After having them thoroughly cleaned, boil the head and feet until the meat falls from the bones, salting while boiling, remove from the liquor, chop fine, season with black and red pepper, sage, thyme, etc., dried and pounded; put in a pan of proper size, add a few spoonfuls of liquor from the pot, and place the pan under weights. May be eaten in 24 hours.

BAKED APPLE DUMPLING.—Pare and core eight or ten apples. Roll out pieces of puff paste the size of a saucer. Put an apple in each piece and close the edges of the paste around the fruit. Lay the dumplings in a large, flat dish. Pour over them a sauce made of one cup butter and three cups sugar well creamed together, and seasoned with nutmeg, and bake one hour. Peach dumplings are made in the same way.

CHOCOLATE SPONGE.—Dissolve 2½ ounces of grated or powdered chocolate, 1½ ounces sheet gelatine, and sugar to taste in a pint of new milk, and let it simmer (not boil very gently) till it is all melted and quite smooth, then add half a pint of good cream and strain the whole. When quite cold and beginning to set, whip it lightly to a sponge, and put it into an oiled mold on ice if handy. To turn it out, just dip the mold in hot (not boiling) water, and loosen the edges carefully, as this sponge is very apt to break.

PATTIES FROM PUFF PASTE.—Roll the paste about half an inch thick, and cut out with a round or oval cutter about two inches in diameter. Take a cutter half an inch smaller and press it into the piece already cut out, so as to sink half-way through the crust; this is to mark out the top piece; lay on tins and bake to a delicate brown. They should treble in thickness by rising, and require from 20 minutes to half an hour to bake. When done, the marked-out top can easily be removed. Take out the soft inside and fill with sweetmeats for dessert or with minced chicken or oysters.

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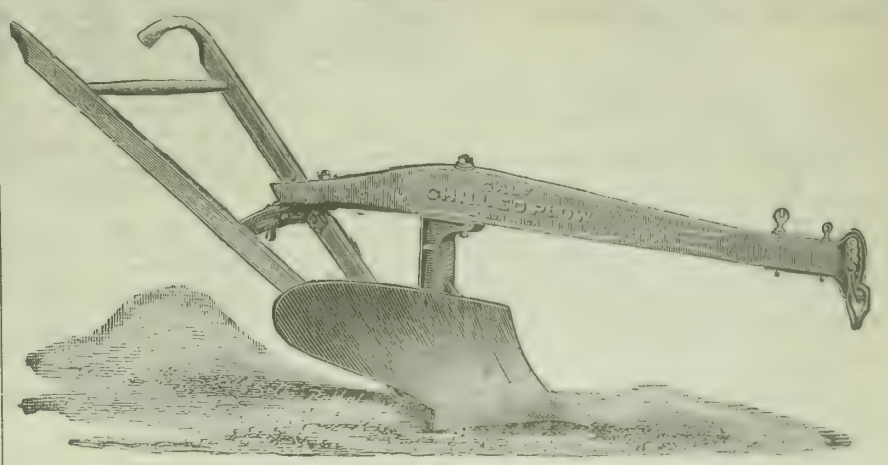
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GOOD HEALTH

Medical Ethics in San Francisco and Berlin.

There seems to be a most decided contrast between the medical fraternity of Berlin and that of San Francisco. The telegraph, a few days ago, announced that a new remedy for diphtheria had been discovered by a German peasant, named Riegar, living near Berlin. Common report attached so much significance to it by reason of the great success which the poor, unlearned peasant met with in its application, that the story reached the ears of the now celebrated Dr. Koch, and friendly relations were at once established between the learned doctor and the poor peasant; and now we hear that the peasant's son has been called to Berlin and requested to experiment with the new remedy under the immediate supervision of Dr. Koch himself. The humane doctor is going to investigate and learn whether there may not be something of value to humanity in this accidental discovery alleged to have been made by a poor peasant.

What would our San Francisco surgeons and physicians have done under similar circumstances? Following the line of policy marked out and practiced by them, they would have refused all recognition of such "nonsensical quackery." They would have said to any one of their number who might have been anxious to investigate—"Hands off! Our code of ethics enforced by our Hippocratic oath forbids us to countenance any such quackery. We must stand by and let the children die of diphtheria until some one learned in medical lore shall have discovered and announced the discovery of some remedy better than any we now have."

In proof that such is the policy and practice of the medical profession of this city, we have only to call attention to the well-known fact that patients which our best reputed physicians and surgeons pronounce, beyond all doubt, afflicted with that most dreaded of all diseases, cancer, are constantly going to a well-known practitioner in this city, but one not of the dominant school, and are there being *cured* by constitutional treatment. Many of these patients, before leaving the regular faculty, submit to the cruel manipulation of the knife, and often *twice* without any beneficial effect. These facts are perfectly well known to every prominent physician in this city.

Do they follow the example of the German doctor? Not at all. They denounce in the strongest terms the practitioner—deny the cures, and when their own patients come back to them to prove what has been done, they refuse to talk with them and shut their doors in their faces!

The writer has often been asked why this is so. Why do our medical men refuse to look into this matter, so apparently important to the community? The most frequent answer is because the remedy is a secret and the profession will not experiment with a secret remedy. Herein lies the difference in practice between San Francisco and Berlin; for Dr. Koch keeps *his* remedy a secret to this day, and yet thousands of European physicians are experimenting with it.

Another equally common reason given is because the practitioner here is not in standing with the dominant school. To this we would answer, neither is the poor German peasant; yet as great and learned a man as Dr. Koch is ready and anxious to investigate as to what purports to be of benefit to the sick and suffering. The San Francisco physician is the proud pharisee who passes by on the other side, while Dr. Koch is the good Samaritan.

Then again, it is claimed, and correctly, that our friend is desirous of some remuneration for the discovery, which is contrary to medical ethics. There is nothing in the known world but medical ethics which makes such a demand. Common law, common custom and common sense say that the inventor or discoverer is worthy of a reasonable reward, especially when the discovery has been attained by many long years of investigation at great expense of money, time and health, to say nothing of the fierce opposition and obloquy which has been thrown at the effort by those who should have encouraged it, and who now demand the knowledge for the mere asking.

Further, we would reply that Dr. Koch keeps *his* remedy a secret and has already received a most princely reward in money, in addition to which honors without stint have been heaped upon him. Of course the doctor will make his remedy known to the world at the proper time. So will our San Francisco remedy be made known at the proper time and under proper conditions. There are philanthropists without number who stand ready to make good the compensation so soon as a proper medical investigation shall pronounce the cure a genuine one. Of course, time alone will prove its genuineness, but then, in the mean time, thousands are suffering and dying, while those who should investigate are doing nothing but putting hindrances in the way of investigation. That is not the way they do in Berlin.

Do they say there are no grounds for investigation? In reply, we would say that there is every day in the week waiting in a front parlor in this city, a large number of persons who have the authority of the most eminent physicians and surgeons of this city that they are afflicted with cancer. Some of these persons have been operated on in private offices and in public hospitals, and have subsequently been assured of the positive recurrence of the malady, with the assurance that the knife must again be used. These persons have afterward gone to the location referred to for treatment.

At that locality not less than twelve or fifteen has been the average number under treatment for the last five or six years—nine-tenths of which patients have been discharged as perfectly cured—*and not one single case of a return of the malady has been reported;* while when the knife is used, the books tell us that fully nineteen in twenty return within six or twenty-four months.

It has been intimated by some that these cases of cure were not cancer, but simply benign tumors. If such is the fact, what are we to say of the diagnosis of our leading physicians? Don't they know a cancer when they see it, and especially after they have cut it out, held it in their hands and put it under a microscope? Many and many cases have occurred and been successfully treated where the malady has returned after once and twice being cut out, and in one case after the third removal.

The only reasonable conclusion to which an honest-thinking man can arrive, after taking in the evidence, which is within the reach of all, is that either we have a remedy for cancer in this city or our leading physicians should be debarred by statute from practicing any longer in that specialty.

We desire that this statement should be received by our readers and the public as a most carefully considered utterance made after four years of most patient investigation, aided much of the time by medical gentlemen of undoubted standing in their profession, but whose names cannot be used in public because of the fearful professional pressure which is immediately brought to bear upon any medical person who presumes to make any inquiry into this matter of such vital interest to all. One of our medical advisers and assistants who was convinced that the discovery was a genuine one, and who attempted to bring the matter before the Medical Association of this city at one of its regular monthly meetings, was immediately put down, metaphorically stamped upon and the next day received a note that his assistance was no longer needed as a lecturer before the Cooper Medical College of this city. Others who have shown a desire to investigate have been threatened by word and by letter. The writer of these lines was present at the meeting referred to by invitation of a member of the association and was unceremoniously requested to leave the room, which he did after vainly endeavoring to make his excuse for being there. His voice was so completely drowned by the pandemonium of noise which accompanied his exit that he could not be heard ten feet from his person. We make this statement *now*, after four years of silence, as an evidence of the unseemly and unreasonable opposition of the medical fraternity of this city to allow any of their members to inquire into the truth or falsity of a medical discovery which we hold to be a better-proven reality than the alleged consumptive cure in Berlin and of fully equal value to mankind.

There are quite a number of gentlemen of standing, and several ladies also, not physicians, who have become sufficiently interested in this matter to join us in this inquiry, all of whom fully indorse the position we have taken in the matter and unqualifiedly condemn the course which our supposed health conservators are taking in regard to it.

In view of the importance of this inquiry, and the determined opposition thereto by those who should be foremost in aiding it, we appeal to the press to aid us in this work of humanity. All we ask for is an honest medical investigation. Let the State or City Board of Health or any other body of physicians select two or three cases such as they will pronounce cancer and proper subjects for the knife. Let those persons be placed under the treatment of Dr. Cook, and this vexed question will soon be practically settled. The doctor has for years been anxious for such a test. In common with all who have made inquiries into this alleged cure, we hold that the evidence fully warrants a demand for some such action, and we trust the press, not only of this city, but of the State generally, will unite with us in asking for a medical investigation.

But we have already quite overrun the space which we had allotted to this subject and will close with the remark that the name Kooh is the German for the English name Cook, which latter is the name of the person who has discovered a cancer cure in this city—Cook of Berlin for consumption, Cook of San Francisco for cancer.

W. B. E.

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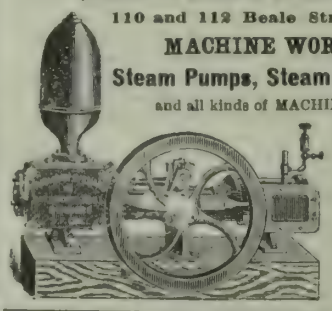
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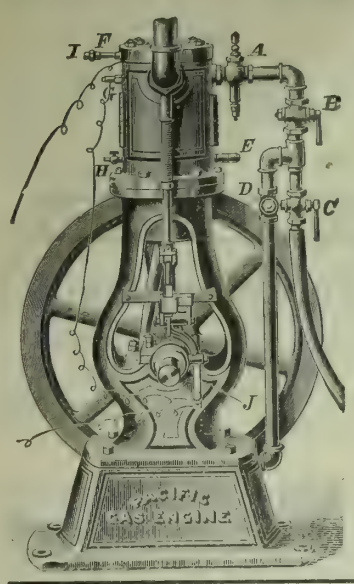
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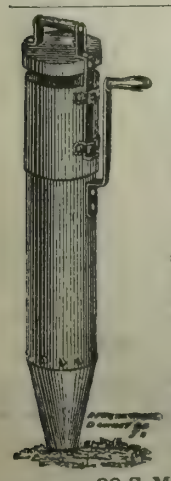
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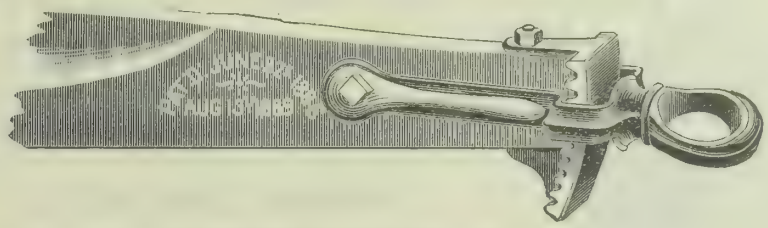
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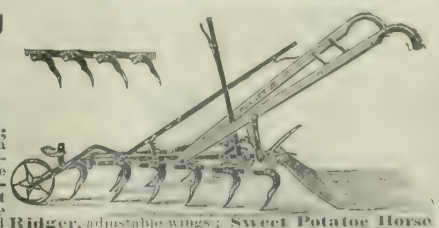
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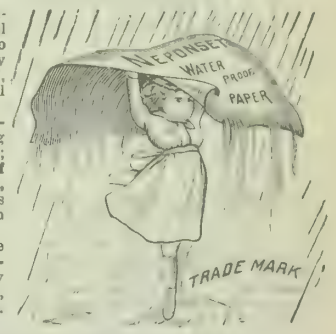
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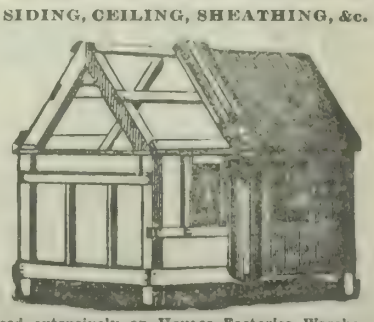
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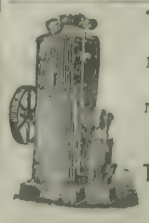
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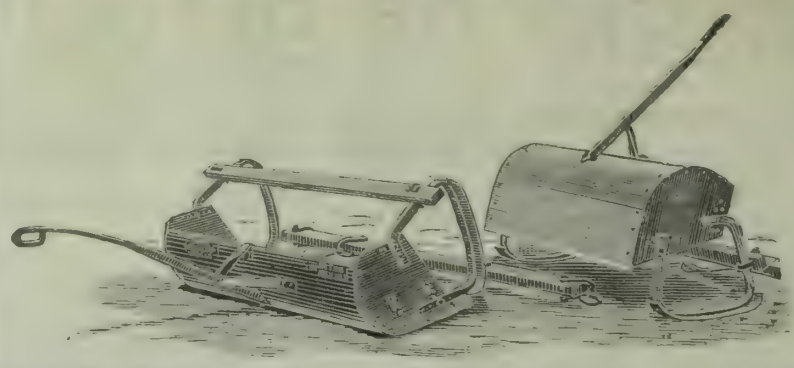
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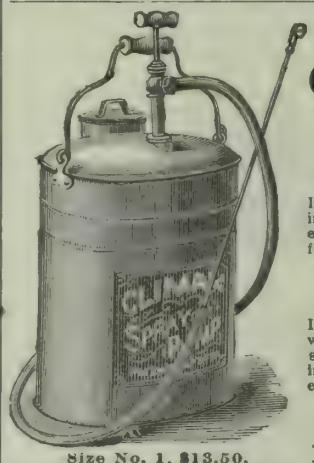
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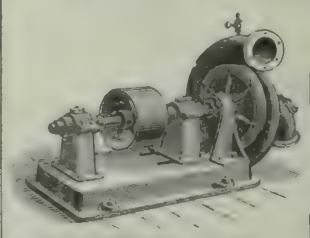
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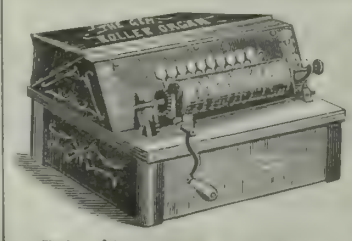
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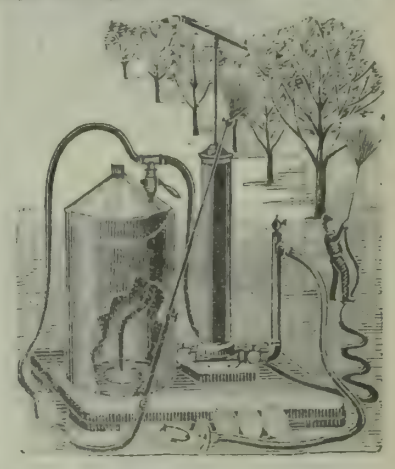
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Ninth	2	Tenth	1

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Best 12 seedlings by one grower.

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Ninth	2	Tenth	1

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Best display of lemons.

First premium	$50	Second premium	$30
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Best display of limes.

First premium	$10	Second premium	$5

CLASS 10—SHADDOCKS.

Best display of shaddocks and pumalos.

First premium	$5	Second premium	$3
Third	2		

CLASS 11—OLIVES.

Best display of olives.

First premium	$20	Second premium	$10
Third	5		

CLASS 12—PICKLED OLIVES.

Best display of pickled olives.

First premium	$10	Second premium	$5

CLASS 13—OLIVE OIL.

Best display of olive oil.

First premium	$50	Second premium	$25
Third	15	Fourth	10
Fifth	5		

CLASS 14—PERSIMMONS.

Best exhibit of persimmons.

First premium	$5	Second premium	$3
Third	2		

CLASS 15—POMEGRANATES.

First premium	$3	Second premium	$2
Third	1		

CLASS 16—RAISINS.

Best display of raisins.

First premium	$100	Second premium	$75
Third	50	Fourth	25
Fifth	10		

CLASS 17—DRIED FIGS.

Best display of dried figs.

First premium	$25	Second premium	$15
Third	10	Best display of dried White Adriatic figs	20

CLASS 18—PRUNES.

Best display of dried prunes.

First premium	$50	Second premium	$25
Third	10		

CLASS 19—DATES.

Best display of dates.

First premium	$5	Second premium	$2

CLASS 20—DRIED FRUITS.

Best general exhibit of dried fruits other than raisins.

First premium,	$100	Second premium	$75
Third	50	Fourth	25

CLASS 21—PRESERVED AND CANNED.

Best exhibit of canned and preserved fruits exhibited by others than packers.

First premium	$15	Second premium	$10
Third	5		

CLASS 22—NUTS.

Best general exhibit of nuts.

First premium	$15	Second premium	$10
Third	5		

CLASS 23—NURSERY STOCK.

Best exhibit of citrus nursery stock $25



COL. BUMPER'S CHRISTMAS PRESENT.

CLASS 24—PLANTS AND FLOWERS.

Best exhibit of potted plants and flowers.

First premium	$10	Second premium	$5
Third	2		

CLASS 25—ESSAY.

Best practical essay on orange culture (limited to 2500 words) $50

The essay must be type-written and delivered to the Secretary on or before Jan. 10, 1891, unsigned but accompanied by a letter giving name of contributor.

CLASS 26—WINES.

Best general display of wines by maker $50

CLASS 27—MOST ARTISTIC DISPLAY.

Most artistic display $50

Rules and Regulations.

1. All exhibits must be in position and readiness for examination by the judges at 12 o'clock noon Tuesday, and no premiums will be paid on any article on exhibition unless properly entered on the Secretary's books before that time, and in the place assigned them for exhibition.

2. All exhibitors must obtain a card with number on from entry clerk to agree with exhibit. This card must be kept in a conspicuous place near the exhibit.

3. Competitors must be producers except in the competition for wines, in which case maker is admitted.

4. No article or exhibit entered for premium can be removed before the close of the fair without permission of the superintendent.

5. Free cartage in Marysville for all exhibits.

G. HUNSIKER of Cloverdale recently gave us good opportunity to examine the crystallized and dried white Adriatic figs for which he is finding an excellent market in his own county. His idea of a crystallized fruit is to our notion more correct than that of some other manufacturers. He does not give the fruit such a dense sugaring or syruping that its flavor is lost in a sweetness which cloys upon the palate. It is still a fig in flavor, but sugared enough to satisfy the requirements of a crystallized fruit. It strikes us he has struck a happy degree in his use of sugar. His dried figs are also very good in flavor and handsome. They are only lightly bleached, consequently do not have a pallid hue, nor do they taste of the match-box. We understand that Sonoma county towns now take all of Mr. Hunsiker's product from his 400 trees.

W. R. STRONG COMPANY have issued their catalogue for 1891 in style handsome enough for a Christmas card, and as a holiday greeting from a pioneer firm of nurserymen, seedsmen and fruit-shippers, the publication will be widely distributed over the coast and beyond. We find the publication replete with good things for the garden and with the most popular and approved sorts for the orchard, and it is a fitting exponent of California enterprise and progress.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

FELIX GILLET of Nevada City has issued his 1891 catalogue of the choice varieties of fruits, to the collection of which he has given so many years and such earnest study, as readers of the RURAL know, from his important contributions to our columns. Mr. Gillet holds that though the production of a cooking prune is a proper field of enterprise for California, and its extent and profit is to be rejoiced in, the production of a first-class dessert prune should not be overlooked. This is a wise conclusion, and all who like him are experimenting in this direction should be encouraged and applauded.

McGarvin's Fruit Truck.

Mr. Smith McGarvin, inventor, patentee and manufacturer of the McGarvin Fruit Truck, has succeeded beyond his expectation in introducing this valuable adjunct to the fruit-growers. He is building two sizes, one of capacity of 2500 lbs. for one horse and one of 4500 lbs. for two horses. A RURAL representative visited his works at San Jose last week and learned that McGarvin is making preparations to incorporate for the purpose of extending his plant with a view of manufacturing extensively to meet the demand. He was just finishing one of large size on an order, and has just shipped one to Clements, San Joaquin county.

A New Carriage House.

Mr. T. A. Lauder (formerly connected with the Studebaker M'f'g. Co.) has opened a large repository at 927 K street, Sacramento. He has now a full stock of fine carriages, buggies, carts, farm wagons, harness, etc. Some of the largest manufacturing establishments in the East have given him an agency, and he has recently made favorable arrangements with Eastern houses that will enable him to sell first-class goods at bottom prices.

WE received this week a copy of the second annual catalogue of the California stump-puller. It is a 38-page pamphlet neatly gotten up and well illustrated, and contains much matter useful and interesting to those having land to clear. After a careful perusal of its pages, together with the favorable reports coming from sections where it has been used, we strongly incline to the belief that it is a machine possessing much merit, and one which is certain to make hand grubbing a thing of the past. The catalogue can be obtained by addressing Geo. Harvey, 547 Brannan street, and we advise every person interested to send for one.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING DEC. 9, 1890.

442,471.—MACHINE FOR TURNING PILES, ETC.—A Ames, Berkeley, Cal.

442,411.—RAILWAY CROSSING—W. M. Axtell, Fruitvale, Cal.

442,419.—WATER-CLOSET VALVE—Jos. Budde, S. F.

442,184. — TREE-TRANSPLANTER— A. Harpold, Colton, Cal.

442,480. — DRESSING TOOL—S. T. Harrison, Skipanon, Or.

442,186.—MINERS' CANDLESTICK—D. B. James, S. F.

442,441.—APPARATUS FOR REDUCING BITUMINOUS ROCK, ETC.—J. B. Jardine, S. F.

442,484.—CAN BODY MAKING MACHINE—M. Jensen, Astoria, Or.

442,444.—DOOR OPENER AND CLOSER—W. H. Leavens, S. F.

442,590.—WINDOW CURTAIN ADJUSTER—D. F. McDonald, Berkeley, Cal.

442 449.—HOISTING MECHANISM—W. F. Murray, S. F.

442,244.—FEEDWATER HEATER—David Stark, S. F.

442,468.—SHELF SUPPORT—O. F. Wegener, Seattle, Wash.

442,160.—CAR COUPLING—G. H. Williams, Albany, Or.

The following brief list by telegraph, for Dec. 16, will appear more complete on receipt of mail advices:

California—Mora M. Barrett and J. F. Daly, San Francisco, governor for gas engines; Edwin Bartsch, San Francisco, syringe; John Beermaker, Santa Barbara, sea and wave power; Elswood Chaffee, Santa Monica, assignor of one-half to B. H. Fairchild, Claremont, car brake; John H. Eichler, San Francisco, rotary gas engine; Samuel C. Lewis, San Francisco, machine for making rock-drill bits; Lanthus E. Marshall, Martinez, assignor of one-third to P. Tormey, Pinole, car coupling; William Meakin, San Francisco, machine for reducing bituminous rock; Roscoe B. Paige, Oakland, wheel for road engine; Presley B. Smith, Alameda, assignor to M. Morganstern and J. A. Behr, San Francisco, fountain pen; John C. E. Stut, San Francisco, engine; William Wainwright, San Francisco, vaporizing spray nozzle; Henry B. Ward, San Diego, pipe coupling; George C. Watris and L. Haymann, San Francisco, construction of roadbeds for street railway; Frank White and F. J. Murphy, Pomona, animal trap.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Struck Water.

EDITORS PRESS:—**The rains have been sufficient to place the soil in shape for plowing and all the farmers are busily engaged in that pursuit. The well-borers on Mr. Itim's place southwest of town, have struck a fine flow of water, and Mr. Itim has already contracted for the planting of 20 acres in grapes. Mr. Itim is a man of push and means.** S. H. O.

Pixley, Cal., Dec. 12.

LAND FOR LABOR

Vineyard Land

On the Dewey Homestead Tract, within one mile of Tulare City corporation limits. From 5 to 20 acres will be sold cheap, without a cash payment, and without interest the first year, to any responsible party who will put the same to raisin vines Terms of payment after first year, 20 per cent of purchase per annum. This offer will not be open long.

Address THOS. H. THOMPSON, Tulare; F. M. DEWEY, Porterville; or A. T. DEWEY, 220 Market St., San Francisco.

P. S.—Other desirable raisin and fruit land for sale at very low rates. Also grain land to rent on shares. Terms liberal.

ANNUAL MEETING.

THE REGULAR ANNUAL MEETING OF THE Stockholders of the GRANGERS' BANK OF CALIFORNIA, for the election of Directors for the ensuing year, will take place at the office of the Bank, in the City of San Francisco, State of California, on TUESDAY, the 13th day of January, 1891, at one o'clock P. M.

For Grangers' Bank of California,

ALBERT MONTPELLIER,
Cashier and Manager.

Calendar for 1891.

1891	Sunday	Monday	Tuesday	Wednes.	Thursd'y	Friday	Saturday
Jan....	...	...	...	...	1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31
Feb...	...	...	...	...	...	...	...
	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
March	...	...	...	...	...	...	...
	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31	...	...	...	...
April.	...	...	...	1	2	3	4
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	...	...
May..	...	...	...	...	...	1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31	...	...	...	...	...	...
June..	...	1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	...	...	...	...

1891	Sunday	Monday	Tuesday	Wednes.	Thursd'y	Friday	Saturday
July..	...	...	...	...	1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31
Aug..	...	...	...	...	...	...	...
	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31	...	...	...	...
Sept..	...	...	...	1	2	3	4
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	...	...
Oct...	...	...	...	...	...	1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31	...	...	...	...	...	...
Nov..	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	...	...	...	...	...
Dec....	...	...	1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31	...	...

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

WILD FLOWER STOCK FARM, Fresno Co. A. Heilbron & Bro., Props., Sac. Breeders of thoroughbred strains and Crulkshank Shorthorns; also Registered Herefords; a fine lot of young bulls in each herd for sale.

CHARLES E. HUMBERT, Cloverdale, Cal., Importer and Breeder of Recorded Holstein-Friesian Cattle. Catalogues on application.

PERCHERON HORSES.—Pure bred horses and mares, all ages, and guaranteed breeders, for sale at my ranch near Lakeport, Lake Co., Cal. New catalogue now ready. Wm. B. Collier.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. None better.

REGISTERED HOLSTEIN CATTLE. Also best thoroughbred Poultry and Eggs. Address Hibbard & Ellis, Santa Rosa Breeding Association, Cal.

P. H. MURPHY, Perkins, Sac. Co., Cal., Breeder of Recorded Shorthorn Cattle and Poland China Hogs.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

PURE-BRED HOLSTEIN FRIESIAN Cattle for Sale. Bonnie Brae Cattle Co., Hollister, Cal.

JOHN LYNCH, Petaluma, breeder of thoroughbred Shorthorns. Young stock for sale.

JERSEYS—The Best Herd, all A. J. C. Registered, is owned by Henry Pierce, San Francisco.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

M. D. HOPKINS, Petaluma, importer and dealer in Eastern registered Shorthorns, Red Polled Cattle, Holsteins, Devons and Shropshire Sheep.

GEO. B. POLHEMUS, Coyote, Cal. Holstein-Friesian cattle, comprising males and females on advanced register. First premium in great milking test at State Fair, 1889, was won by a member of this herd.

PETER SAXE & SON, Lick House, San Francisco, Cal Importers and Breeders, for past 18 years, of every variety of Cattle, Horses, Sheep and Hogs.

HENRY HAMILTON, Westley, Cal., breeder of Kentucky Jacks and Jennies, Draft Horses and Holstein Cattle. Jacks, Horses and Mules for sale.

JERSEY BULL No. 468 P. C. J. C. C. for sale cheap. A fine four-year-old animal. Address Dellwood Poultry Yards, Napa, Cal.

IMPORTED REGISTERED CLYDESDALE Horses and Holstein-Friesian Cattle from the most noted families. H. P. Mohr, Mt. Eden, Alameda Co., Cal. Visitors welcome. Correspondence solicited.

J. R. ROSE, Lakeville, Sonoma Co., Cal., breeder of Thoroughbred Devons, Roadsters and Draft Horses.

POULTRY.

GEO. TREFZER, 911 E St., Sacramento, Cal., breeder of Houdans, Black and White Leghorns, Prize Winners at late State Fair. Eggs, $2 50 for 13; $4 for 26.

DELLWOOD POULTRY YARDS, Napa. Light and Dark Brahmas, Buff Cochins, Langshans, Plymouth Rocks, Silver and Golden Wyandottes, Houdans, Minorcas, Spanish, Brown, Black and White Leghorns, Pekin Ducks. Birds for sale. Eggs, $2 per 13.

PURE-BRED LANGSHAN EGGS and Toulouse Geese. J. E. Sylvester, Santa Ana, Cal

CALIFORNIA POULTRY FARM, Stockton, Cal.; send for illustrated and descriptive catalogue, free.

GALT POULTRY YARDS, Galt, Sac. Co., Cal., Breeds Most Popular Varieties of Thoroughbred Fowls. Choice Imperial Pekin Ducks, $2 each, $5 per trio.

R. G. HEAD, Napa, Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

JOHN McFARLING, 706 Twelfth St., Oakland, Cal., Importer and Breeder of Choice Poultry. Send for Circular. Thoroughbred Berkshire Pigs.

IF YOU KEEP ANY KIND OF FOWLS, Pet Stock, Dogs, &c., it will pay you to send your address at once to C. R. Harker, Santa Clara, Cal. You cannot afford not to do it. It will cost you but one cent and you will receive something worth ten times that.

W. C. DAMON, Napa. Fowls and Eggs, $2.00.

O. J. ALBEE, Lawrence, Cal. Pure bred poultry.

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E. W. WOOLSEY & SON, Fulton, Cal., importers & breeders Spanish Merino Sheep; ewes & rams for sale.

R. H. CRANE, Petaluma, Cal., breeder and importer. South Down Sheep from Illinois and England for sale.

KIRKPATRICK & WHITTAKER, Knight's Ferry, Cal., breeders of Merino Sheep. Rams for sale.

L. U. SHIPPEE, Stockton, Cal., importer and breeder of Spanish Merino Sheep, Durham Cattle, Jacks and Jennys & Berkshire Swine high graded rams for sale

ANDREW SMITH, Redwood City, Cal.; see adv't.

SWINE.

JOSEPH MELVIN, Davisville, Cal., Breeder of Poland-China Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

TYLER BEACH, San Jose, Cal., breeder of thoroughbred Berkshire and Essex Hogs.

ANDREW SMITH, Redwood City, Cal.; see adv't.

BEES.

APIARIAN SUPPLIES for sale by Mrs. J. D. Enas, Napa City, Cal.

IMPORTANT!

That the public should know that for the past **Eighteen Years** our **Sole Business** has been, and now is importing **(Over 100 Carloads)** and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires, and Jerseys (or Alderneys) and their grades; also, **all the varieties** of breeding Sheep and Hogs. We can supply any and all good animals that may be wanted, and at **very reasonable prices** and on **convenient terms.** Write or call on us. PETER SAXE and HOMER P. SAXE.

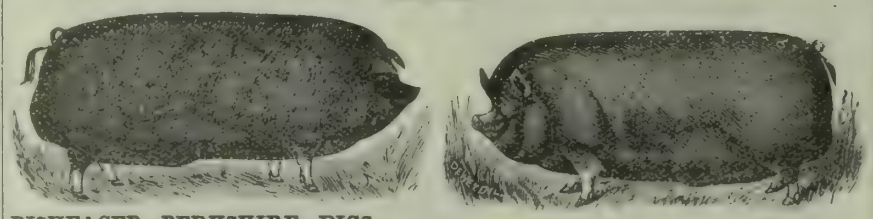
San Francisco, Cal., Oct. 22, 1888. **PETER SAXE & SON, Lick House, S. F.**

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IMPORTER AND BREEDER OF THOROUGHBRED

(RECORDED



DISHFACED BERKSHIRE PIGS,
IMPROVED POLAND-CHINA PIGS,
SHROPSHIRE DOWN SHEEP,

Young Stock for sale at reasonable prices. Every animal guaranteed.

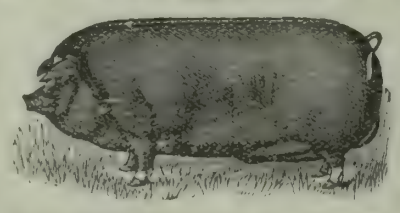
OFFICE—218 California St., San Francisco. REDWOOD CITY, CAL.

Walnut Grove Herd OF Poland China Hogs

JOSEPH MELVIN,

Proprietor,

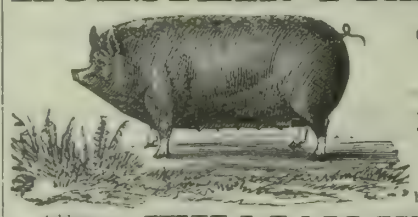
DAVISVILLE, CAL.



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— OF —
Strictly Bred
POLAND CHINA SWINE.

At the head of the herd stands PERFECTION KING, No. 7579; KING OF THE WEST, No. 8921; HOOSIER BOY 2d, No. 8923. Breeding Sows as fine individuals and as strictly bred as any in the land; also recorded in the C. P. C. R. record with pedigrees full to standard. Breeders for sale at all times. I have first-class Pigs of both sexes at reasonable prices. Residence 1¼ miles northeast of Davisville, Cal. Personal inspection solicited. All inquiries promptly answered. Yours truly, JOSEPH MELVIN.

HOLSTEIN-FRIESIAN CATTLE.



Registered Herd Book Stock of the Aaggie, Netherland, Neptune, Clifden, Artis and other families. None better.

JERSEYS,

Of the Coomassie, Alphea and other choice strains.

Poland-China and Berkshire Pigs.

POULTRY—Nearly all Varieties.

Third Edition **POULTRY & STOCK BOOK**, 50 cents by mail postpaid. Thirteen years experience on this coast.

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MANHATTAN STOCK FOOD

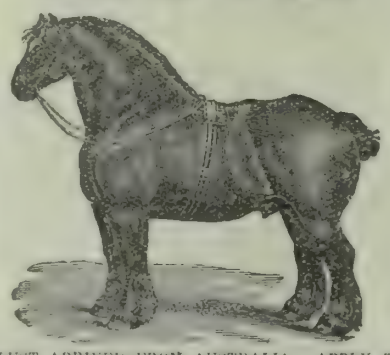
Saves One-Quarter of Grain Feed.

FRAUDULENT PARTIES have been selling an article, claiming theirs to be the same, and, in order to mislead, have added a prefix to "Manhattan." Our genuine food is called simple "Manhattan Food," with the Red Ball Brand.

623 Howard St., San Francisco, Cal.

FOR SALE:

Consignment of Six Clydesdale Stallions and Four Mares.



JUST ARRIVED FROM AUSTRALIA. APPLY TO C. L. TAYLOR, No. 428 California Street, or JOHN SCOTT, Park Louvre Stables, Bay District Race Track, San Francisco, Cal.

IMPORTED STALLIONS!

HOLBERT & CONGER,

Los Angeles, Cal.,



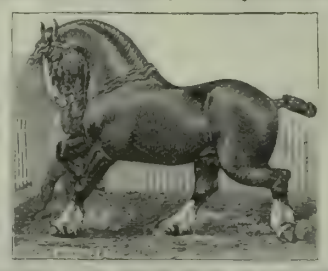
Import Direct from Europe and sell **Full-Blooded Yorkshire Cleveland Bay, Oldenburg German Coach and English Shire Draft Stallions.** The best Coach and Draft Horses in the world. Stables permanently located. Third Importation. We give Eastern prices and guarantee our horses. Correspondence solicited. Address

1002 Olive St., Los Angeles, Cal.

Our Horses are full registered in Europe and America.

Alameda County Fine Stock Farm.

MOHR BROS., Proprietors.



IMPORTED AND HOME-BRED REGISTERED Clydesdale Stallions and Mares, weighing from 1600 to 2000 lbs each, from prize-winning families, Holstein Friesian Bulls and Heifers of the most noted families. All Registered. Also Registered Berkshire Pigs. Call on or address **H. P. MOHR,** MOUNT EDEN, ALAMEDA COUNTY, CAL., 20 miles southeast from San Francisco. Take train for Haywards station, on broad gauge, or Mt. Eden on narrow gauge railroad. Fare 50 cents. Conveyance at depot if notice is given. Visitors welcome and inspection invited

COLTS BROKEN.

THE SOUTHER FARM,

One and a half miles northeast of San Leandro, Alameda County, has every facility for Breaking Colts properly. Rates very reasonable. Horses boarded at all times.

THE SOUTHER FARM,
GILBERT TOMPKINS, Proprietor,
P. O. Box 149, San Leandro, Cal

MECHAM & FRITSCH,

—IMPORTERS AND BREEDERS OF—

Red Polled Cattle.

We have 19 head of Imported Stock.

Young Bulls and Crossbreds on Devons for sale.



H. MECHAM,

Importer and Breeder of Shropshire Sheep

They were all imported from England in '88, or bred direct from Imported Stock, and all registered.



H. MECHAM,

—BREEDER OF—

American Merino Sheep Without Horns.

The only flock in the United States. When we bought our sheep East 20 years ago, among them was a ram without horns. He grew to be a large fine sheep, shearing at 2 years old, a 12 months' fleece, 35 lbs. of long white wool.



I have bred from him and his get ever since and have never made an out-cross and never used the same ram but one year on the same flock. My rams at 2 years old will weigh from 160 to 180 lbs.; have a strong constitution, without wrinkles, and will shear on an average about 25 lbs., a 12 months' fleece, of long white wool. Rams and Ewes for sale. **P. O. Address:**

Stony Point, Sonoma Co., Cal.
R. R. Station, Petaluma.

New Importation!



THEO. SKILLMAN

Has just arrived in Petaluma with a new importation of

CHOICE YOUNG STALLIONS

Consisting of

PERCHERONS, SUFFOLKS, SHIRES AND FRENCH COACHERS.

Prices moderate and terms liberal to suit the times.

THEO. SKILLMAN.

FOR SALE VERY CHEAP,

One Full Blood

HEREFORD BULL,

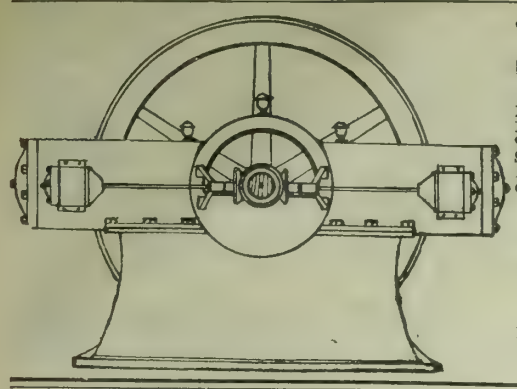
Three Years Old.

Apply to DAVID GRIFFITH, Administrator of Griffith Estate, Penryn, Cal.

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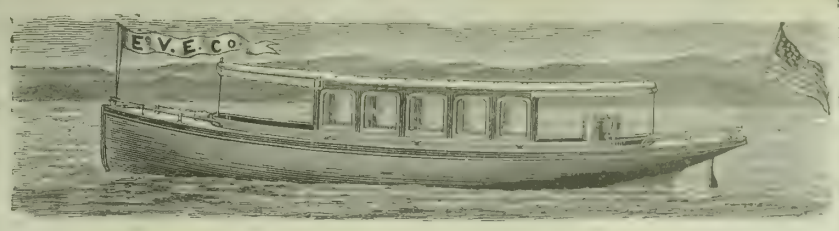
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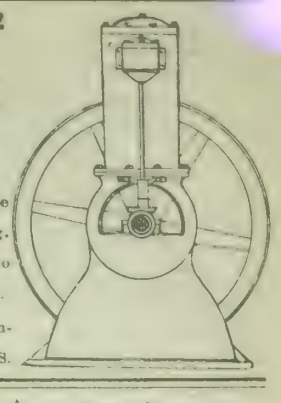
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Works Best in Winter and Spring.

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U. S. DEPARTMENT OF AGRICULTURE,
DIVISION OF ECONOMIC ORNITHOLOGY AND MAMMALOGY.

WASHINGTON, D. C., April 22, 1889.

MR. J. R. LOCKE, Bleudon, Davison Co., Dakota—DEAR SIR: Your postal card addressed to the Entomological Division of this Department has been handed me for reply. The best remedy we know for the destruction of Pocket Gophers is bisulphide of carbon. You can obtain important information in regard to the use and cost of this article by applying to J. H. Wheeler, Melrose, Alameda Co., Cal.

Respectfully, [Signed] C. HART MERRIAM, Ornithologist

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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Dec. 17, 1890.

The general feature of the past week was in the line of its predecessor. Farmers are again in want of rain. In many localities where they had started the plow, work has been stopped, owing to the land being too dry. Money is reported close. It is claimed that the supply in the banks is in excess of last year at this time, but the want of confidence in the situation deters many owners from putting out their holdings. The grain market has held fairly steady, with a stronger tone toward the close in wheat. The following is to-day's London cable:

LIVERPOOL, Dec. 17.—Wheat—Steadily held. California spot lots, 7s 4d to 7s 6½d; cargoes off, coas 38s to 38s 3d; just shipped, 37s 6d; nearly due, 37s 9d; cargoes off coast and on passage, firm; Mark Lane wheat, steady; French country markets generally dearer; wheat and flour in Paris, firm; weather in England, frost continues.

The Grain Supply.

NEW YORK, Dec. 15.—The visible supply of grain is as follows: Wheat, 25,166,000 bushels, an increase of 616,000; corn, 1,820,000 bushels, a decrease of 458,000; oats, 3,391,000 bushels, an increase of 81,000; barley, 4,345,000 bushels, a decrease of 164,000.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Dec	Jan	Feb	Mar.	April	May.
Thursday	7s6½d	7s6½d	7 6½d	7s6d	7s5½d	7s5½d
Friday	7s5½d	7s5½d	7s5d	7s5d	7s4½d	7s5d
Saturday	7s5½d	7s6½d	7s6½d	7s6d	7s6d	7s6½d
Monday	7s5½d	7s6½d	7s6d	7s5½d	7s6½d	7s6½d
Tuesday	7s6½d	7s6½d	7s6d	7s5½d	7s6d	7s6½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D	Market
Thursday	37s6d	37s6d	37s6d	Steadier.
Friday	37s6d	37s6d	37s6d	Quiet.
Saturday	37s6d	37s6d	37s6d	Firmer.
Monday	37s6d	37s6d	37s6d	Quiet.
Tuesday	37s9d	37s6d	37 6d	Strong.

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per bushel:

Day.	Dec.	Jan.	Feb.	Mar.	May.	July.
Thursday	103½	101½	..	106¾	105¾	..
Friday	104½	102½	....	107	106¾	..
Saturday	106	105¾	..	107¾	107¾	..
Monday	103¾	101	106¾	107	106¼	..
Tuesday	103½	104	..	106½	106¼	..

The closing prices for wheat have been as follows at Chicago for the past week, per bushel:

Day.	Dec	May.	June.	July.
Thursday	90½	99¾	....	....
Friday	92½	100⅝	....	....
Saturday	93½	101½	....	....
Monday	93½	100¾	....	....
Tuesday	94½	102	....	....

NEW YORK, Dec. 17.—Wheat—$1.05½ for cash, $1.03⅝ for December, $1.04¼ for January, $1.05⅛ for May, and 99⅜c for July.

CHICAGO, Dec. 17.—Wheat—97⅜c for January and 99½c for May.

Foreign Grain Review.

LONDON, Dec. 15.—The *Mark Lane Express* says: English wheats are weak. Prices of foreign wheats are against sellers, except for Russian, which is firm. Flour is steady. Corn, in increased supply, is in strong demand. Mixed American is quoted at 27s on spot, 24s 9d on passage. At to-day's market English wheats were slow and unchanged. Foreign wheats were steady.

Hops

NEW YORK, Dec. 13.—Prime California hops sold here yesterday at 35c ₩ lb, 1c in advance on the preceding day for similar goods. The market shows rather more tone, but the local demand is still slow.

NEW YORK, Dec. 16.—The outside moderate sales to brewers in the hop market are very quiet. Samples are shown of small lots of fair to good stocks, but very few first class is offered, and holders, therefore, are quite firm. The interior market is quiet. Foreign is unchanged and unimproved.

California Products at the East.

NEW YORK, Dec. 12.—The importations of Malagas this season are exceedingly small. California monopolizes the whole trade in ordinary to good fruit of this class.

Upward of 3000 bags of California Lima beans were received here this week, the greater part going to fill old orders.

Local Markets.

BARLEY

	Buyer Season. H.	Buyer Season. L.	Seller 1891. H.	Seller 1891. L.	Buyer 1890. H.	Buyer 1890. L.
Thursday	153	152½	....	....	....	....
Friday	153	150½	....	....	....	....
Saturday	150½	150	....	....	....	....
Monday	144	144½	105	105	146	145
Tuesday	149½	149	....	....	....	....

WHEAT

	Seller Season.	Buyer 1891.	Buyer 1890. Season.	Buyer Season.	Seller 1890
Thursday	h.	....	130½	141	....
	l.	....	130½	140½	....
Friday	h.	....	130½	....	....
	l.	....	130½	....	....
Saturday	h.	....	130½	141½	....
	l.	....	130½	141½	....
Monday	h.	....	130½	141½	....
	l.	....	130½	141	....
Tuesday	h.	140	130½	141	....
	l.	140½	130½	140½	....

BAGS—So far as we can learn there is nothing doing in grain bags. Quotations are nominally 6¼c for May-June delivery.

BARLEY—The local market has eased off under fair receipts and buyers not caring to anticipate their requirements. In futures, trading has been light. The following are to-day's Call Board sales:

Morning Session: Buyer season—100 tons, $1.48¾; 100, $1.48⅜; 200, $1.48 ₩ ctl. Afternoon Session: Buyer season—100 tons, $1.47⅜; 300, $1.47½ ₩ ctl.

BUTTER—The market appears to be working into better position for the selling interest. The dry weather is said to have curtailed again the output from some of the dairies. Pickled and solid butter is getting scarce. Eastern or Central butter is coming in, but the quality does not average choice.

CHEESE—The market is stiff at full prices under moderate receipts and a good demand.

EGGS—Californian have come in more freely, but Eastern are in fair receipt only. There is a good demand.

FLOUR—The market is barely steady at current quotations.

WHEAT — The sample market is firm under strong holding. The low prices and silver advancing in price appear to justify the holding. In futures, trading has been fair. The following are to-day's Call Board reported sales:

Morning Session: Buyer 1890—500 tons, $1.30⅛ ₩ ctl. Afternoon Session: Buyer 1890—100 tons, $1.30⅛. Buyer season—1800 tons, $1.40⅜ ₩ ctl.

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Dec. 16th, were as follows:

Flour, qr. sks.	174,807	Middlings, sks	2,568
Wheat, ctls.	385,579	Alfalfa, "	155
Barley, "	22,023	Chicory, bbls.	20
Rye, "	1,422	Broomcorn, bdls.	2
Oats, "	14,414	Hops, bls.	150
Corn, "	11,244	Wool, "	244
*Butter, "	427	Hay, tons	2,271
do bxs	177	Straw, "	157
do bbls	....	Wine, gals	183,660
do kegs	9	Brandy, "	25,110
do tubs	93	Raisins, bxs	6,469
do ½ do	101	Honey, cs	271
†Cheese, ctls	323	Walnuts, sks	236
do bxs	35	Flaxseed, sks	....
Eggs, doz	33 400	Mustard, sks	1,044
do " Eastern.	35,610	Almonds, sks	169
Beans, ctls	13.634	Peanuts, sks	555
Potatoes, sks	38,517	Popcorn, sks	469
Onions, "	744	Beet sugar, bbls.	50
Bran, sks.	11,472	do do sks	1,814
Buckwheat, sks	....		

*Overland 102 ctls. †Overland 306 ctls.

Cereals.

The local wheat market has held to fairly steady prices. In some localities buyers continue to pay an advance on San Francisco quotations. This, it is claimed, goes to show they consider prices low enough for an investment. It is claimed also that if they quoted full prices here it would have a tendency to put the market up on themselves. Buyers urge two things against the market—first, no spot vessels; second, a close money market. While there are no disengaged vessels here, there are quite a number due, with a large number due within the next 60 days. While money is scarce, it is temporary only, for in next month heavy disbursements will be made, all of which will go into circulation soon. Besides this, all present information coming from Washington City points to the dominant party dropping partisan legislation and taking up the financial situation with the view of passing a bill looking for speedy relief to the money market. It now looks as if this bill will be of a twofold character relief to the money market and at the same time advancing the market value. Higher prices for the latter means better prices for farm products, particularly wheat. Oregon and Washington continue to send us fair supplies of wheat. In this State (California) holders are slow in letting go, which keeps the market firm, for to get supplies buyers have to pay full up.

The San Francisco Produce Exchange gives the following stock of grain in California Dec, 1st, 1890:

LOCALITIES.	Flour, bbls.	Wheat, ctls.	Barley, ctls.	Oats, ctls.	Beans, sks.	Corn, ctls.	Rye, ctls
San Francisco and Oakland wharf, including grain afloat in harbor and in transit	30,076	774,936	241,588	46,280	45,896	68,066	4,705
Marin, Sonoma, Lake, Mendocino and Humboldt	5,481	34,900	8,364	2,761	84	1,280	30
Napa, Solano, Yolo and Colusa	7,523	2,472,520	41,955	120	110	60	
Sacramento, Yuba, Sutter, Butte, Tehama, Placer, Amador, Contra Costa and Alameda	99,200	1,140,240	62,756	8,700	2,500	5,720	
San Joaquin, Stanislaus, Merced, Fresno, Tulare and Kern	2,100	2,692,636	217,738	750	275	1,520	138
San Mateo, Santa Clara, San Benito, Santa Cruz and Monterey	13,745	4,140,570	335,098	1,940	4,234	10,278	28,317
San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange	21,670	548,800	337,498	4,234			3,000
San Bernardino and San Diego	8,320	394,281	307,411	2,000	115,149	229,550	65
Totals	118,129	12,108,923	1,616,655	61,085	174,291	302,921	37,170
June 1, 1890	81,000	4,871,663	1,004,467	61,265	30,603	91,111	15,892
December 1, 1889	116,225	15,300,368	3,321,960	129,356	107,419	134,916	66,640
June 1, 1889	100,565	2,092,420	2,052,630	113,245	60,415	35,995	10,215
December 1, 1888	95,966	19,819,630	4,487,650	129,175	225,320	268,747	7,040
June 1, 1888	71,920	3,881,200	2,063,450	62,096	33,675	82,200	800
January 1, 1888	60,370	9,730,660	1,229,900	65,380	109,225	121,300	4,300
January 1, 1887	50,825	2,700,400	726,300	42,400	74,405	72,320	1,350
January 1, 1886	80,695	7,815,860	1,302,600	47,400	243,560	136,250	44,650
January 1, 1885	102,325	1,302,600	1,302,600	31,100	107,700	27,925	1,080
July 1, 1890	107,180	13,708,389	1,620,500	114,350	107,449	81,240	32,575
October 1, 1890	70,800	5,382,200	603,150				
July 1, 1885							

Farmers are in want of rain, but all present indications point to a general rainstorm soon.

Barley has fluctuated slightly, but unfortunately for holders, to slightly lower figures. The supply is going into consumption quite rapidly. It now looks as if the season of 1891-92 will open upon stocks lower than for several seasons past. The acreage that will be seeded to barley depends largely upon the character of the weather from now on. There are many who hold to the opinion that there will be an increase of fully 50 per cent more, but this is entirely problematical, for nothing is more uncertain than California winters.

Corn has been coming in quite freely, causing a shading off in prices. The demand appears to be confined to actual requirements.

The receipts of oats have been freer, but the market remains firm under strong holding. The demand continues fair. It is confined to actual requirements—prices being too high to invite speculation. The supply in this State, Oregon and Washington is light.

Rye is steady, with a firm tone reported.

Feedstuff.

There is a continued good demand for ground feed. Bran, middlings and ground or rolled barley are firm, while cracked corn and feedmeal are easier.

Free receipts of hay have not caused lower prices, although for some consignments not placed previous to shipment concessions were necessary to effect sales without additional cost to sellers. The supply in the country is light, while natural feed, except in favored localities, is scarce. In some counties freer feeding of hay is necessary to keep stock in condition to withstand the cold weather.

Dairy Product Receipts 1890.

Months—	BUTTER. California.	Eastern.	Oregon.
January, lbs	656,300	.....	1,700
February	810,800	34,600	.....
March	1,276,700	.....	500
April	1,496,600	12,700	300
May	1 546,800	115,700	2,300
June	1,163 200	109,700	200
July	952,900	114,100	.....
August	1,184,100	164,200	9,900
September	1,024,500	109,300	1,200
October	653 500	36,000	4,500
November	438,900	177 600	2,200
Totals	11.123,000	873,900	22 800
1889	10,644,500	942 600	35,600

Months—	CHEESE. California.	Eastern.	Oregon.
January, lbs	293,100	60,300	600
February	314,000	129,400	300
March	478 300	98,800	100
April	624,000	135,700	2,900
May	761 900	47,000	200
June	469,500	98,400	800
July	483,800	103,700	3,700
August	484,600	187,100	4,700
September	383,000	101,000	1,700
October	850,500	156 400	. .
Tota's	4,642,700	1,117,800	15 600
1889	3,827,600	1,270,100	70,900

Months—	EGGS. California.	Eastern.	Oregon.
January, doz	107,774	213,720	.....
February	317,761	412,050	12,510
March	337,930	88,260	210
April	355,770	320,460	.....
May	263,234	414,030	.....
June	163,575	335,670	.....
July	218,529	310,200	510
August	184,425	202,560	900
September	111,355	345,630	660
October	144,045	351 980	1,800
November	175 995	457,860	.....
Totals	2,375,893	3,452,420	16,590
1889	2,643,303	2,857,030	13,350

Live-stock.

Bullocks are slightly higher, that is, well conditioned. Poor, scrubby stock are unchanged. Mutton sheep are fairly firm, as are hogs. The impression prevails that the latter will advance slightly. Milch cows and horses are unchanged.

The market for dressed cattle is quoted as follows [to obtain the price on foot, take off from the price for stall-fed one-third to one-half, according to the nature of the feed and time fed; and for grass-fed take off the price from 40 to 60 per cent]:

HOGS—On foot, light grain fed, 4½@4¾c ₩ lb dressed, 7@8c ₩ lb.; heavy, 4@4¼c ₩ lb.; dressed, 6½@7½c ₩ lb. Stock hogs, 3@3½c ₩ lb.

BEEF—Stall fed, 7@—c ₩ lb.; grass fed, extra, 6½@—c ₩ lb.; first quality, 5½@6c ₩ lb.; second quality 4¼@5c ₩ lb.; third quality, 3½c@4½ ₩ lb.; bulls and thin cows, 2@3c ₩ lb.

VEAL—Small, 8@9c ₩ lb.; large, 6@7½c.

MUTTON—Wethers, 7c ₩ lb.; ewes, 6½c ₩ lb. lamb, spring, 8@9c.

Fruit and Canned Goods.

The shipments of fruit and canned goods to the East by rail in November were as follows:

From	Canned Goods.	Dried Fruit.	Green.
San Francisco, lbs	4,232 670	657,900	.....
Los Angeles	77,330	144,610	42,750
Sacramento	734,800	2,127,470	928,380
San Jose	1,482,520	2,955,890	524,860
Marysville	328,290	210,910	.....
Colton	151,380	94,590	.....
Stockton	.....	699,910	180,300
Oakland	34,800	440,710	23,000
Totals	7,041,770	7,331,990	1,699,470
July	4,339,930	2,869,140	13,194,260
August	14,965,470	5,410,850	20,768 260
September	18,489,450	10,710,360	17,559,540
October	17,966,720	12,581,400	11,509,440
Since July 1	63,303,340	38,903,740	64,821,270

Fruits.

Grapes continue to come in sparingly; the demand is offish.

Berries are virtually out of the market.

Pears are in limited supply. The demand is chiefly for Winter Nelis.

Apples are cleaning up, causing a firmer tone for good keepers. Poor keepers are placed only at concessions. There are large quantities of specked and otherwise poor on the market. Choice good-keeping red apples of rich color are wanted, for which top prices are paid.

Oranges are coming in more freely, but as a large percentage are rather green, low prices must be accepted. For choice ripe oranges good prices are obtainable. It is claimed that from now on the quality will improve. Several carloads have been sent up north for Christmas trade.

Dried fruits are dull, with quotations hard to get from reliable parties. It is quite safe to state that the market will continue heavy until the spring trade starts up in 1891.

Raisins are easier. Eastern buyers are said to be making every conceivable excuse to throw up their purchases. If the market there was strong with higher figures quoted, then everything received would come up to representation. It is the market at the time purchases come to hand that makes the quality.

The total shipments of raisins from the State in the past month were 10,430,500 lbs. against 8,973,670 in October and 3,478,780 in September. None were sent East in July or August. During the five months ending Nov. 30, 1889, the shipments were as follows: Canned goods, 27,522,950 lbs.; dried fruit, 28,918,860 lbs.; green fruit, 38,773,690 lbs.; raisins, 15,147,780 lbs.

The totals for the past eleven months compare as follows with the shipments in 1889:

Articles.	Eleven Months— 1889.	1890.
Canned Goods	33,062,740	77,203,260
Dried Fruit	31,679,340	41 298,440
Green Fruit	62,812,500	86,286,500
Raisins	15,837,190	24,459,970
Totals	143,391,770	229,248,170

Vegetables.

In garden truck the market is becoming bare, making quotations altogether nominal and unreliable.

Cabbages are in free supply. The demand is fair. In root vegetables there is nothing of an important character to note.

Choice good-keeping onions have a firmer tone, due to smaller receipts and more disposition to hold for better prices. Poor keepers have to be sold on the market.

Notwithstanding the heavy receipts of potatoes, the market has a strong tone with some dealers talking up prices. It is reported that considerable are being stored in expectation of a better market. There are more inquiries for seed potatoes. It looks as if a very large acreage will be planted to potatoes in this State, Oregon and Washington.

Miscellaneous.

For the first time in this year, there is not a disengaged vessel in the port. An improvement in the wheat market abroad caused exporters to take up the vessels here.

In poultry the market has an easier tone, with turkeys lower. Large, well-conditioned hens and roosters are wanted. The most of the receipts are poor.

Beans have, as a rule, a weaker tone.

Hops have every appearance of improving after the holidays. The supply on this coast is very light. An increased acreage will be put out in this State, Oregon and Washington.

Wool still drags. Quotations are nominal.

Honey is in good supply. The market at the East is reported strong. The supply on this coast is light and the outlook not favorable for a large crop next year.

Exports by sea the past week aggregate as follows: Flour bbls, Sydney, 226; Central America, 3109; Mexico, 568; Panama, 200. Wheat ctls, Rio de Janeiro, 46,700; Antwerp, 125,068. Bran sks, Honolulu, 2000. Hay bls, Honolulu, 1225. Beans lbs, Apia, 1127; Auckland, 752. Dried fruits lbs, Apia, 650; Sydney, 3000. Corn ctls, Sydney, 2003; Central America, 621. Raisins boxes, Sydney, 50; Port Chalmers, 100; Mexico, 174. Broomcorn bls, Melbourne, 200. Canned fruits cases, Auckland, 200. Barley ctls, New York, 3888. Brandy gals, New York, 1600. Wine gals, New York, 67,082; Central America, 21,111; Mexico 2303; Panama, 1211; South America, 925.

Overland shipments the past month aggregate as follows: Beans lbs, 5,036,970; brandy gals, 301,650; dried fruits lbs, 7,331,990; green deciduous fruits, 1,678,770; honey lbs, 105,150; hops lbs, 431,860; nuts lbs, 721,703; potatoes lbs, 368,130; raisins lbs; 8,940,400; canned goods lbs, 2,809,100; wine gals, 4,874 620.

Dried Fruits, Etc.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices named, unless otherwise specified, are for fruit in sacks. Add for 50-lb boxes ½c per lb., and for 25-lb boxes ½c to 1c per lb.

Apples, sun-dried, quarters, common	6	@ -
" " " prime	7	@ -
" " " choice	8	@ -
" " sliced, common	7½	@
" " " prime	8	@
" " " choice	8½	@
Evap. choice, in 50 lb. boxes	10½	@ 11½
Apricots, sun-dried, unbleached, common	8	@
" " " prime	10	@
" " " choice	12	@ -
" " bleached, prime	16	@ -
" " " choice	17	@ -
" " " fancy	18	@ -
Evap. choice, in boxes	18	@ -
" fancy, "	19	@
Figs, sun-dried, black	3	@ 4
" white	—	@
" " washed		@
" " fancy	8	@ 10
" " pressed	9	@ 14
" Smyrna boxes	12	@ 14
" do sacks	10	@ 12½
Grapes, sun-dried, stemless	3½	@ 4
" unstemmed	2	@ 4
Nectarines, Red, sun-dried	10	@ 13
" evaporated, in boxes	13½	@ 14
" white, sun-dried	12	@ 1
" evaporated	17	@ 19
Peaches, sun-dried, unpeeled, common, bleached	8	@ -
" " " prime, "	10	@ -
" " " choice, "	13	@ -
" " " fancy	14	@ -
" evaporated " choice	15	@ -
" " " fancy	16	@ -
" sun-dried, peeled, prime, bleached	19	@ -
" " " choice	22	@ -
" " " fancy	24	@ -
" evaporated, " in boxes, choice	25	@ -
" " " fancy	27	@
Pears, sun-dried, quarters	7	@ 9
" " sliced	9	@ 10
" evaporated, " in boxes	10	@ 11½
" " " ring	12	@ 13
Plums, pitted, sun-dried	9½	@ 11
" " evap. in boxes, choice	11	@ 12
" " " fancy	13	@ 14
" unpitted	3½	@ 5
Prunes, Cal. French, ungraded sizes	9	@ 10
" " " graded 90 to 100	5	@ -
" " " " 80 to 90	9	@ -
" " " " 70 to 80	9½	@ -
" " " " 60 to 70	10	@ -
" " " " 50 to 60	11	@ -
" " " " 40 to 50	12	@ -

Fancy sell for more money

RAISINS.

Halves, quarters and eighths, 25, 50 and 75 cents higher respectively than whole box prices.

London Layers, choice ₩ bx	$1 75	@ 2 00
" fancy, "	2 10	@ 2 25
Layers, ₩ bx	1 50	@ 2 00
Loose Muscatels, common, ₩ bx	1 15	@ 1 35
" choice, "	1 50	@ 1 75
" fancy, "	1 80	@ 1 90
Unstemmed " in sacks, ₩ lb	4	@ 6
Stemmed " " "	4	@ 7

Seedless " " "		6 @ 7
" ℔ 20-lb bx		1 15 @ 1 25
" Sultanas, unbleached, in bxs		1 15 @ 1 25
" " bleached "		1 25 @ 1 30
CALIFORNIA HONEY.		
Comb, dark, 2-lb. frames, 60-lb. cases, ℔ lb		5 @ 6
" amber, " " cs. new "		7 @ 8
" white " " " "		11 @ 13
" " 1lb " " "		13½@ 15
Extracted, dark, 5-gal. cans, 2 cans to case, ℔ lb.		4½@ 5
" amber, " " "		5½@ 6½
" white, " " "		6½@ 7
Comb, 2-tins, 2 doz. to case, ℔ doz		— @ —
Extracted, " "		— @ —
" 4-lb. tins, 1 doz. "		— @ —
Beeswax, per pound		22½@ 25

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Dec. 17, 1890

BEANS AND PEAS.		Almonds, hd shl.	6 @ 7
Bayo, ctl.	— @ 4 00	Softshell	14 @ 15
Butter	2 75 @ 3 00	Paper shell	15 @ 16
Pea	2 50 @ 3 00	Brazil,	19 @ 20
Red	2 60 @ 3 00	Pecans mall	11 @ 14
Pink	2 00 @ 2 40	do large	17 @ 18
Small White	2 50 @ 2 80	Peanuts	4½@ 5½
Lima	3 40 @ 3 70	Filberts	11 @ 13
Fld Peas,blkeye	1 75 @ 2 10	Hickory	6 @ 8
do green	2 50 @ 3 00	Chestnuts	12 @ 15
do Nlles	1 60 @ 2 00	Pine nuts	7 @ 8
Split	5 @ —	ONIONS.	
BROOM CORN.		Silver Skin	2 50 @ 3 15
Choice toExtra	60 00 @ 75 00	POTATOES.	
Fair to Good	45 00 @ 55 00	Early Rose, sks.	90 @ 1 05
Poor	40 00 @ —	Tomales	1 05 @ 1 25
CHICORY.		Peerless	1 00 @ 1 10
California	5½@ 6	do Salinas	1 05 @ 1 20
German	6 @ 6¾	River Reds	1 20 @ 1 35
DAIRY PRODUCE, ETC.		Burbanks	1 00 @ 1 15
BUTTER.		do Salinas	1 30 @ 1 42½
Cal. Poor to fair,lb	15 @ 28½	Sweet sks	1 00 @ 2 50
do good to choice	31½@ 37½	POULTRY AND GAME.	
do Giltedged	39 @ 40	Hens, doz	4 00 @ 6 50
do pickled	27½@ 32½	Roosters,old	4 50 @ 5 50
do in kegs	22½@ 28	do young	4 50 @ 6 50
do Creamery rolls	40 @ 41	Broilers, small	3 00 @ 4 00
do Eastern tubs	30 @ 32½	do large	4 50 @ —
do do dairy	20 @ 27½	Fryers	4 50 @ 5 00
CHEESE.		Ducks, tame	4 00 @ 5 50
Cal choice mild	12 @ 13	do large	6 00 @ 7 50
do fair to good	10 @ 11½	Geese, pair	1 50 @ 2 00
do gilt edged	13 @ 14	Turkeys, Gob'r.	13 @ 15
Young America	13 @ 15	Turkeys, Hens	13 @ 15
N. York Cream.	13 @ 15	do dressed	14 @ 16
Western	11 @ 13	Pigeons	1 75 @ 2 50
EGGS.		Rabbits, doz	1 25 @ 1 50
Cal. ranch, doz.	35 @	Hare	1 50 @ 1 75
do do sel'cted	37½@	Quail	1 00 @ 1 25
do. store	30 @ —	Snipe, English.	1 25 @ 1 75
Eastern, fresh	25 @ 30	do Jack	50 @ 75
do selected	32½@ —	Ducks, Mallard	2 00 @ 3 00
FEED		do Canv'sback	3 00 @ 5 00
Bran, ton	22 00 @23 00	do Sprigs	1 50 @ 2 00
Feedmeal	27 00 @29 00	do Teal	75 @ —
Gr'd Barley	31 50 @33 00	do Widgeon	1 00 @ 1 25
Middlings	24 00 @26 00	do Small	75 @ 1 00
Oil Cake Meal	25 00 @27 00	Geese, G ay	2 50 @ 3 00
Manhattan Food	℔100 lbs 7 50	do white	1 25 @ 1 50
HAY		Brant	1 25 @ 2 00
Compressed	13 00 @18 00	Hunkers	4 00 @ 5 00
Wheat, per ton	12 00 @17 00	EGG FOOD.	
do choice	18 00 @ —	Manhattan, ℔ lb	12 @ —
Wheat and Oat	12 00 @15 50	PROVISIONS	
Wild Oats	12 00 @15 00	Cal. Bacon,he'vy,lb	10½@ 11
Tame do	12 00 @15 00	Medium	12 @ —
Barley	9 00 @13 00	Light	13 @ —
Barley and Oats	10 00 @14 00	Lard	9 @ 10½
Alfalfa	12 00 @13 50	Cal. Sm'k'd Beef	11 @ 12
Straw bale	70 @ 80	Hams, Cal	12½ @ 13
FLOUR.		do Eastern	13 @ 14
Extra, City Mills	4 10 @ 4 25	SEEDS.	
do Co'try Mills	4 00 @ 4 25	Alfalfa	9 @ 9½
Superfine	3 00 @ 3 50	Canary	3 @ 4
GRAIN, ETC.		Clover, Red	9½@ 10½
Barley, feed, ctl.	1 42½@ 1 50	White	17½@ 20
do Choice	1 51½@ —	Cotton	20 @ —
do Brewing	1 52½@ —	Flaxseed	2 @ 3
do do Choice	1 55 @ —	Hemp	4 @ 5
do do giltedg'd	1 60 @ —	Italian Rye Grass	10 @ 11
Chevalier once	1 57½@ 1 62½	Perennial	7 @ 9
do com to good	1 40 @ 1 52½	Millet, German	5 @ 6½
Buckwheat	1 40 @ 1 70	do Common	5 @ 6
Corn, White	1 30 @ —	Mustard, yellow	1 90 @ 2 25
Yellow, large	1 30 @ —	do Brown	2½ @ 3
do, small	1 30 @ —	Rape	1½@ 2
Oats, milling	1 93 @ 1 95	Ky. Blue Grass	25 @ 27
Surprise	1 90 @ 2 00	Sweet V. Grass	15 @ —
Choice feed,ch'c	1 90 @ —	Orchard	14 @ 16
do good	1 80 @ —	Hungarian	7½@ 8
do fair	1 70 @ —	Lawn	27½@ 40
do Gray	1 72½@ 1 80	Mesquit	7 @ 8
do Black	1 70 @ 1 90	Timothy	6 @ 7
do do for seed	2 00 @ 2 10	TALLOW.	
Rye	1 30 @ 1 36½	Crude, lb	3 @ 4
Wheat, milling.		Refined	6 @ —
Gilt edged	41½@ —	WOOL - SPRING, 1890	
do Choice	1 38½@ —	Humb't & Mend'cino	19 @ 24
do fair to good	1 33½@ —	Sac'to valley	15 @ 20
Shipping, cho'ce	1 33½@ —	Free Mountain	18 @ 24
do good	1 31½@ —	S Joaquin valley	12½@ 17
do fair	1 28½@ —	do mountain	17 @ 22
Sonora	1 27½@ 1 31½	Cala'v & F'th'll	15 @ 24
HIDES.		Oregon Eastern	13 @ 22
Dry light to h'vy	10 @ 11	do valley	20 @ 25
Salted	5 @ 8½	So'n Coast, def.	10 @ 14
HOPS.		So'n Coast, free	12½@ 19
Oregon, 1890	30 @ 40	FALL—1890.	
Cal 1890 Choice	37½@ 40	North'n, choice	16 @ 18½
do Fair to G'd	30 @ 35	do defective	14 @ 16
NUTS—JOBBING.		Mountain Free	13 @ 15½
Walnuts, Cal. lb	8 @ 9	S. Joaquin, def.	9 @ 11½
do Ch'ce	9 @ 11	Southern do	9 @ 11½

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Dec. 17, 1890.

Bananas, bunch	1 50 @ 2 75	do good	90 @ 1 10
Cranberries	10 50 @14 00	do choice	1 20 @ 1 50
Limes, Mex	4 00 @ 5 50	do Red bx	1 25 @ 1 75
Lemons, Cal., bx.	2 00 @ 5 00	Grapes, box	15 @ 1 00
do Sicily, bx.	7 00 @ 8 00	Lady apples, box	1 50 @ 1 75
do Malaga	7 00 @ 8 50	VEGETABLES.	
Oranges.		Okra, dry, lb	10 @ 17½
do *Winters	1 25 @ —	Parsnips, ctl	1 25 @ —
do *Vacaville	1 00 @ 1 50	Peppers, dry, lb	15 @ 30
Navel Oranges.		Turnips, ctl	75 @ —
do †Riverside	4 00 @ 5 00	Beets, sk	— @ 1 00
Pineapples, doz.	3 00 @ 5 00	Cabbage, 100 lbs	50 @ 60
Pears, bx	50 @ 1 00	Carrots, sk	30 @ 45
do Winter Nelis	1 25 @ 1 75	Marrowfat, ton	12 00 @15 00
Apples, com box	50 @ 75	Hubbard	5 00 @20 00
		Garlic, lb	8 @ 10

* Small box. † Large box.

Rope.

Baling, Duplex, lb	10
" Manilla, lb	13
Twine, for hops, balls, tarred, lb, Manilla	15
" " grape vine, balls, lb "	14½
" " " coils, lb "	14½
" spring, lb	16
" binder (650 ft. to lb), lb	14

Duplex twine 3c per lb less.

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PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by officer in charge of branch Signal Office, Division of the Pacific.]

DATE, Dec. 10-16.	Olympia. Rain	Temp.	Wind	Weather	Portland. Rain	Temp	Wind	Weather	Eureka. Rain	Temp	Wind	Weather	Red Bluff. Rain	Temp.	Wind	Weather	Sacramento. Rain	Temp	Wind	Weather	S.Francisco. Rain	Temp	Wind	Weather	Fresno. Rain	Temp	Wind	Weather	Keeler. Rain	Temp	Wind	Weather	Los Angeles. Rain	Temp	Wind	Weather	San Diego. Rain	Temp	Wind	Weather
W.	.04	46	SW	Cy.	20	41	SW	Rn.	.00	48	Nw	Cl.	.00	50	S E	Cl.	.00	42	0	Cl.	00	50	Nw	Cl.	00	3	W	Fy	.00	11	SW	Cl	.00	6	W	Cy	.00	60	W	P C
T.	.00	48	S	Cy.	.00	4	S	P C	.00	52	N E	Cl.	.02	38	S	Fy.	.00	40	0	Cy.	00	46	Nw	Cl.	00	40	W	Cl	.00	40	S E	Cl	00	60	W	Cl	.00	60	Nw	Cl.
F.	.30	40	SW	Cl	.10	48	W	Cy.	.06	52	S E	Cy.	.00	42	0	Cy.	.00	36	N	Cy.	00	46	N E	Cy.	.00	28	N	Fy	.00	44	S	Cl	00	62	W	Cl	00	6	Nw	Cl.
S.	.00	42	S	Cy.	.00	38	S	Cy.	.04	50	N	P C	.00	48	S	Cl.	.00	44	S E	Cy.	00	50	Nw	Cy	36	40	S	Cl.	.00	44	N	C.	.00	62	N	Cl.	00	60	Nw	Cl.
S.	.34	38	S	Rn.	.50	44	S	Cy.	.02	50	N	Cl.	.00	52	0	Cl.	.00	42	N	Cy	00	52	0	Cl.	00	18	E	Cl.	00	44	N	P C	00	60	W				W	Cl
M.	.04	48	S	Cy.	.00	48	S	Cy.	.00	48	N	Cl.	.00	58	Nw	Cl.	.00	44	S E	P C	00	50	N	Cy.	.01	42	S	Cy	.00	8	0	Cy	00	58	Nw	Cy			N	Cy
T.	.00	52	S	Cy.	.00	48	Nw	Cl.	....	....	....	....	.00	56	N	Cl.	.00	52	Nw	Cl.	.00	48	Nw	Cl	.00	52	Nw	Cy.	.00	44	SW	C		58	W	Cy.	.10	60	SW	P C
	.72			....	.80	....	....	....	....	....	....	....	.02	..	..	..	00	..	..	..	00	....	..	..	.00	....	..	..	..	01	..	..	..	..	..	..	..	..	..	..	..

EXPLANATION. Cl. for clear; Cy., cloudy; Fr., fair; Clm., calm; .. indicates too small to measure. Temperature, wind and weather at 5 a.m. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall. P C, partly cloudy. Rn., rain.

THE

RAISIN INDUSTRY

A PRACTICAL TREATISE ON THE RAISIN GRAPES, THEIR HISTORY, CULTURE AND CURING.

By GUSTAV EISEN.

The house of H. S. CROCKER & Co. may take pride in this handsome volume as a sample of their bookwork. It is a large volume of over 200 pages, with about a dozen fine illustrations, germane to the subject, and printed on heavy paper, with wide margins. Intelligent readers will at once be struck, on opening the book, with the wide range and masterly handling of the subject. It contains a vast fund of important information, and every page of it is eminently practical. The table of contents will justify this statement. It is a fair and full account of raisin growing in all parts of the State adapted to the business. The author knows the business in all its details, and he can make the reader understand it.

There is space here for but few sentences from notices of the book. The October *California* says: "It is a work of singular merit. "There is not a dull page in the book. Its charm lies in the vigorous and lucid treatment of the subject. The language is luminous, apt and strong, albeit the idiom reveals the hand of a foreign master." Prof. E. W. Hilgard, of the State University, writes: "It is certainly a most timely work, and one that the author's training and experience have fitted him peculiarly to undertake. I congratulate him and the raisin industry of the State upon the forthcoming work, in which I recognize from the outset the Germanic thoroughness and a certain adherence to facts that do not always characterize such publications." Prof. E. J. Wickson, also of the University, says: "I discern in the work a breadth of information and a faithfulness in details of practice which will constitute it the standard treatise on the raisin. I congratulate the author sincerely upon his most excellent work." Col. Forsyth of Fresno, the World's Fair Commissioner, writes: "It is a concise history of raisin grape growing, and is a practical guide for the raisin growers, containing full and reliable information about how to plant and grow the vines, and how to cure and pack the raisins. With this book in hand the inexperienced farmer or clerk can safely engage in raisin growing with expectation of success from the very start." From a long review by the San Francisco *Chronicle:* "In this work the author has performed a much-needed task, going into the details of every branch of what has become one of the foremost industries of California. No man better qualified for the enterprise could have been found." It is also commended by other leading journals in the same spirit.

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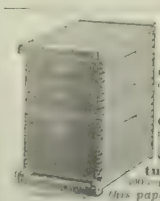
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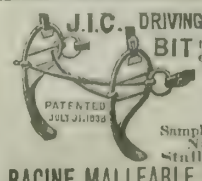
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Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS U. S. and Foreign Patent Agency, the following are worthy of special mention:

CULTIVATOR.—Robert Simpson, Hanford, Cal. No. 441,382. Dated Nov. 25, 1890. The novelty in this cultivator consists in connection with a wheel shaft and suspended toothed-frame of rigid pole and guides and supports for holding the frame in place, and preventing it from swinging from side to side, and for raising and depressing it. The cultivator is prevented from swaying outside the line of the wheels, and it can be easily guided to avoid a root or tree. It may be raised to avoid anything and can be held at any desired depth in the ground. The draft is brought directly upon the pole, and the axle is relieved from this strain.

FERMENTING-TANK WINE-STRAINER.—John C. Jones, Napa, Cal. No. 441,419. Dated Nov. 25, 1890. This device is to be used in connection with the discharge of wine from the tanks in which it is fermented. It consists of a removable strainer and means for clearing it while in position. Within the tank are vertical channeled guides on each side of the discharge opening and extending to the top of the tank; in these guides is fitted a vertically movable box, and upon the interior of the box are adjustable rods forming a screen; a transverse bar travels upon the outer rods as guides, said bar having tongues which project between the intermediate rods, and a rod is arranged to reciprocate the transverse bar.

FRUIT-DRYING TRAY.—Wendell P. Hammon, Oakland, and Charles J. Sechrist, San Francisco, Cal. No. 441,871. Dated Dec. 2, 1890. This tray consists of a frame having a perforated paper bottom and a spring-actuated bar for holding the bottom in place. The paper bottom rests upon a wire netting or frame. The perforations in the bottom permit free circulation of air, and the fruit will be dried both from above and below. When soiled, the paper bottom can readily be removed and another substituted.

HOOP-COUPLING. — Lamartine R. Fulda, San Francisco, Cal., assignor of one-half to Edward Fulda, of same place. No. 441,869. Dated Dec. 2, 1890. This is an adjustable coupling for tank hoops. It consists of a clamp formed of screw-eye bolts bent and connected in such a manner that the ends of the hoop may be attached to it, and whenever the hoop becomes loose it may be tightened by screwing up the clamp. There are two screw bolts, each having one end threaded and the other bent at right angles and formed with an eye to receive the threaded end of the opposite bolt, the bent ends being adapted to pass through and hold the looped ends of the hoop

FRUIT GATHERER.—Florian Stanke, San Francisco, Cal. No. 441,859. Dated Dec. 2, 1890. This device belongs to that class of pruning shears and fruit-pickers or gatherers in which the shears are fitted to the end of a long pole, and are adapted to cut the branches or stems of the fruit, the fruit then dropping into a hopper on the head of the pole directly underneath the shears, and is directed by a suitable conveyor to a receptacle below. The object of this invention is to provide a device of this character which is adapted to cut fruit conveniently, no matter in what position it may be located, and to convey it below without bruising it, and also to provide a shears not only adapted for the picking of fruit, but for general pruning purposes. The essential improvement lies in the shears, which are formed with opposing jaws in line with the handles, and a second set of opposing jaws extending from the ends of the first jaws and at an angle therewith. This peculiar construction enables the shears to reach both horizontal and vertical stems conveniently. The mouth or hopper of the conveyor is made with a barred or grated open front, so that the operation of the shears may be readily seen. The conveyor itself has a tortuous passage which serves to break the fall of the descending fruit.

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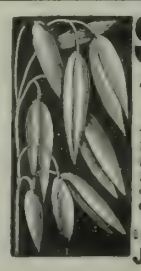
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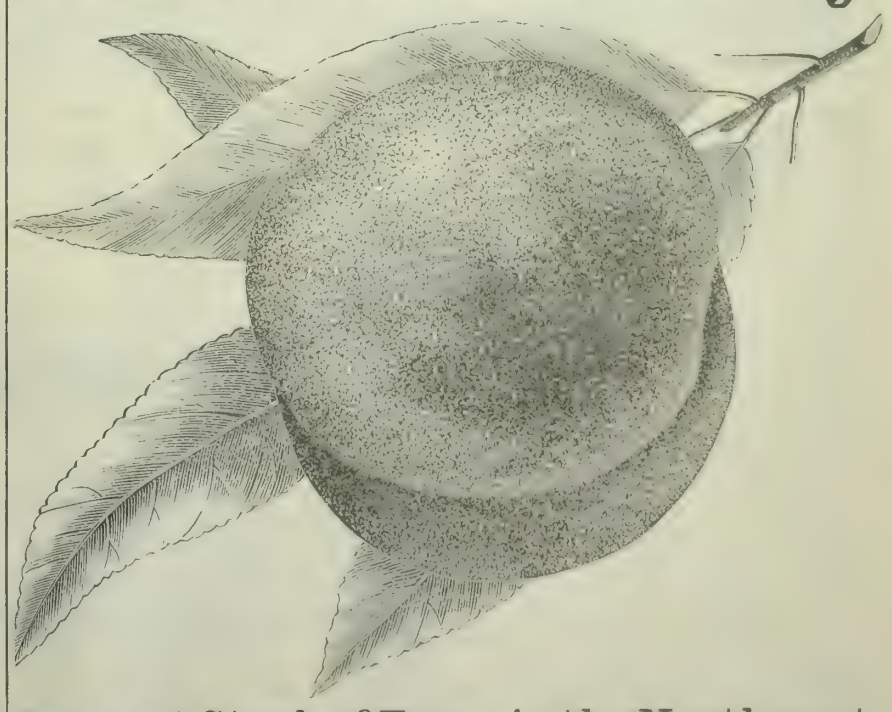
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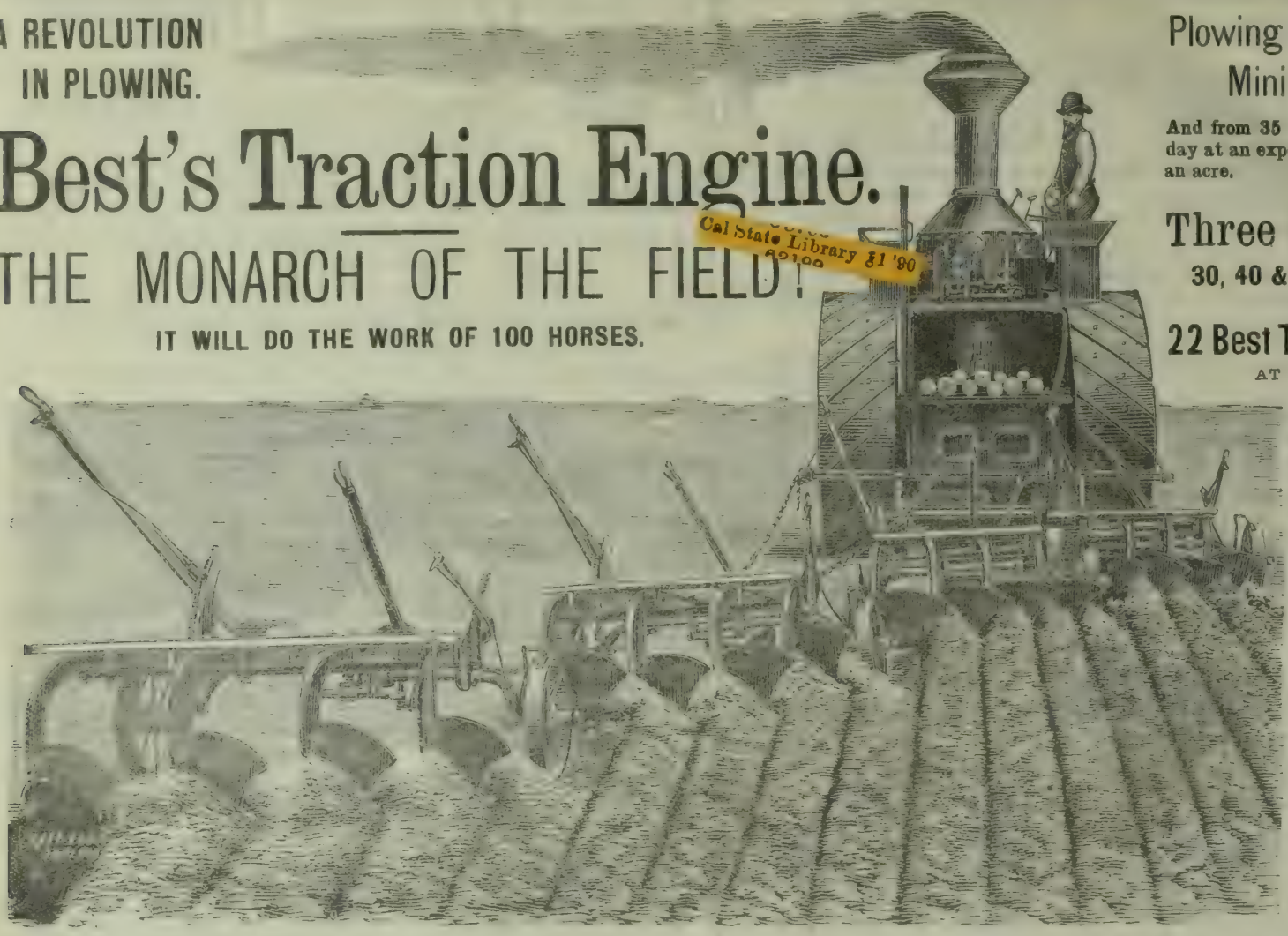
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Close of the Volume.

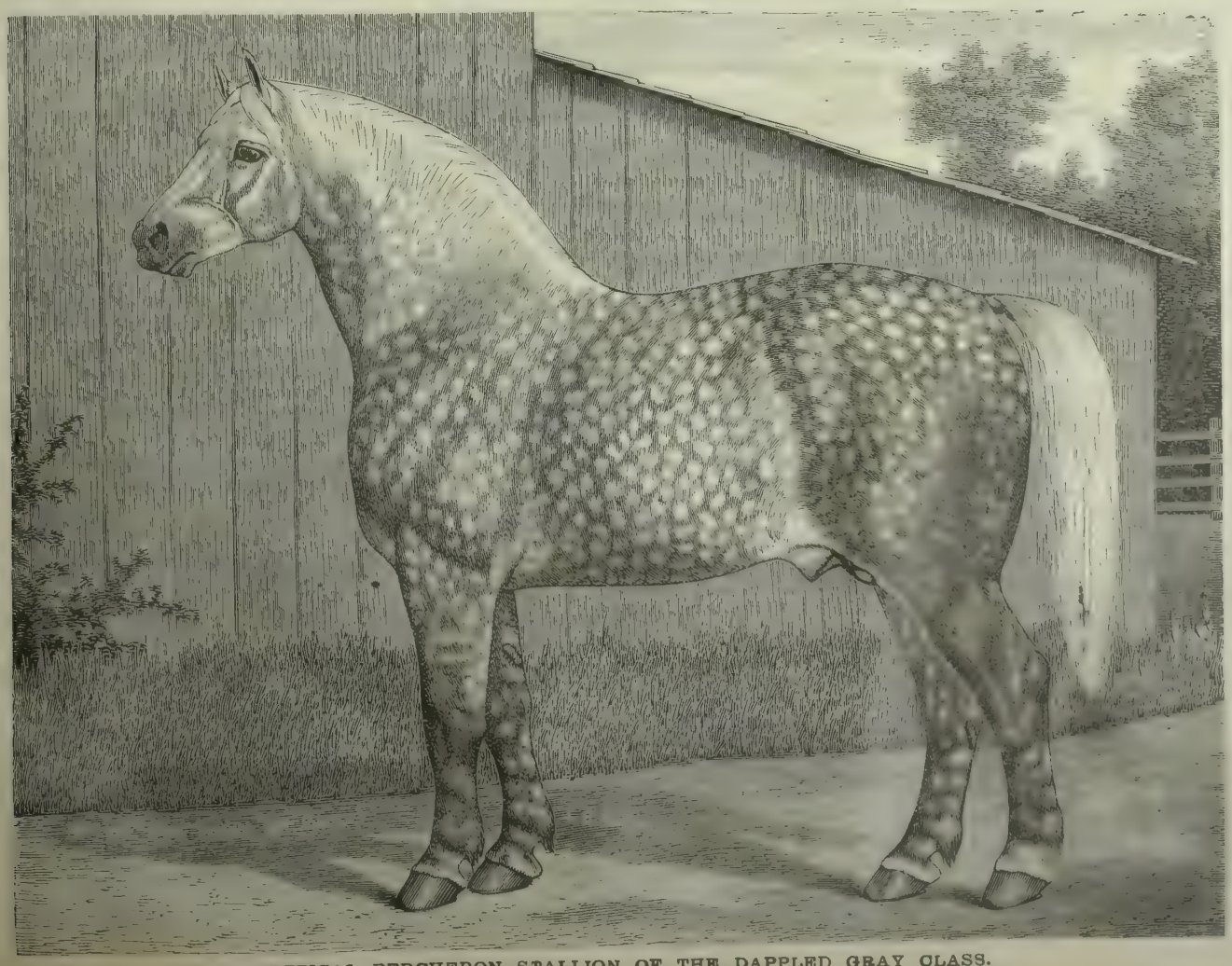
This issue closes Volume XL of the pacific years, and the twentieth year of the history of our journal. One more year and the RURAL will "come of age" and be entitled to vote—then look out for reforms in public affairs and a general righting of things. If youth contains the promise of age, then the RURAL looks forward with confidence to its maturity, for it has had a steady youth—the whole score of years in the same hands which brought its first issue to the light in January, 1871.

On the last page of this issue is our usual index, which will enable the reader to readily turn to any article which has appeared during the last half year. We constantly bear in mind the value which our subscribers find in the RURAL, not only as a chronicler of our progress in agricultural arts, but as an expounder of improved and progressive methods. Thus the RURAL becomes a practical handbook of agricultural art and practice, and the index makes its treasures readily available. Fasten the issues together with a patent binder; sew them tightly with a strong cord, or, if you please, have the bookbinder make a volume of them, and you have information which cannot be found in such quantity and in such explicit detail in any other form.

With the next volume we begin anew the work to which our lives are devoted. We trust to take with us into the new volume all old friends and many new ones, and to return them full value for their esteemed confidence and patronage.



ENGLISH SHIRE STALLION BAYARD WEIGHING 1860 POUNDS AT 23 MONTHS.



A TYPICAL PERCHERON STALLION OF THE DAPPLED GRAY CLASS.

Typical Draft Stallions.

We give herewith engravings of representative specimens of the two leading draft breeds, the English Shire and the Percheron. These animals show individuality somewhat different from those we have recently portrayed in the RURAL, and are, therefore, of interest. The comments which we have previously made upon the breeds will serve to generally characterize these animals. Both breeds are powerful in muscle and great in weight, yet coupled with a briskness of motion and a wide-awake disposition which would hardly be expected with such weight. Consequently they are valuable not alone for moving heavy weights but for much work which requires a good pace. This is a very important point in improving the work horses of the country by crossing with these heavy breeds, because they impart a spirited disposition as well as greater weight and strength and the grades become of the greatest value for farm and road work. Fortunately there are many fine draft stallions scattered over the State and more are constantly being brought in, and the condition of our work stock is continually improving. On country roads and on city streets the influence of our imported sires is very noticeable, and both those who have had enterprise to import and those who had enterprise to invest in and use them are both entitled to much credit.

SECRETARY LELONG of the State Board of Horticulture has just returned from a brief visit to Los Angeles and the San Gabriel valley. At every place he went to, horticulturists were busy getting ground ready for planting, and his judgment is that a greater acreage will be put in oranges this season than for many years. Nurserymen have sold out long ago, and considerable Florida orange stock is coming in.

THE STOCK YARD.

The American Fat-Stock Show.

EDITORS PRESS: — The thirteenth annual meeting of this show was held at Chicago last month, and according to the account given in the *Breeders' Gazette*, it was below the average of former exhibitions. The Hereford breeders came forward with 50 head, against 31 head of Shorthorns and 28 head of grades and cross-bred animals, while the Polled Angus and Galloway classes were left without a single representative pure-bred animal.

The *Gazette*, which I shall largely quote, says: "The cattle show was not the exhibition we have seen in earlier days. The animals were hidden away behind the doors, under the amphitheater, in dark corners, and everywhere in fact except where they could be seen. * * * Not only was the arrangement of quarters forced upon the board a very bad one, but there was not the usual big run of fine cattle. Then, to make matters worse, everybody had to grope in the dark all through the week, for lack of particulars in regard to the various entries, because the catalogue was not delivered by the printers till half the animals enumerated in it had been judged."

Better late than never, the never being the rule in California, and I have often thought what a boon it would be to visitors at our best live-stock shows to be able to go about with catalogue in hand, and thus know the age, owner, breeder and pedigree, as much as necessary for the time being, of each and every animal, without having to hunt up the attendants or owner, often busy, every time one wanted to see the animals. How much better one would know what he was looking at, and at the same time be able to write down whatever he thought, be it good or not good, of each animal and herd, separately, if he chose to do so, for future reference. This would be a help to many a man looking for breeding stock, with the idea of buying some time in the near future, more especially to beginners and others not well acquainted with the pure-bred herds, of any breed, in that part of the country where the exhibition is held.

But to return to the stock show. The single-judge system now prevails at many of the leading cattle shows, both in this country and in Great Britain. All the classes at Chicago were judged on that principle.

The Shorthorns

Were brought out first, and only numbered six in the 3-year-old class in which Mr. W. H. Renick's "Nonesuch" was the winner, this steer being afterward adjudged the champion honors of the show.

There were fifteen steers in the 2-year-old ring, and thirteen in the yearling Shorthorn ring, among which were some rare good ones, one of which is described as being "a nicely-finished, wide-ribbed, low-legged fellow, full of good, solid flesh." Of another it said—a yearling—"His spread and depth of rib was simply prodigious, his loin was broad and full; his quarters long, deep and heavy; his twist filled to his hocks, and his thighs of unusual strength. In wealth of flesh, breadth of beam, and shortness of leg he was, in brief, the outstanding animal of the Shorthorn class. But the unevenness of flesh manifested along blades and ribs led the butcher judge to pass him for the blue in favor of the leveler Amelia's Hillhurst. The latter is a son of the well-known show bull Oscar 88290, out of an Acomb cow, and the impress of his Bates-bred dam is quite manifest in his superior gayety and finish. He has fine thickness of flesh on top, and the meat, which is nicely put on, though a trifle soft, is carried well down on the rib, but wants width at top as well as filling in twist, thighs and flanks."

These are "wants" hard to pass over, one would think, in a prize-winning steer, and for my part I would risk breeding from an animal with some flesh laid on a little unevenly, but still having abundance of both width and depth of carcass, to one lacking in the essential principles of *width and depth*, for where these are there is very apt to be a robust constitution, but where they are not the animal is pretty sure of being deficient in hardihood and vigor. By this I do not by any means infer that the premium was not placed right, but merely express my partiality for breeding animals with plenty of substance—weight and quality.

In the calf class there were seven entries; the two winners belonging to Mr. J. M. Turner are the get of Grand Duke of Woodburn 86825, a highly inbred bull of the Duchess family of Shorthorns.

The winning calf Romulus has the greatest weight for age of any animal on exhibition; at 355 days old, he weighed 1105 pounds, or 3.11 pounds per day since date of birth. This shows that there is still thrift and vigor in some of the most fashionably bred Bates Shorthorns, notwithstanding a good deal that has been asserted to the contrary.

Herefords.

"The fat-stock show of 1890 will long be memorable for its extraordinary display of pure-bred Herefords. Nothing equal to it, as a whole, has ever been presented by the breeders of 'White Faces' at previous exhibitions. In fact, all other pure breeds made but a sorry show in comparison."

In the three-year-old class, nine good bullocks put in their appearance, the first premium going to Mr. Culbertson's Bowdoin 11th, age 1128 days, weight 1915 pounds. "This steer went into the fight the most evenly-balanced bullock of all animals of his age on exhibition, with his great weight carried in admirable form. He was evenly filled with deep, mellow flesh at almost every point." The second went to Mr. Adams Earl's Earlington 8th, age 1290 days, weight 1170 pounds. "His tremendous spread of rib, full neck vein, heavy plates, thick, broad loin, low twist and nearness to the ground, certainly entitled him to bear Bowdoin company." The third prize bullock is spoken of as being full of good flesh, but not so neat in his bone as his more successful competitors.

"The two-year-old Herefords were probably as strong a single ring of cattle as ever stood beneath the exposition dome—twelve in number and altogether excellent in their uniform high quality."

Mr. Culbertson's Hindoo was placed first. It is rare, indeed, that any one exhibition can capture two blue ribbons in successive rings at this show. It is altogether exceptional when the same owner accomplishes this feat in the face of competition unprecedented in his class, but the veteran importer and breeder, Mr. C. M. Culbertson, has this great record to his credit. Mr. Earl took second premium with his Merry Boy, age 1075 days, weight 1910 pounds. The third prize was awarded to J. R. Price & Son's Coupon, age 1068 days, weight 1660 pounds.

There was no "let-up" to the number of "White Faces" pressing for recognition. Hereford breeders seemed bent on massing their well-ripened bullocks in such battalions as would emphasize beyond all question the claims of their favorites as beef-makers maturing at an early age. A long line of nineteen sappy yearlings, with mossy coats, broad backs and short legs were the despair of the single judge for the better part of an hour.

The first premium steer was Mr. T. Clark's Abel, well balanced fore and aft and full of mellow flesh.

Mr. Culbertson's Pathmaster was second, a little uneven on top and not fully filled on the quarter, but with his well-sprung ribs almost faultlessly covered and his chine a marvel of thickness.

For third Mr. Earl's Edison was chosen, and as a specimen of neatness, with thickness and breadth without hight, he had no superior in the lot.

Fat Hereford calves are always to be admired. In a class of ten, Mr. Adams Earl had an outstanding winner in Earl Wilton 43d, a burly 980-pound calf, full of hair and flesh.

Mr. Ponting's ripe Defiance calf with his rare loin, was placed second and Mr. Earl's Effel third.

The sweepstakes of the class, to the amazement of the spectators and exhibitors, was sent by Mr. McKay to Mr. Earl's calf-winner Earl Wilton 43d. The *Gazette* does not question the fact that the youngster selected for this high honor is extraordinarily developed for his age, etc., but it is rather too rude an overturning of generally accepted notions of propriety in such cases to pass by such bullocks as Bowdoin 11th and Hindoo Abel in a championship competition, no matter how perfect a calf may figure in the case.

The Devons dwindled this year to a trio, while the Holstein-Friesians never before pressed their claims so strongly as beef-producers.

Grades and Crosses.

The show in this class was not up to those of former years in point either of extent or excellence. Hereford breeders did their full share, but with few exceptions, the Shorthorns were not up to the mark. The Aberdeen-Angus acquired prominence only by their entire absence, and the Galloways had forward but a single representative, the third-premium animal in the three-year-old class, the first and second premiums going to Shorthorn grades.

In the two-year-old and yearling classes the winners had a preponderance of Hereford blood, though some were half Shorthorn and Hereford.

The winner in the calf class was three-fourths Shorthorn and one fourth native, said to be the only good calf in a class of three.

Sweepstakes.

Sweepstakes by Ages.—Mr. Renick's pure-bred Shorthorn Nonesuch was the champion three-year-old of the show over Mr. Culbertson's Hereford Bowdoin 11th.

Mr. Emendorf's grade steer Charley won sweepstakes premium for two-year-olds and the cross bred Hereford Shorthorn Sultan, belonging to Mr. Adams Earl, was winner in the yearling sweepstake class, the same owner's Earl Wilton 43d winning the sweepstakes premium in the calf class.

For the *Breeders' Gazette* challenge shield there was keen competition. The prize being awarded to to the Hereford steer Bowdoin 11th, makes the prize the absolute property of Mr. Culbertson, this being the third steer he has produced capable of bearing away the shield.

Grand Sweepstakes.—The rules of the show limited this competition to Renick's three-year-old Shorthorn Nonesuch, Emendorf's grade Charley, Morse's Devon, Earl's Hereford calf and Waddel's spayed black and white heifer. The Shorthorn had the advantage in age and scale, and barring his plain shoulders was a bullock that was indeed difficult to get over.

The *Gazette* medal-winner was not in. The judge lingered for quite awhile over Mr. Earl's magnificently ripened calf before passing the championship of the yard to the Shorthorn. (The calf had been awarded the Hereford sweepstake premium over all ages by the same judge.) With Nonesuch as the recipient of the society's chief honor, and Bowdoin 11th as the challenge shield champion, it is safe to say that the two strongest all-round bullocks of the show received the two most valuable prizes of the week, but as the Shorthorn beat the Hereford for the 3-year-old championship of the hall, he is entitled to all the glory that attaches to fighting his way successfully over all barriers from the beginning to the end.

The Carcass Competition.

In the dressed carcass competition Mr. Van Natta's Hereford Bendigo was awarded the prize for three-year-olds—four entries. None of the beef in this lot was of the best, but in this case the carcass designated was fairly entitled to the distinction given. The champion Shorthorn Nonesuch killed out a great lot of flesh, but it was overripe and lacking in even distribution of fat. The same may be said of the Galloway, with the additional objection that it was much too dark in color.

In two-year-olds the carcass of the Champion grade of the show, Mr. Emendorf's Charley, was chosen, but not without numerous protestations loud and deep. Compared either with the Herefords Sensation and Coupon, or the Shorthorn Victor, the award may fairly be challenged. If richness was desired, the Shorthorn had it in abundance, with less of the oily fats which made the prize carcass so fat and sleazy, but it was anything but attractive to the eye or touch.

A prettier lot of beef than the Hereford steer Sensation cut out has indeed never been seen upon the boards at these shows, unless we except the Sussex, and a majority of those who compared it with the prize carcass would have given it the preference.

There was not a bad carcass in the yearling class and Mr. Earl's Sultan was awarded the prize without leaving room for any severe criticism.

The ribbon for carcass showing greatest percentage of edible meat was awarded to a grade Hereford.

The ticket for steer dressing, greatest percentage of net to gross, went to Mr. Renick's Nonesuch, the champion Shorthorn, at 68 per cent, although the record shows that Morse's Devon weighed out in the same notch.

I have enumerated the winners of the principal prizes, to obtain which the Shorthorn and Hereford breeders have sacrificed animals which might have become noted sires had they been kept as such. Many of the prize-winning animals are themselves descended from prize-winners in the breeding-classes at some of the best shows, and some of them have unexceptional pedigrees as well, which makes it still more creditable to those breeders who have made such sacrifice of good and well-bred animals for the sake of upholding the merits of the respective breeds of cattle for the production of beef.

ROBERT ASHBURNER.

Baden Station, San Mateo Co., Cal.

FARMERS' INSTITUTES.

The First Institute in California.

The first assemblage of California agriculturists under the name of a Farmers' Institute was held in Tulare on December 10th. An outline of the proceedings at this pioneer Institute meeting is given in the Tulare *Register* as follows:

Despite the errors in the announcements, fixing the date for holding a Farmers' Institute at Tulare, quite a number of farmers and fruit growers gathered at Goldman's hall yesterday afternoon, and a profitable session was the result. Rev. N. W. Motheral of Hanford occupied the chair, and Mr. J. W. Mackie of Tulare was made secretary.

Prof. E. W. Hilgard was present, and being asked to give his views in regard to Farmers' Institutes, favored the audience with a little talk upon the Institutes of Wisconsin and other Western States, throwing much light upon the subject. One of the most important advantages to be gained by the Institute was the interchange of experiences of practical men and the wide publicity given the results of experiments. Almost every grower experimented more or less, but the results of such experiments, while important, were not known beyond the confines of the immediate neighborhood, and often not beyond the boundaries of the farm. The professor thought that in fruit-growing it was specially necessary to have, accessible to all, the results of the experiences of all, for in no vocation of man is there greater necessity for a discriminating intelligence than in fruit and vine culture.

Upon motion, the former Committee upon Permanent Organization, consisting of N. W. Motheral, John Tuohy and J. W. Mackie, was continued, and the names of I. H. Thomas and A. J. Pillsbury were added thereto.

The question up for discussion was: "What, how and when to plant;" and while all the talkers did not stick to their text very closely, a tremendous mass of information of one kind or another was elicited, and much of it was important.

Mr. I. H. Thomas was put upon the witness-stand and questioned by the chairman for the benefit of the assembled fruit-growers. A 40-acre farm was taken as the typical farm of the future, and the question was as to what it should be planted to.

Mr. Thomas thought that if it were good, sub-irrigated land, he would plant 20 acres to prunes and 20 to peaches, choosing for the latter the Foster, Susquehanna and Late Crawford. These are all yellow freestones, and are good for drying, canning or Eastern shipping, and they ripen successively, giving time to take care of one before the other is ready, and thereby preventing a rush.

Questioned as to George's Late, so highly prized at Bakersfield and upon the Sacramento, Mr. Thomas said that it was not a good peach for this section of the State. It was its size which sold it; it ripened from the center out and was neither fit to dry nor to can, and only to sell upon its good looks. Mr. James Morton corroborated Mr. Thomas' statement, adding that he had boxes of the fruit sent to him from Bakersfield and had tested it thoroughly, pronouncing it quite unfit for any use.

It was the general sentiment of all that if the land were wet land, sub-irrigated, 20 acres or so of the 40 should be set to prunes, but if not wet, it should be planted to raisin grapes. Raisin grapes should not be planted on heavy, wet land, and prunes on light, dry soils. But at all events, one-half the farm should be set to peaches, with, perhaps, some nectarines, but for a good, all-around stand-by, nothing could beat good peaches. Raisins and prunes might some time suffer from overproduction, but peaches, never.

Speaking of prunes, the sentiment was that for Tulare county at least, peach root was the best. The Myrobolan does not permit the tree to grow as large as the peach and the root is not strong enough to support the tree when it reaches maturity. Side by side, the prunes upon peach roots bear as much again as upon Myrobolan. Prof. Hilgard stated that prunes will not do upon apricot roots.

Speaking of the future outlook for prunes and of competition between this valley and the coast counties, Mr. Thomas thought that we could, upon our best prune land, produce twice as many pounds to the tree as Santa Clara county, and we would have much fewer prunes to the pound; that if competition did arise betwixt us and the coast counties, it would be bad on the coast counties. Still, there were 90,000,000 pounds of prunes imported from France each year, and until that was cut off and the natural increased demand supplied, there need be no fear of overproduction in prunes.

The matter of drying peaches came up, and Mr. Morton was asked about the advisability of sulphuring. Being in the fruit business for profit, his study was to give the market what it wanted and would pay best for, and as his sulphured fruit brought five cents per pound more than unsulphured fruit and it cost very little to sulphur, he sulphured. He thought, also, yellow peaches much preferable to white for drying. The white turned to an unpleasant gray and did not sell as well, and the selling qualities are the ones that should rule.

During the discussion of this subject, facts dropped out which show that the thing we call the market is a peculiar institution. For instance, peaches like George's Cling that have no merit except size sell in preference to others that lack no merit except size, and all yellow peaches have to be sold as Crawfords. The market won't touch a Susquehanna under that name but will snap it up eagerly under a Crawford label, although a better peach than the Crawford. There is nothing which growers have to study more closely than the market. The market prefers old stand-bys and is slow in taking hold of anything new. For a good while nectarines would not go. Now they are in good demand and sell higher than peaches.

Speaking of the shipping qualities of fruits grown upon irrigated land, Mr. Morton said that he had shipped fruit in ventilated cars that was 12 days in transit and which arrived in good condition and sold well, but his experience in shipping grapes had not been satisfactory.

This brought on a general discussion as to grapes in which a variety of opinions and expressions were brought out. Speaking of kinds, Mr. N. W. Motheral maintained that the bell-shaped grape was in reality the de Gordo Blanco and that the round grape was the Muscatel of Alexandria, although the books were all the other way. However, nearly all vineyards were mixed badly and the second crop of de Gordo Blanco had a round berry. The advantages of the fruit having the bell shaped berry were that it ripened earlier than the other, was not so thick upon the stem and had a thinner skin. On the other hand, cold north winds made it cast its bloom more than the other and it should be protected by windbreaks around the vineyards.

As to the Sultana, it did not bear so early as other grapes, and the market did not welcome it so heartily. It was only used by confectioners and had to be sold as Zante currants.

Speaking of alkali and its effects upon plants and vines, Prof. Hilgard expressed the opinion that this subject would demand greater attention as irrigation advanced and that unless precautionary measures were taken, the bringing of these salts to the surface would entail great expense. The only cure for black alkali is plaster, which properly used, will change it to a white alkali, and vegetable life will stand eight times as much white alkali as black. The only way to remove a superabundance of white

alkali is by washing and bleaching out by under drainage or some other method of drainage.

Other subjects were discussed which we haven't space to report and much of the talk was desultory and could not well be reported. The chairman, Mr. Motheral, did much to bring out points of interest and to give spirit to the proceedings. It is to be hoped that interest in Farmers' Institutes will grow and that they will be very generally held throughout the State. Tulare county breaks the ice; what county will follow?

THE APIARY.

How to Keep Your Italians Pure.

EDITORS PRESS:—A few months ago I received a communication from a bee-keeper who had purchased an Italian queen from me at the commencement of the season, stating that the progeny from this queen were remarkably beautiful bees. He now writes that this queen must have met black drones this season and become tainted, as her progeny appears to be little better than the rest of his bees. I have had several communications from other parties to the same effect, blaming the dealers for having supplied them with impurely fertilized queens.

Now I wish to say right here that when a queen has once been fertilized that is sufficient for her whole life and she never afterward meets any other drone for the purpose of fertilization. Therefore, if a perfectly pure Italian queen meets a pure Italian drone, this queen will produce pure Italian bees during the whole of her life. Although this may seem a little surprising to a novice, yet it is nevertheless perfectly true, as almost every intelligent modern apiarist will tell you.

I have already stated in my last paper that the old queen *always* leaves the hive with the first swarm. I would therefore suggest to any one who purchases an Italian queen and wishes to keep this race pure, that the best way to do so is to clip the queen's wing before introducing her, for the following reasons: We will suppose an Italian queen has been introduced to a colony of hybrid or black bees, and that her wing has *not* been clipped; the result is, the queen goes off with the first swarm, and if this swarm has come off without the knowledge of the apiarist, away she goes with the swarm to the woods, the young queen left in the hive meets a black or hybrid drone, and the colony which is supposed to be pure Italians, quickly becomes reduced to hybrids or blacks again. The apiarist, not knowing what has happened, still expects that the queen in this hive is the one sold to him as a pure Italian, and finding his colony reduced to hybrids, or black bees, he blames the dealer for having sold him an impurely fertilized queen.

Now supposing we clip off half of one of the wings of the queen before introducing her; when the first swarm issues, she will of course make an attempt to go with them, but, being unable to fly any distance, she will drop near the hive, where she may be easily found, having a small cluster of bees with her. The swarm, after flying around, will frequently cluster in the usual manner; and if we have found the queen before the swarm has clustered, we take a new hive, remove two or three frames of brood from any hive, and after brushing off the bees, we place the queen on one of the combs containing brood, then put these frames into the new hive and fill up with empty combs or frames filled with foundation (if on hand). Next remove the hive from whence the swarm issued, place the new hive on the stand previously occupied by the old one, and if this has been done while the swarm was clustering, the result will be as follows:

The swarm, finding they have *no queen*, will return to their old location, entering the new hive now containing their queen and some brood; the greater part of the bees left in the old hive, when they fly out, will return to the new hive, leaving the old hive so nearly deserted that all after-swarming is generally prevented, and we have the satisfaction of knowing that we have saved not only a swarm but probably a valuable queen from going astray. Should the swarm have already returned to the old hive before we found the queen, we still go through the same process exactly as described above, as fully two-thirds of the bees from the old hive will enter the new one when placed on the old stand.

How To Clip the Queen's Wing.

To do this with a queen which you have received in a queen-cage, take the cage containing the queen and her attendant bees into a room and close all doors and windows so that they cannot get away, then hold the cage close to the window and allow the bees and queen to walk out on to the window-pane (should the queen fly she will return on to the window), then catch her by the shoulders. You need not be afraid, for she will not sting. Be careful not to pinch her too hard or to injure the soft part of her body, then transfer her to the two forefingers and thumb of the left hand (still holding her by the shoulders) and with a sharp pair of scissors clip off half of one of the *long* wings. As this mars the appearance of a fine queen, we usually take off half of *both* the long wings, then return her to the cage either with or without her attendant bees, and she is ready for introducing.

WM. STYAN.

San Mateo.

THE IRRIGATOR.

Proposed State Irrigation Service.

A little more than a year ago, Mr. A. J. Pillsbury, one of the editors of the Tulare *Register*, conceived the idea that inasmuch as the irrigation districts being formed under the Wright law were feeling their way along slowly and painfully over an untried road, an association of district officers ought to be formed by means of which an interchange of experiences might be had which would be decidedly helpful. The matter was talked up in the *Register* and other papers, and finally the Board of Directors of Tulare Irigation District sent out invitations to other districts for a meeting at Tulare. The meeting was held on the 12th and 13th of September last and was very successful. It was there decided that a permanent association should be formed, and a committee was appointed to perfect a plan for organization, but only a sort of provisional form of government has thus far been effected.

Mr. Pillsbury was made secretary of this provisional form of association, and has maintained quite an active correspondence with districts and prominent friends of the district system ever since, and with the result that the subject has so grown upon him that, in his judgment, no form of association less comprehensive than his draft of a bill provides for will prove adequate to the needs of the district system of irrigation in California. This draft will be submitted to the next meeting of the association, to be held at Sacramento January 8th, and after undergoing such changes as are deemed advisable, will doubtless be presented to the Legislature.

The theory upon which this draft is founded is that irrigation is the paramount interest in California; that the State cannot become greatly populous without it, but can sustain a tremendous population when all of its waters shall have been put to economical and intelligent use; that the district system of irrigation is the only system which can enable irrigating neighborhoods to command capital for constructing needed irrigation works, or compel a frugal use of the waters of this State, and that the district system will in time supersede all other systems.

The State has conferred very great powers upon these irrigation districts, including the power to create bonded indebtedness, a power that is very likely to lead communities into extravagances, especially if there should chance to be a bit of a boom on anywhere, and very likely also to prompt sharpers to enter upon schemes of a swindling nature. There is certainly no lack of opportunity for extravagance and speculation, and a most rigid system of supervision is imperatively demanded; yet, strange to say, the State exercises no supervision whatever outside of the judiciary, which can do nothing of its own volition and so must be an inadequate protection.

It is proposed in the draft as printed below that the State shall delegate this supervisory power to the associated districts themselves, and certainly nobody can be more deeply interested in maintaining the faith and credit of all the districts. It is made the duty of the association to examine into the conduct of every district and publish reports of their condition. This alone will have a most salutary effect, but as the association is forbidden to negotiate the bonds of any district until its acts have been approved by a civil engineer and an attorney, to be selected by the association, it will be nearly impossible for any district to market its bonds without such approval, for capitalists will soon come to require it before considering purchases of bonds.

The financial aid asked from the State is not great. Indeed it is much less than other interests are getting. It is only asked that the secretary's office shall be maintained and the printing be done at public charge, which will cost no more than $5000 a year at the outside. This is much cheaper than the State could discharge its duty of supervision for by any other method.

Of course there are other services besides that of supervision of districts, which it is expected that the association will perform. It is expected that it will develop a market for irrigation district bonds, hold annual conventions wherein the experiences of irrigators from all portions of the State will be compared and important recommendations made as to methods, and, by a system of correspondence and issue, and of bulletins, keep all the districts informed as to methods of procedure adopted here and there. In this way the best heads among the directors of all the districts will, by their advice and example, be able to shape the work for the districts throughout the State. In fact there seems to be no limit to the good results which might flow from associated action among all the irrigation districts of California, properly empowered and aided by the State.

The Proposed Law.

Mr. Pillsbury submits the following draft of a bill wholly upon his own individual responsibility, and not as an official act of the association with which he is connected.

The People of the State of California, represented in Senate and Assembly, do enact as follows:

SECTION 1. It shall be lawful for five or more irrigation districts organized under and by virtue of an Act entitled "An Act to provide for the organization and government of irrigation districts," approved March 7, 1887, to unite in forming a State Association of Irrigation Districts to which all irrigation districts organized or to be organized under and by virtue of said Act shall be entitled to membership upon terms of equality. Such association when formed shall be a State institution.

SEC. 2. The State Association of Irrigation Districts shall have power and it shall be its duty to inquire into the acts and inspect the works of all irrigation districts organized or to be organized under the laws of this State, and its authorized agents shall not be denied access to the books and archives of any of said districts. Said association shall have power to make, ordain and establish and put into execution such by-laws, ordinances, rules and regulations as shall be necessary for the good government of said association; provided that said by-laws, ordinances, rules and regulations shall not be inconsistent with the laws or Constitution of this State or of the United States. Said association shall have power to contract and be contracted with, to sue and be sued, and its purpose shall be to promote the development of the district system of irrigation in California by securing the co-operation of the irrigation districts of the State in a united effort to that end. Said association shall have power to act as special agent for any irrigation district affiliated therewith, and when duly authorized so to act by such district may do any of the acts which such district itself may do, but said association shall have no power to bind any district without such special authority except as herein provided.

SEC. 3. The State Association of Irrigation Districts shall meet in open session in October of each year upon such day and at such place as shall have been determined at the preceding annual meeting, and each district belonging to such association shall be entitled to one vote in the meetings of such association and shall designate some number of its board of directors to represent such district at such meetings. Provision shall be made at such meetings for consideration and discussion of matters important to the development of irrigation in California and industries dependent thereon; and it shall be the duty of said association to use all suitable means to collect and diffuse such information as is calculated to aid in the development of irrigation and the district system thereof in this State, and shall make such recommendations and suggestions as experience and good policy shall dictate.

SEC. 4. The officers of said association shall consist of a board of five trustees, to be selected from among its accredited representatives, in whom shall vest the general prudential and financial affairs of said association, and whose duty it shall be to execute its by-laws, ordinances, rules, regulations and recommendations. There shall also be a president and vice-president of said association, who shall be members of the board of trustees and ex-officio president and vice-president thereof; and a secretary and treasurer who shall not be members of said board. The president and two trustees shall, at the first meeting of this association held subsequent to the approval of this Act, be elected to hold office until the second annual meeting of said association, and the vice-president and one trustee shall be elected to hold office until the first annual meeting held subsequent to the approval of this Act; and thereafter the terms of office of all trustees shall be two years, but all shall hold office until their successors have been elected and have qualified. If from any cause a vacancy shall occur in said board, it shall be filled by the remaining members until the next annual meeting of the association. The secretary and treasurer shall be appointed by the board of trustees and shall hold office for two years unless removed for good cause shown.

SEC. 5. For its maintenance said association shall have power, at its annual meetings, to levy an assessment upon the taxable property of all irrigation districts belonging thereto not to exceed one cent upon each $100 of assessed valuation of property in such districts, and it shall be the duty of the boards of directors of such districts to include the same in their next regular tax levy, to collect the same with its other taxes and pay it over to the treasurer of the association on or before the first day of March of each year. The by-laws of said association may also provide for the payment by each district of an admission fee of $50, before being entitled to membership therein. The association shall have the power to negotiate the sale of bonds of any district belonging thereto, when specially authorized so to do, and at a price not lower than a minimum price to be prescribed by the board of directors of said district, but before undertaking to negotiate the sale of such bonds, the legality of such bonds must be affirmed by an attorney to be selected by the board of trustees of said association, and the proposed works must be approved by a civil engineer to be selected by said trustees. The expense of such affirmation and approval shall be borne by the district offering bonds for sale, and for its services in selling said bonds the association shall be entitled to receive a commission not exceeding one per centum upon the face value of said bonds so sold, but from which said commission there shall be deducted the expense of affirmation and approval above referred to, whereupon the residue shall be paid to the treasurer of said association and become a part of the general fund thereof.

SEC. 6. It shall be the duty of the secretary of said association to attend all meetings of the association and of the board of trustees, and to make and preserve a record of such meetings; to conduct the correspondence of the association and of the board of trustees and preserve a record of the same; to collect statistics and other information showing the actual condition and progress of irrigation in this State and elsewhere; to keep all accounts of the association and of the board of trustees; to visit each irrigation district in the State and prepare and cause to be published a report touching the area, character of soil and productions of said district, together with the nature and cost of irrigation works, quantity of water utilized, source of water supply, system of distribution, and such other matters as the board of trustees or association shall require, or shall seem to be of public concern. He shall correspond with investors and financial agencies, and use all proper means to develop and maintain a ready market for irrigation district bonds. He shall collect books, papers and pamphlets relating to irrigation and forms of production dependent thereon, and preserve the same. Under direction of the association and the board of trustees, he shall prepare for publication such reports as are required by law or the association or trustees; and by means of the issuance of periodical bulletins, he shall keep the irrigation districts belonging to the association constantly advised concerning all occurrences touching their interests. He shall appoint, subject to the approval of the board of trustees, a competent person as clerk and shall be responsible for the acts of said clerk. He shall maintain an office in the city of San Francisco at an expense for rent, stationery and incidentals, not exceeding $500 per annum, and said office shall be open daily, except Sundays and legal holidays, from nine o'clock A. M. to four o'clock P. M. He shall be paid for his services as secretary the sum of $200 per month, and his actual traveling expenses not to exceed $500 during any one year. His clerk shall be paid a salary (as such clerk) of $50 per month, each to be paid as other State officers are paid. Said expenditures herein provided for are to date from the day upon which a copy of the by-laws of said association, together with a certificate of organization, signed by the president and secretary thereof, is filed in the office of Secretary of State, and are to be paid out of the general fund in the State treasury.

SEC. 7. All printing required to be done by this Act shall be done by the State Printer.

An Irrigation Convention.

A session of the State Association of Irrigation Districts of California is hereby called to meet at Sacramento, California (in such hall of meeting as shall hereafter be determined upon, due notice whereof will be given), upon Thursday, Jan. 8, 1891, at 10 o'clock A. M.

The purposes of said meeting will be to perfect the organization of said State Association of Irrigation Districts; to agree upon and formulate such amendments to the irrigation laws of this State as shall be deemed needful and expedient; to use all proper means to secure their enactment by the Legislature and approval by the Governor; and to consider such other matters as the association shall be pleased to consider.

In the deliberations of such association each irrigation district which shall have become a member thereof, shall be entitled to one vote, and the board of directors of such district should designate, by resolution, one of their number who shall be empowered to cast the vote of such district, and a copy of such resolution under seal of said district shall constitute the credentials required. It is earnestly hoped that every irrigation district in California will be authoritatively represented at such meeting, for it is believed that it will be productive of most important results. It will not be objectionable to have more than one member of district boards of directors as well as other district officers present, and doubtless they will be asked to take part in the discussions (but not in the balloting), and it would be well, too, for each district to extend to known friends of the district system a cordial invitation to be present with full privileges as to debate.

The dispatching of business would be much facilitated if persons having amendments to the law to be proposed would reduce them, as nearly as may be, to proper form before presentation. Districts which have not already joined the association will be given an opportunity to join when the association meets.

J. W. NANCE, President.
A. J. PILLSBURY, Secretary.

A HOUSE FLY is born fully grown and of mature size, and there are no little flies of the same species, the small ones occasionally observed being different in kind from the large ones. The house fly does not bite nor pierce the skin, but gathers its food by a comb or rake, or brushlike tongue, with which it is able to scrape the varnish from covers of books, and it thus tickles the skin of persons upon which it alights to feed upon the perspiration. The fly is a scavenger, and is a vehicle in which contagious diseases are spread. It poisons wounds, and may carry deadly virus from decaying organic matter into food.

ELECTRIC LIGHTING, says M. Fontaine, did not make its appearance until the close of the year 1873. It was in Paris, in November, 1873, in the workshop of M. Gramme, that the first installation on a really industrial scale of electric lighting took place.

Patrons of Husbandry

In our Rural Press Official Grange Edition, issued every week, will be found additional matter from this and other jurisdictions, of interest and importance to Patrons. Any subscriber who wishes can change free to that edition.

The Master's Desk.

R. W. DAVIS, W. M. S. G. OF CALIFORNIA.

There will be an effort made at the coming session of the Legislature to amend the Road laws, so that the keeping of the roads shall be by school districts instead of in townships, as is now the case. In addition to the school district plan, why not add a section providing that the work of maintaining such roads shall be let to the lowest responsible bidder for a term of three or five years? This is a most important subject—one on which subordinate Granges should, by resolution and petition, inform their representatives of their wishes. Let the action be taken at once. Don't wait till the last days of the session. Remember the story of "the early bird."

The farmers of California demand some legislation on the subject of fire insurance. If the city people are satisfied with the rates now charged by the insurance compact, the country people are not. Equal and exact justice is all we want. We want the legal right to compete with others in carrying our own insurance. The Legislature ought not to refuse that privilege. We believe the State's Solons will not deny the farmers this right of self-protection. Keep an eye on your Senator and Assemblyman when the Insurance bill comes up.

Kansas has elected a Congressman so plain and so economic that he does not wear socks. I wonder if he will be so plain while Congressman and so economic with the people's money? Let us hope, at least, that he will practice some lessons of economy with the public coin. Parsimony we don't want. Economy we do want.

The manufacturers of ordinary wrapping paper have formed a trust. Do you wonder at it? It won't do to trust anybody nowadays.

That the California poppy should have been chosen as the "Flower of State" seems both proper and appropriate. It is a fitting tribute to the Grange, for what flower is more universally the companion of the Patron than the native poppy? On hillside and on plain, by stream and on desert sand, the golden-hued poppy is the agriculturist's constant companion. The tillers of the soil in this great Golden State have reason to be proud of the "State Flower," the charming golden-leafed poppy. It is the first flower of spring and stays most of the summer. Pretty poppy, ever welcome!

For the next thirty days Deputies and other Past Masters will be very busy installing the officers for the New Year. It is the duty of the installing officer to report at once to the Secretary of the State Grange, the full list of officers installed.

Bro. Ava E. Page has been re-elected to the office of Master of the Missouri State Grange. Bro. P. is also the accommodating Gate-Keeper of the National Grange. We rejoice to know of his re-election to the Mastership, for it surely insures active, successful work for the Order in the State of Missouri. By the way, did you know that the Missouri State Grange unanimously passed a resolution asking for the 1892 session of the National Grange? From this it will be seen that the oldest farmers' organization yet has friends, and friends who ask for the privilege and for the honor of entertaining the National Grange.

With the burial of the old year don't forget to bury all personal hatred and animosity. If your brother or sister of the Grange has erred, forgive him or her and start on the new year without enemies and without animosities. If you will do this, the new year will have more pleasant days and more sweet faces for you than it otherwise would have. Don't you think so?

Do you know that a cultivated mind, an inventive brain, is the most lasting and profitable fertilizer a farmer can procure? Get one and use it!

Tranquillity, coupled with modesty, makes a most becoming garment for any lady, regardless of her age, her size, her complexion or her vocation. Anybody can obtain the article. It is obtainable anywhere, at any time, without money and without price.

What's the news from your Grange?

Several of the sisters have been talking "turkey" quite lately. No doubt they intend to convey the thoughts of Christmas-time, but somehow our mind took, or wanted to take, another view of the subject.

Sebastopol Grange conferred the first and second degrees at the last meeting.

Happy New Year to all.

Publishers' Comments.

The following, from the Tulare *Register* of Dec. 12th, tells much that is unfortunately true. We know both from extensive experience and observation the difficulty of getting Grangers to patronize the best of papers that faithfully advocate their cause. Although we blame nobody in particular for it, still we think the editor of the *Register* will live long enough to see he has greatly underrated the coming business and political accomplishments of farmers' organizations.—Eds. Press.

Grange Department, Finis.

The Grange Department of the Tulare *Register* is no more. Its valedictory was placed in our hands this week and Mr. J. W. Mackie, its editor, retires with emotion. We feel a little emotional also. The idea occurred to us that inasmuch as the farmer was upon the very eve of grabbing the political lines out of the political hands of the political jehu who had been running things generally and was about to fire that worthy off the box, the aforesaid farmer ought to have an organ, ought to have a means of communicating his wishes, hopes, aspirations and fears to the dear public. Therefore we set aside certain columns of the *Register* to the free and untrammeled use of the Grange. Mr. Mackie was chosen editor, and the Grange, with the same generosity which characterized our giving of space, generously gave him all the work to do, and he got his Scotch back up, quit, and the Grange department is no more.

We will say this for Mr. Mackie, what he did, he did well. What he wrote was well written, and what he said was well worth reading, but he did not propose being made a pack-horse of, and we do not blame him.

As for ourselves, we haven't anything in particular to grumble about, and hereafter we shall at all times stand ready to set aside one or more columns of the *Register* to the Grange or Farmers' Alliance, at the rate of twenty-five dollars per month per column, coin down, and we shall do it cheerfully, but there shall be no more free business. Of course we shall be glad to hear from our farmer friends at any time upon any subject, and will give them space in our columns as we give others, but we shall do the editing and reject what we do not want.

The point of this experience is that the farmer is the worst man on earth to try to do anything for. Why, all the Granges in California couldn't keep one little weekly paper's nose out of water. The Farmers' Alliance throughout the State of California will not do as much business as one Tulare merchant. Farmers banded as a political party may play the mischief for one campaign, but it will be the victory of a formless mob without leadership and without cohesive power. One victory, and it will fall to pieces like a rope made of sand. A saloon is more effective in politics than a Grange or an Alliance. A brotherhood of farmers seems to be an impossibility. If we were asked why this is so we could not answer, but it does seem to be so.

The *Register* is in sympathy with the farmers' interest. We believe that the farmer has had to take the little end of everything. His end of the horn of plenty has always been the tip end, but the fault is his own. There is no injustice about it. Every man should suffer the legitimate consequences of his own acts. It is right that he should, and would be wrong if he did not. The evils which the farmers of the United States suffer are the legitimate consequence of their own negligence, and they have no right to complain of any party or interest. We view the present farmers' movement over this country with infinite satisfaction, but we have not the remotest idea that it will live to be four years old. It will be a fly blister upon the two old parties and will do them good. The old parties will live, but the fly blister, having served its purpose, will be cast into the rubbish-heap.

Sudden Death.

Died on his ranch, Dec. 15, 1890, G. F. Starn, of heart disease. The *Sutter Independent* has the following concerning his death:

"The deceased had been long known in this community, and his sudden death cast a gloom over every household where the sad event was known. He was an exemplary member of the Methodist church, and his walk and conversation had always been orderly and honorable. He was a practical horticulturist and took a lively interest in everything calculated to improve and develop that industry. He leaves a widow and four children to mourn his loss. They have the sympathy of a wide circle of friends who share in their bereavement. The funeral took place under the auspices of Yuba City Grange on Wednesday afternoon from the M. E. church. Rev. H. C. Tallman preached the funeral discourse at the church, and at the grave the beautiful burial service of the Patrons of Husbandry was impressively rendered by the officers and members of the Grange of which deceased was a worthy member. The following brother Patrons acted as pall-bearers: G. W. Carpenter, Herman Berg, J. P. Onstott, F. Cooper and W. J. Gray. The attendance of friends was very large."

The farmers in '67 sold $1,284,000,000 worth of grain from less than sixty-six million acres. In '87 there was more than twice the acreage reaped and more than twice the harvest, yet they received $79,711,000 *less* money for their product. But the interest on mortgages kept at nearly the same figure. In '67 we had $52 per capita in circulation, in '87 less than seven, in '90 only five, and the glorious work still goes on. Put these few facts together, brother farmer, and then scratch your head real hard. —*Monache Tidings.*

Mortgages on Land.

The following letter, published in the Portland *Oregonian* of Dec. 19, will interest a great many of our readers, who have viewed with alarm the rapidly increasing alien ownership of our land:

Editor Oregonian:—It is said that the Lombard Loan and Trust Company, of London, has foreclosed on at least 120,000 acres of farmlands in Kansas alone.

It seems the company's agents loaned money on some of these lands at 2 per cent a month, and on chattels—such as household furniture, farming utensils, cattle, horses, hogs and fowls—at 2½ per cent, or 24 and 30 per cent a year. They would estimate the land at its lowest cash value, and then place a loan of 25 per cent of this amount on the property, and take a mortgage.

It seems that this Lombard Loan and Trust Company—this cruel creature with a soft and liquid name—made a clean sweep of everything, except the open air and blue sky, whenever it lit down upon an American farm. It might have been called the "London Locust Plague Company," but that would have been a gross libel upon an honest but hungry insect that visited the same region some fifteen or sixteen years ago, and only devoured every green thing, while it left the soil in all its integrity to the settler.

On the other hand, the Lombard Loan Company's agents, when the interest came due, foreclosed on all the chattels—robbing barns, fields, hen-roosts, parlors, kitchens and bedrooms—and selling farms worth from $2000 to $4000 for just enough to pay costs of sale and lawyer's fees, bidding them in themselves at prices ranging from $40 to $60, and then bringing a bill against the former owners for the principal and interest still due.

In this way, vast tracts of Kansas farming lands are now owned by foreign sharpers, while the evicted owners are still in debt for more than the amount originally loaned upon them. All this was done "legally," as there were no usury laws—such as exist in Oregon—to prevent the carefully-planned robbery.

Several years of drouth in Kansas brought about a condition which made the farmers an easy prey to these English Shylocks, and ended in wholesale evictions which discounted those in Ireland, over which Americans are so deeply interested.

Strange to say, the farmers were driven from their homes without resisting the officers of the law, save in a few instances. In one case, some twenty five farmers armed themselves with guns, and met the evicting party and told them to "git;" and they got, and did not think it best to return.

In another instance, one of the loan and trust company's agents arrived in the neighborhood with the necessary legal papers, and put up with one of the farmers, with the intention of attending to business the next day; but a committee of disguised grangers called that night at his stopping-place and asked his intentions. The agent replied that he "proposed to move immediately upon their farms." The committee took the gentleman to a lonely ravine and endeavored to induce him to give up his project and retire from the missionary field, which he refused to do. Nobody knows what happened afterward; but the next morning a loan and trust agent was found hanging by a rope from a bridge that spanned the ravine.

On the 4th day of last July a banker was selected to deliver an oration in one of the Kansas towns, and in the presence of a large concourse of ruralists, he began by saying: "Fellow-citizens, this glorious day is the one day in the year when the rich and poor can meet together without distinction or regard to caste." He didn't go any farther. He was interrupted by a shower of such missiles as industrious hands could find lying around loose, and by responses that bore no resemblance to "amens" in an old-fashioned camp-meeting. He disappeared in the rear of the platform and was obliged to take a train out of town that afternoon to avoid being the subject of a midnight surprise party.

Of course all these irregular proceedings are to be deprecated, but we must remember that with those long-suffering Kansans it was a simple question of self-preservation touching themselves and their wives and children, and when we consider that, with the exception of these rare and natural, if not justifiable, deviations from the Christian doctrine of non-resistance, they obeyed the requirements of the law and became penniless exiles and wanderers from their homes, we must give them credit for greater patience and self-denial than Oregonians and Californians would or will be likely to display under similar circumstances.

This English loan and trust company is doing its part toward introducing the European tenant system in America. In some instances the company not only charged 2 per cent a month, but in addition to this interest, which aggregated upward of 24 per cent annually, took "bonuses" whenever opportunity offered. In this way it was an easy matter to secure large holdings, upon which to place renters and serfs, who assume all the risks for the sake of keeping soul and body on speaking terms. I am informed by former citizens of Kansas that a person can travel for miles at a stretch in Southeastern Kansas—which is the garden of the State—and see nothing but farms owned by the Lombard Loan and Trust Company—farms that have been swallowed up by this 30 per cent interest infamy, and which are now grown up to wild mustard and other weeds, and awaiting cultivation by their new foreign lords and their tenants.

Now we are informed that they are about to erect agricultural colleges in several Western States for the purpose of educating English agents to oversee the white slaves who are to be imported and placed on lands that British money lenders have legally stolen from the citizens of the "best government the sun ever shone upon." Is it any wonder that one of the planks in the Farmers' Alliance platform embodies a demand for an alien land law? Is it any wonder that the pent-up emotions of the farmers burst forth on November last in a cyclone of opposition to national banks and loan and trust companies, both foreign and domestic, with a vehemence that paralyzes party wirepullers and slate-makers all the way from Kansas to the four corners of the Union? The end is not yet. If I thought it was, I would pray Queen Victoria to send one of her numerous family over here to wear the crown at Washington.

James G. Clark.

Grant's Pass Dec 10.

Coming State Grange Sessions.

Alabama, July 22, '91; Connecticut, January, '91; California, September, '91; Colorado, (Denver), Jan. 13, '91; Delaware (Dover), Dec. 9, '90; Georgia, ———; Illinois (Springfield), Dec. 9, 90; Indiana (La Fayette), Dec. 9, '90; Iowa (Des Moines), Dec. 9, '90; Kansas (Olathe), Dec. 9, '90; Kentucky, ———; Massachusetts (Worcester), Dec. 16, '90; Minnesota (Chowen), Dec. 16, '90; Mississippi (Hickory), Dec. 9, '90; Missouri (Cameron), Dec. 9, '90; Maine (Lewiston), Dec. 16, '90; Maryland (Baltimore), Dec. 9, '90; Michigan (Lansing), Dec. 9, '90; Nebraska (Pawnee City), Dec. 9, '90; New Hampshire (Manchester), Dec. 16, '90; New Jersey (Trenton), Dec. 12, '90; New York (Elmira), Feb. 4, '91; North Carolina (Potecasi), Dec. 9, '90; Ohio (Tiffin), Dec. 9, '90; Oregon (Hillsboro), May, '91; Pennsylvania (Harrisburg), Dec. 9, '90; Rhode Island (Providence), Jan. 13, '91; South Carolina, ———; Tennessee (Greenfield) Aug. 20, '91; Texas (McGregor), Aug. 13, '91; Vermont (West Randolph), Dec. 10, '90; Virginia (Alexander City), Dec. 10, '90; Washington (Klickitat Co.), June, '91; West Virginia (Charleston) ———; Wisconsin (Madison), Dec. 9, '90.

Farm Mortgages.

The *Bankers' Monthly*, which surely would not overestimate the matter, in speaking of the farm mortgages in six of our best States, gives the amount carried by each as follows: Kansas, $235,000,000; Indiana, $645,000,000; Iowa, $567,000,000; Michigan, $500 000,000; Wisconsin, $357,000,000; Ohio, $1,127,000,000.

Here are mortgages on the farms of only six States aggregating $3,431,000,000, the interest on which at 6 per cent amounts to over $200,000,000. Now the whole production of gold and silver in the United States per year is not half enough to pay the interest on the farm mortgages of six States, and yet these same bankers are demanding the destruction of treasury notes, the demonetization of silver and the establishment of a gold standard; and the farmer, what is he doing? Well, he is economizing, cursing the ring politicians and voting the old party ticket.—*Pacific Union.*

Figures.

When Egypt went down, two per cent of her population owned 97 per cent of her wealth.

When Babylon went down, 2 per cent of her population owned all her wealth.

When Persia went down, 1 per cent of her population owned the land.

When Rome went down, 1800 men owned all the known world.

There are about 40,000,000 people in England, Ireland and Wales, and 100,000 people own all the land in the United Kingdom.

In the United States, three fifths of the entire wealth of the country is owned by 31,100 persons—less than one-twentieth of one per cent of the population.

In 1860 there were but two millionaires in the United States and no tramps. To-day there are 35,000 millionaires and 1,500,000 tramps.

Enterprise Grange Installation.

Editors Press:—I am requested to announce that Enterprise Grange, No. 129, will install officers the first Saturday in January (the 3d), followed by a feast. Grange to open at 10 o'clock. A general invitation is extended to all Grangers who may find it convenient to meet with us. Yours fraternally,

Etta Plummer, Sec'y.

Perkins, Dec. 22, 1890.

FARMERS' ALLIANCE.

SUBSCRIBERS who are members of the Farmers' Alliance can have their names changed to the Grange Edition of the RURAL PRESS *free*, much to their advantage.

National Farmers' Alliance and Industrial Union.

President.....L. L. POLK, Washington, D. C.
Vice-President.....B. H. CLOVER, Cambridge, Kan.
Secretary.....J. H. TURNER, Washington, D. C.
Treasurer.....H. W. HICKMAN, Puxico, Mo.
Lecturer.....BEN TERRELL, Washington, D. C.
Executive Council—K. A. Patty, Macon, Miss.; Isaac McCracken, Ark.; Evan Jones, Dublin, Tex.
Executive Committee—C. W. McCune, Washington, D. C.; Alonzo Wardall, Huron, South Dakota; J. F. Tillman, Palmetto, Tenn.

Cal. State Alliance Officers for 1890-91.

President.....MARION CANNON, Ventura
V. Pres't.....PETER ROTH, Black's Stat'n Yolo Co.
Secretary.....C. W. PEDLAR, Gilroy
Treasurer.....J. W. HINES, San Jose
Chaplain.....MRS. J. KENNEAR, Modesto
Lecturer.....J. L. GILBERT, Fresno
As't Lecturer.....P. K. WOOD, Los Angeles
Door-Keeper.....J. B. JOHNSON, San Jose
As't Door-Keeper.....MRS. M. A. TALCOTT, San Jose
Serg't-at-Arms.....C. W. MARTIN, Santa Barbara
State Bus. Man'g'r, J. M. MOORE, 297 Linden Ave., S. F.

EXECUTIVE COMMITTEE—JNO. S. DORE, Fresno; JESSE POUNDSTONE, Grand Island (Colusa Co.); JAS. MORGAN, Santa Barbara; E. M. WARDALM, Monrovia (Los Angeles Co.); DAVID REED, Monterey.

NATIONAL DELEGATES—J. S. BARBEE, Santa Barbara, and D. C. VESTAL, San Jose.

Organizing Deputies.

J. B. RIGDON for Alameda and San Benito counties.
KATE L. SQUIRE for Santa Cruz and Santa Clara counties.
F. P. COOK for Merced and Stanislaus counties.
H. W. RHYNE for San Luis Obispo county.
J. W. HINES, San Jose—Deputy-at-Large.

The Moral Import of the Farmers' Alliance.

The above is the subject of a discourse delivered in New York City, Dec. 7th, by Rev. Thomas Dixon, Jr., pastor of the Twenty-third Street Baptist Church. Mr. Dixon is delivering a series of sermons on current events to crowded houses. He is pronounced a brilliant orator by the metropolitan press, and the *Phrenological Journal* declares him a second Patrick Henry. The sermon was received last week just as we were going to press, consequently but a brief extract could be given. As everything pertaining to the Farmers' Alliance is at present engrossing a large share of public attention, we take pleasure in printing the discourse in full and expect to be able to give further effusions from the reverend gentleman's pen. The following is the discourse in full:

The real sensation of the year 1890 is the advent of the National Farmers' Alliance and Industrial Union. It is no mushroom growth. It is here to stay. It is the resistless movement of millions under the oppressions of centuries. Its motive power is social, economic, religious and political. The advent of these embattled hosts is the most pregnant event of this generation. It is the beginning of

A Revolution

That will shake this continent and move the world.

The first time they gathered around the ballot-box was the 4th day of last November. They polled between two and three million votes, elected the Governors of three States, sent forty men to Congress, and scared the life out of hundreds they did not send. What is the moral meaning of this great movement?

1. It is the protest of the patient burden-bearers of the world, who have toiled through weary years, struggling beneath the wrongs of economic and political superstitions. In America the farmers have literally become the beasts of burden of the nation. Their business has been to feed over 65,000,000 people, together with the hosts of the Old World, with the products of the year's work, and then through the winter eke out a miserable existence wrestling with their

Mortgages, Cyclones and Floods.

While they are doing this, we laugh and grow fat, dance and make merry in the city, and bet how much they will make next year, buy and sell their crops fifty times before they are planted, and charge old "Hayseeds" with all our losses.

The question is, whether these men, the freest of the free, the authors of this country's liberty, shall assert their rights and obtain justice, or degenerate into the condition of tenants and serfs. The conditions of labor in all other industries have undergone marvelous development and changes in the past hundred years. The farmer works under the same stern conditions, perishing in the midst of boundless prosperity, for others. He has determined to effect a change in these conditions, and readjust himself on a living basis to the new civilization.

This movement means the education of the masses as masses—of the farmer as a farmer. It means the assertion of the manhood of the yeomen of the nation. This is real education. The accent of our education has hitherto been to get on, "to rise." We have been taught to climb out of the humble sphere in which we were born into some so-called higher sphere. The smith learns to despise his anvil, and the clodhopper to look with contempt upon the plow. They rise to "higher" things. They become lawyers, and doctors, and preachers, and bankers, railroad men and politicians. We now have fully 8,000,000 men in this country educated to be Presidents of the United States. We only need about a dozen Presidents in a hundred years—an awful waste of raw material.

The farmers are learning and teaching it to their children, in this organization, that the work of the farm is as sacred, as noble, as honorable as that of any sphere in life. Women, too, are admitted to the Order. Well they may. There are more farmers' wives in the insane asylums of America than any other class. They have actually recognized the fact that

Woman Is a Human Being.

A reporter once asked an old farmer in the West what he thought about the question "Is marriage a failure?" He replied: "What, marriage? Well, let's see. There's Lucindy gits up in the mornin', kindles the fire, milks six cows, starts four children off to school, tends to three others, skims 20 pans o' milk, feeds the hens, likewise the hogs, looks after some motherless sheep, gits breakfast, washes up the dishes, gits dinner, et cetera—why, mon, do you think I could *hire* anybody to do all that for what she gits? Not much! It's a great success, sir!" Ah! these patient, sad-faced, weary millions of women! The pathos of their lives! They have entered this organization with cheeks flushed with hope, many of them for the first time in life! May God lead and bless them! This movement means

Co-operation as Against Competition.

It is in this principle of Socialism that the Order has its strongest foundation. They are pledged to co-operate with each other in the production of economic goods, and not only so, but to co-operate in the distribution of these goods. The Alliance stores for supplies are a prominent feature of their work. These stores contain the germ idea of the great industrial co-operative societies of workingmen in Great Britain. They are asserting in life the principle that it is better for men to fight *for* each other than *against* one another. They are learning the secret of associated power—that in union there is strength. It is in the light of this fact that we solve the apparent paradox, that while they cry out against trusts and monopolies, in the same breath they demand that the Government press its functions to the very verge of State Socialism. These cries are not inconsistent. They are the assertion of fundamental principles. They recognize the important fact that government is not something separate from the people, but when normally administered is simply the people governing themselves—that it is not a power to be forced, but a power to be utilized for the happiness of all.

4. The organization means brotherhood. It is a fraternal and benevolent Order with principles of love and fraternity, wide as the world, universal as the rose.

The 5th and 6th Articles in their St. Louis Declaration of Purposes,

A Second Declaration of Independence, read thus:

"5. To constantly strive to secure entire harmony and good-will to all mankind, and brotherly love among ourselves.

"6. To suppress personal, local, sectional and national prejudices, all unhealthy rivalry and all selfish ambition."

An ideal as high as heaven—an echo of the life of Jesus of Nazareth. They have determined to "bear one another's burdens and so fulfill the law of Christ." They pledge themselves to alleviate suffering and pain, to care for the widows and educate the orphans of their dead. This is climbing the hights of life. This is pure religion, undefiled.

They have gone into politics not because they are a political organization. They have been

Forced to Go Into Politics

Because their principles were social, economic and religious. All social and economic questions have become political questions, and all political questions are religious. The political arena is where all the great questions of to day and to-morrow must be fought and settled. Let no man deceive himself by believing that this organization is but a passing episode in politics. Remember its foundation is not primarily political, but social and economic. It is the embodiment of grand moral ideas; it is the movement of a revolution. It will not go backward. May God give its leaders wisdom.

An Independent Opinion.

The city of Indianapolis has been chosen as the place, and Washington's Birthday the time to form a political party on the lines of financial, land, transportation and labor reform. So far so good; but to unite with either of the old parties means the betrayal of the young Samson into the hands of the Philistines. If the farmers and industrial classes are not able to "go it alone," they have not strength enough to enforce lasting reform in either old party or in legislation.

Unconditional surrender should be demanded of the monopolists and money-changers in the control of the Government, and if the patriotic men of both parties dare not support and rally around a new party, then any union with Democrats or Republicans will be barren of good results. If the Democrats indorse any reform platform and candidates, they will be compelled to give their present leaders the bounce, for they are as servile gold and Wall-street fearing men as the Republican bosses. This the leaders of both parties will try to prevent by having just enough half-way reform planks adopted to divide the radical elements and keep themselves and Wall street in power.—*Monache Tidings.*

Answer, Who Can.

If farmers create the largest portion of the world's wealth and are admitted to be the bone and sinew of a nation's power, why is it that laws are made to discriminate against them?

The mechanic and farmer pay directly nine-tenths of the taxes of this nation; but not a mother's son of them can borrow one dollar from our government to assist them in their business, and yet the use of millions is given to the speculative class on the flimsy pretense of safe-keeping, while other millions are loaned to the same class for speculative purposes, at a cost of one per cent.

If a United States bond is good security for money used in the banking business, why is it not equally as good security for money to be used in any business?

If our government can loan money for one kind of business, by what rule is it made unconstitutional to loan for another on the same security?

If our government can loan money on its bonds, why not loan money at the same rate on the people's land which make the bonds good, for if there were no farms or farmers there would soon be no value to the bonds of this country.

Labor creates and sustains all wealth, yet it receives but a small portion of what it makes. Why should it be compelled to pay all taxes? Answer who will or can.—*Laborers' Light.*

Semper Fidelis Alliance, No. 8.

EDITORS RURAL PRESS:—In compliance with your request, I send the following roll of officers of Semper Fidelis Alliance, No. 8, of Brooks, Yolo county, Cal.:

Pres., J. H. Norton; V. P., H. H. Smith; Sec., I. M. Henry; T., J. C. Winter; C., Rev. J. J. Smith; L., H. E. Norton; D. G., R. R. Robison; A. D. G., A. Winter; S., Miss Loma Robison.

We have an Alliance of 31 members strong, all earnest in their work and ready to answer any call for the advancement and benefit of our cause. Yours fraternally,

I. M. HENRY, Sec.

Brooks, Cal., Dec. 18.

STANFORD, Blaine, Cleveland, Hill and several other equally honorable statesmen with presidential aspirations are said to be laying wires to capture the Alliance men in '92. This kind of thing can't be worked; no land-grabbers, corporation tools, professional politicians nor lawyers need apply. The little ones get the bounce at all the State Alliances, and the big ones will feel a hob nailed boot in '92.—*Monache Tidings.*

Machines—Human and Mechanical.

New Inventions Greatly Enlarge the Scope of Labor.

Much has been said of late in regard to the influence of labor-saving machinery on the scope of labor, and it has been stoutly held by many that the present condition and future prospects of mechanics in this country are far less satisfactory than they were in the earlier history of the country, before the recent great advance in the introduction of labor-saving machinery. But the most careful-thinking people, even among our best mechanics, hold to the contrary. In consideration of this question, we would refer our readers to the following, which we clip from the columns of the Holyoke (Mass.) *Manufacturer:*

As old people fondly look back on the days of their youth, and say that such days were fraught with more of sensible and pleasurable living than is experienced by the rising generation, so do many of our veteran mechanics delude themselves by thinking that when they learned their trade, under conditions far more narrow and crude than those belonging to the advancement and greater enlightenment of the present day, men who followed mechanical vocations were better off and had more promising opportunities than they now do.

No doubt there is a good deal to make such reasoning appear plausible. Thirty or 40 years ago small machine shops were scattered thickly throughout the country, and many a mechanic, on a contracted scale, conducted an independent business for himself. Every settlement in the country had one or more clever individuals who, with the few rude tools and appliances of the times, did the "tinkering" for their neighbors. There was a deal of mechanical work done by hand, and to the old stagers it seems as if men then obtained employment more generally than in these days, in which labor-saving machinery has such extensive usage. But if they stopped to think, they would perceive that as many, if not more, individuals in proportion to the number of inhabitants, are at the present time engaged in mechanical pursuits. There has been a concentration of labor, that is all. The small shops have disappeared, but large establishments, containing new and improved machinery of all kinds, requiring for its guidance many hands, have supplanted them, and surpassed them to an immense extent in amount of work performed. It may be said, to roughly illustrate, that men now work in gangs, and under a system of concentration, whereas formerly labor was more generally diffused among individuals who worked independently of each other.

What the Grumblers Say.

The grumblers say that the mechanic is not so much in demand, and not so much respected, socially, as he once was. At the time when steamboats, railroads, and labor-saving machines were beginning to be constructed, no doubt wages were good, and the services of the mechanic held in high value. Circumstances then were such that for a time an unusually lively impetus was given to that department of labor peculiar to his vocation. The field was wide and sparsely tilled, and with no great degree of effort yielded rich returns. But after all, the methods of the time, if enterprising and vigorous, were yet rude, and of a nature necessarily so transitory that they soon yielded before more disciplined efforts and more careful, exacting and intelligent requirements. So the hasty methods of the mechanics of former days, and the few rude appliances and tools they used, did good work in their time, but would not be suitable now.

With the Growth of the Country

Machinery has increased, and the mechanic has commensurably gained in intelligence. The result is natural enough, and desirable. Now we make more devices in a day than would have sufficed for a month 30 or 40 years ago, and modifications and improvements, one after another, crowd upon each other with astonishing rapidity. The mechanics of to-day are obliged to make themselves acquainted with the manner of operating multiform contrivances, and in such connection must continually make practical application of many of the principles of natural philosophy, the laws regulating steam, etc. Who doubts that many more well-educated and intelligent men are found among the ranks of craftsmen than formerly? If anything, the community awards the best and most worthy members of this class a higher social position than that possessed by their predecessors of a generation or more ago.

Beneficial Effect of New Inventions.

Many new inventions of utility greatly enlarge the scope of labor rather than contract it. By use of labor-saving machinery many more useful fabrics and articles are manufactured, and also many new things are made which soon create new wants among the people, whose consumption of any given manufacture, when times are good, keeps pace with the increased production. Since sewing machines were invented, the average housewife probably has two new calico gowns where formerly she had one. *Labor saving machines do not decrease the amount of work performed by people in the world; they only bring about greater results in proportion to the strength laid out in their management than manual exertion without their aid can accomplish.* The law of things is such that men may vary, facilitate and advance their undertakings to vastly wider performance, but still the generality of them, albeit under easier and more favorable conditions, must work as much as did primitive Adam in the rough country outside of Eden.

During the past few years, mechanics, in common with all other classes, have suffered much from the evils of widespread business depression. Thickly multiplying inventions have doubtless tended to create a temporary disadvantage, for inventors did not cease to construct many fresh devices, as well as make numerous improvements in old machines, up to the stagnate period of business, when the demand for all kinds of manufactures was on a scale of contraction. Nevertheless as soon as makers and inventors find that they are overcrowding the market to such an extent as to be losing or wasting considerable money in so doing, they stop manufacturing until the surplus is disposed of and the demand and supply are equalized.

But until this happy result is realized the mechanic suffers severely from lack of sufficient employment, because purchasers of machinery cannot afford to buy new tools, or improve old ones, since the demand for the goods made by these machines has likewise dropped off. Let the business of the country be once fairly revived, however, and machines, old and new, will be in active demand, and the mechanic will have no reason to complain of their influence.

There Is a Bright Future

For the skilled laborer in this country, provided only he will steadily follow the path of progress, embrace all his opportunities for improvement and advancement, and obtain a thorough mastery, practical and theoretical, of his trade. He cannot be successful if he unambitiously plods like a day-laborer and does not consider his vocation an art in which to take pride and make continual improvement. He must not stop to complain, but must endeavor to keep pace with the enlightenment of the times, must educate himself by all means in his power, and obtain superior intelligence. Indeed, it would seem advisable for mechanics in each manufacturing community to club together and establish schools in which, were they not more than an hour or two during two evenings of the week, they might acquire some geometry, the elements of mechanics, the theory of steam, magnetism, electricity, etc.

The workmen who may thus strive to obtain education and make effort to completely master all details pertaining in any way to their calling, will soon find intelligent exertions rewarded by the attainment of a good living, and an honorable position in society as well.



Thoughts for New Year's.

Think that this day will never dawn again.
—*Dante.*

Reflect upon the words that Sadi penned,
Reveal not every secret to a friend;
For how can you foretell what is to be?
He may, hereafter, be your enemy.
And with your enemy the wisest plan
Is not to do him all the harm you can;
For it may happen to you in the end
To make your present enemy a friend.
The hand that can withhold the tongue discreet,
These fit the Sheik to fill the Sultan's seat.
—*Richard Burton, St. Stark.*

Happy the man who has the poet's heart,
E'en though he lack the poet's golden tongue!
Happy is he who having never sung
And hopeless e'er to sing though but small part
Of those fair visions that before him start,
Still lives within a world forever young,
Still walks, high fancies, noble thoughts among,
And feels the inference which the planets dart.
"Do thy duty, that is best!
Leave unto thy Lord the rest!
Whatsoever thing thou doest
To the least of mine and lowest,
That thou doest unto me!"
—*Longfellow's "Hymn Beautiful."*

Yet smile not, worldling, for in deeds
Not all of life that's brave and wise is!
He strews an ampler future's seeds;
'Tis your fault if no harvest rises;
Smooth back the sneer; for is it naught
That all he is and has is Beauty's?
By souls the soul's gains must be wrought,
The actual claims our coarser thought,
The ideal hath its higher duties.
—*Lowell "On a Portrait of Dante."*

I hold it of little matter
Whether your jewel be of pure water,
A rose diamond or a white,
But whether it dazzle me with light.
I care not how you are dressed,
In coarsest weeds or in the best;
Not whether your name is base or brave;
Nor for the fashion of your behavior;
But whether you charm me,
Bid my bread feed and my fire warm me,
And dress up Nature in your favor.
—*Emerson.*

From the Gorilla to the Monkey.

[Written for the RURAL PRESS by JAMES G. CLARK.]

Hereditary wealth has always been the root of "polite society." To learn what the latter term means we must consult its orthodox interpreters.

England's titled aristocracy gave to the world a Lord Chesterfield, but it was the proud mission of America's moneyed aristocracy to evolve a Ward McAllister. When Boston's cultured, democratic reformer and author of the immortal "Battle Hymn of the Republic," wrote her lecture, "Is Polite Society Polite?" Mr. McAllister's book, "Society as I Have Found It," was not born.

This volume, which has suddenly become the text-book of Gotham's fashion center, is supposed to embody the social tactics and ethics of "polite society," by the accredited oracle and mouthpiece of New York's illustrious "Four Hundred."

The distinguished author, with uncalled-for modesty, aims to disarm criticism by prefacing his work with the following brief note: "One who reads this book through will have as rough a mental journey as his physical nature would undergo in riding over a corduroy road in an old stage-coach. It makes no pretensions to either scholarship or elegant diction.—W. McA." Mr. McAllister evidently overestimates the effect of his effort on one's mental sensibilities.

It does not jolt the mind a particle; and it is far less a "rough mental journey" than a dreary and monotonous one to travel through its pages. He need not have advertised its entire innocence of scholarship and elegant diction, for the class he so fittingly represents is not as a rule distinguished for that sense and diligence which are essential to average literary excellence and expression. Nevertheless, his book as an authoritative definition and exposition of the vast issues and interests involved in "first society," and as an ultimate ring on the uplifted horn of aristocracy grounded in hereditary wealth, is a useful and an important one.

It reveals the moral and intellectual hights to which society thus founded may climb, not alone in our New World Babylon, but in every other city, when given the proper time and scope to expand, "pull itself together" and soar to its loftiest ideal.

It is significant, not because it plainly voices and measures the ambitions of a class which—thanks to a compensating Providence—is forever few and limited as compared with vastly larger classes who are of some actual use to the world in which they live, but because it unerringly indicates the one goal that the descendants of all very rich men in our cities are striving to reach.

For while it is true that "many are called but few are chosen," it is equally true that all try to get there and are chagrined and disappointed if they fail to be numbered among the elect.

New York's "400" do not differ in organic quality and aspirations from the moneyed element in younger and smaller cities, save as a regular army corps differs from half-drilled and ununiformed militia companies and regiments that are aiming to become adepts in the same order and tactics. In short, New York's "400"—deny and kick against it as we may—embody the materialized and perfected substance of things hoped for by all the scattered society fragments whose members aim to walk in the same path.

Where these paths lead, especially if paved with gold, can easily be learned by reading Mr. McAllister's "Guide Book." In one portion of the volume he tells how he converted a bright, unsophisticated young kinswoman into a popular and successful society belle by adroitly and gradually emptying from the dear girl's heart and brain every noble emotion and aspiration and filling the void with polite society chaff until she resembled a bird of Paradise deprived of its inward and original substance by a skilled taxidermist and then stuffed and mounted for exhibition in a dead-bird show.

He relates how he managed to get her well married and settled, for all of which the young lady and her fortunate husband ought to be truly thankful.

To prove that society people have warm and sympathetic hearts to tie to, and are duly considerate of the feelings of old friends who have been unfortunate and have dropped out of the charmed circle, as thousands do, and are excluded from Eden by the "flaming sword" of gold and of fashion, Mr. McAllister proudly says: "A true society man will not cut an old fossil who dresses shabbily but has the aspiration of a prince. If you see him, cross the street and avoid meeting him, but don't cut him."

Of course it is not only generous but brave and manly in the "true society man" to cross the street to avoid meeting an old friend whose only fault consists of financial reverses which had, in the twinkling of an eye, changed him from a gentleman to an "old fossil." But, in case of the street being muddy, as Gotham's are in certain seasons, a rheumatic society man might slip into some convenient shop and a young and limber one climb a convenient lamp-post to save patent-leather boots rather than "cut an old fossil." If Mr. McAllister's ideal society exercises such an elevating and humanizing influence upon men, what must it do for the other sex, who are necessarily more subject to conventional forms than men are?

Mr. McAllister should at least be thankful for frankly, if unconsciously, portraying a condition for which every genuine man or woman ought to blush.

The social offspring he has introduced to the American public, and which has a hundred devotees among the followers of Mammon where the Babe of Bethlehem has one, is the crown and blossom of nearly two centuries of labor and travail on the part of Gotham's hereditary wealth.

A few men in whom acquisitiveness predominated over every noble and manly attribute have successfully made the accumulation of surplus means the chief end of existence.

The descendants of these men have succeeded in keeping this wealth—most of it gathered through unfair and dishonest methods—within the limits of family control. The result has been the creation and evolution of a social structure and dynasty labeled by Mr. McAllister as society's "400." And it is admitted that these 400 are the fashion leaders of America. It is said that the late Wm. H. Vanderbilt spent several hundred thousand dollars on a single great party in the vain attempt to become a member of this envied order; and an ambition akin to this inspired the wife of another American money king, when she sued a London editor for publishing to the world the awful fact that the lady had in former years worked with the hands given her for the express purpose. The London courts, according to precedents founded on the Old English law, "the greater the truth, the greater the libel," rendered judgment in the woman's favor.

This order of aristocracy, this house that money built, is the end to which our commercial prosperity, under the workings of great private trusts and our American system of protection (for manufacturers and corporations) is leading us. And to this end we seem to be dedicating our free institutions, our Congress and our courts, with the American eagle, the star-spangled banner and the Declaration of Independence thrown in.

It is said that Americans do everything in a hurry, but one can hardly realize that in less than a hundred years we have renounced the democratic ideals of Washington, Franklin and Jefferson and placed the crown of social distinction on the brows of lazy parasites whose chief claim to the honor lies in the fact that they consider it degrading to earn their living and creditable to feed, fatten and grow wealthy on the toil and misfortunes of those whom their fathers robbed. Such an outcome is calculated to confirm Darwin's theory, though it hardly seems possible that a creature which, according to high scientific authority, began its dual-legged career as a robust, roaring, lusty gorilla, representing the survival of the strongest, wandering untamed and unintimidated through the unbroken wilderness of animated nature, holding in its all-conquering hand an uprooted sapling for offensive and defensive warfare, and bearing in its rude breast and brain the latent germs of mighty manhood and of divine aspiration and immortal destiny, has at last ended that career and merged all its lofty promise in a little capering, dancing, decorated thing, balancing its diminutive dignity over a six-ounce cane, crossing streets and hiding away to avoid meeting or cutting indigent and unfortunate comrades, and finding its highest satisfaction in midnight sprees, suppers and carousals and in making fantastic shadows on the walls of fashion.

Dead to all sense of right,
Turning day into night,
All life's variety
Merged in "propriety"—
Graceful "400."

Oh the slight change they made
All in late styles arrayed,
Forward through flunkeydom,
Down into monkeydom—
Noble "400."

City and Country Life.

In an interesting article in the December *Forum*, on "Longevity and Country Life," President C. W. Eliot points out the great difference between an urban and a rural population in the average duration of life. Taking the registration reports of Massachusetts for forty-seven years, he shows that in the thirty years from 1850 to 1880 the average age of all the persons who died in Suffolk county, an urban county on the seaboard, was 23½ years; the average age of all who died in Barnstable, a rural county on the same seaboard, was thirty-seven; in Franklin, an inland rural county, 38½, while the average age of all who died in the island county of Nantucket during the thirty years was very nearly double the average age in Suffolk, namely, 46.15.

The same reports, he says, show that the annual death rate is uniformly higher in the densely populated counties than in the sparsely populated ones. Other causes besides density of population, he concedes, contribute to produce these striking results, but the fact remains that a family which lives in the country has a better chance of long life than one that lives in the city. In spite, however, of the tendency of city life to shorten the average duration of human existence, it is interesting to note that the urban population is increasing far more rapidly than that of rural sections.

Representative William M. Springer, in an article in the same number of the *Forum*, calls attention to the fact that between 1880 and 1890 the increase of rural population in this country was only eight per cent, while the increase of the urban population was more than fifty-seven per cent. This computation includes only cities of 8000 and upward, and Mr. Springer believes that if it embraced cities of 4000 it would indicate that the rural population had decreased during the decade, while the total increase had been in the cities.

These two results have been due, of course, very largely to the removal of country people to the cities and towns, which have grown in size by the depletion of the rural districts, the latter acting as feeders to the former, and swelling the total population of the cities, while keeping down their own.

The causes of the strong attraction which the cities possess for country people are obvious enough, but it is probable that a great majority of those who are drawn to them do not realize what they lose by the exchange, and how little most of them really gain. There are more amusements, more pleasures and more opportunities for the accumulation of money in a city, but there are, on the other hand, more worries, troubles and chances for disappointment and failure than in the country.

Scarcely one person in ten thousand betters himself permanently by leaving his rural home and settling in a city. To most, such a change means an increase in anxieties, in the uncertainties of livelihood, in the nature and hours of labor, and in the hardships and wearing burdens of existence. Life may have less color in the country, but it has more calm, less bustle and excitement, but more depth and true satisfaction, less brilliant rewards for the few, but more lasting happiness for the many.

Above all things, as President Eliot shows, the pure air, healthful exercise and the restful surroundings that insure a tranquil mind and a contented heart in the country make for a long and vigorous life, free from morbid influences and carking cares. Under such wholesome conditions there are sound minds in sound bodies, and the country gives us the men and women who replenish the worn-out and enfeebled stock of the cities, and supplies the leaders in thought and action necessary to the progress and greatness of nations. Thus the country is not only the material foundation of a nation's prosperity, but of its intellectual and moral welfare also, and any undue decline in its comparative population must be regarded with regret and solicitude.—*Baltimore Sun.*

A LIE NAILED.—Old Lady: Yes, when Gen. Washington came here, he sat right in that chair, with me on his lap, told me I was a very pretty girl, and— Tommy Makeabreak: I thought Washington never told a lie.

Alfalfa.

[Written for the RURAL PRESS by ISABEL DARLING (LUPA).]

"Say, Bub, what young one is that?"

"Which?"

"The one down by the water."

"Oh, that's Alfalfa."

"Alfalfa! Where did she get such a funny name?"

"We gave it to her."

"What under the sun is she doin'?"

"Making a bed for her doll-baby."

"What out of?"

"Willowe."

"Well, I swan! How black her hair is! Why, she's an Indian!"

"Yes, Pah-Ute."

"How did she get here?"

"Ask one more question and you'll have an even half dozen. It seems to me you're of an inquiring turn of mind, as they said about the cat when she smelt of the cream. You grew here in 'the States,' I take it. I'll tell you, though. We brought her. You appear to want more—have an Oliver-Twist kind of feeling. All right. 'Have a carriage to the Russ House, Russ House?' or 'This way to the Palace Hotel, sir?' Any place where you can get your soup-bowl filled. You really do want to know about Alfalfa?

"Well, 'once upon a time' we, myself and the rest of us, left California to take care of itself for awhile, and came back over the summit into Nevada. Never mind what we were after, for we didn't get it, but kept stock and raised alfalfa for hay.

"Don't you know what that is? It's a tall, coarse clover with a purple blossom full of honey (the bees soon smell it), and it grows so fast we cut two, perhaps three, crops in a season. White help is scarce and every one hires Piute men, sometimes women (they never call themselves squaws) to rake and pitch. The men don't work because they like it, but because they want money, and they do like gambling. The women work to live, I suppose, and keep their babies, but they never seem to have more than two or three, and when they go to work at white people's houses they take them along, and maybe a mother or sister for a nurse; so if you hire one you have quite a family to board, but then they ask only four bits a day."

"Say, sonny, wait a minute. How much is four bits?"

"Half a dollar—fifty cents."

"All right, drive on; but it's curious what a difference there is in folks."

"Here's another thing for you to mix with your black birch and sassafras to chew till you've studied out the meaning of it. You never can make them own to having a name in their own language. Twist your question as you please and they will say, 'no, no Pah-Ute name,' so the whites label them and we had a plenty of Charlies and Toms and Sams and Marys and Janes in the hay-field.

"One afternoon they had gone to their work as usual, but inside of an hour fat old Sally came waddling back to the house, all out of breath and sputtering something about 'Louisa' and 'papoosie;' but the Pah-Ute and English words tumbled over each other so mother couldn't make them out and went to see what she meant. What do you think she found?"

"I give it up."

"Well, Louisa sat leaning against the hay and on the ground beside her, rolled up in her apron, was a black-eyed, brown-faced baby, looking around as coolly as if it had always seen such things and wasn't at all surprised."

"Good natur'!"

"Yes, mother felt that way, but she brought out some small clothes that were left over when we 'kids' kicked out of the cradle, and father paid her for a full day, with two bits over for the papoose, and found a chance for her to ride home (it was two miles and she was going to walk), but that child couldn't be moved till it was tied up in just such a thing as Alfalfa is making now, only it wasn't handsome like the one she had afterward, all close work of fine willows, with that round roof over the head-piece stitched with red, green, blue and yellow worsted, and ribbons to lace across the front after the baby had been wound in its red shawl and laid in there.

"You needn't ask. Yes; that was Alfalfa, and we made a pet of her, for she was Louisa's first baby, and was always clean and dressed like white children, with stockings and little red shoes. She was always pleasant but solemn looking, as if somehow she was sorry for herself but never expected anything different. Louisa wasn't one of the gay kind, either. Baby's father was a dude. He wore a silk handkerchief around his neck when the others wore cotton, and carried a watch, and the ostrich plume in his hat was never shabby."

"You don't say! The men wear feathers in their hats! I thought they stuck them in their hair, in a straight row down the back of the head."

"Ho! They dress mostly like other folks, but they do like feathers, beads and blankets yet. When the Blaine hats went out of fashion with us they came in with the Pah-Utes; but I never saw them trimmed with any plumes except black. The women go bareheaded or run a string across one corner of a blanket, so as to make a hood of it, or if you give them a sunbonnet, they will wear it, but they don't put on style like some of the men. Dude

Charlie was a boss gambler, and spent more than half his time in Virginia City, so he thought he would pick out another wife and keep her there. [They are allowed to have only two.] But Louisa didn't seem to like it. She didn't say much, but sometimes she talked with the women she worked for. She was proud of him, you see, and wanted him all to herself."

"That's nat'ral."

"I suppose so. One winter day she took cold going home after a washing and kept coughing and coughing till she coughed herself to death. Perhaps her being low-spirited made it easier. Every one tried to help her, and the Pah-Ute medicine man was terribly anxious, for he had already lost two patients and he knew the next one would make a bad slip-up for him. Oh, I forgot that you don't know what that means. If their doctor loses three cases one after another, the tribe concludes that he has been practicing without a diploma from the Great Spirit, and a committee of three is chosen to shoot him at sight. Their ways of curing are not all down in our doctor books, but perhaps, on the whole, they don't kill any more than ours.

"Louisa died, and the doctor, poor man, never practiced any more. Dude Charlie was shot six months after for something a relative of his had done long ago, and we managed to get Alfalfa to live with us. We've kept her ever since, couldn't do without her. She was three years old then; she is five now. That's all."

"It sounds *jest like a white story*. Thank ye, boy, thank ye. 'The Lord hath made of one blood all the nations of the earth.'"

The Coming Woman.

EDITORS PRESS:—My friends Clara S. Brown, Maude S. Peaslee and others could not have read my articles very carefully. I said in the beginning that I was talking about cooks *in the future*—that we were in a transition age and could not at once reach a time in which things are the way they ought to be, but we are surely coming to it. Then women shall be able to do what *is* truly womanly.

Those who like to cook are perfectly welcome to do so if they want to, but I maintain that they have no right to set themselves up as models for all other women, and nobody has any business to point to these cooks as models and taunt other women on their account.

As to the question of "affording," I say it is the poor woman who can least afford to sacrifice herself to cookery. Her family, if she has any, look to her for inspiration in art and culture, if that family are ever to know anything about these things at all. A rich woman can hire artists and professors—these cost more in the end than cooks.

How is a girl to study anatomy and painting in addition to the usual education? These branches are already becoming part of the usual education. As a matter of fact, thousands of girls are studying anatomy and painting and paying for their own lessons, earning the money by teaching and in various ways, precisely as they have long been paying for music and elocution lessons. It is not a question of means at all, but a question of judicious choice. Going back a little, because thousands of girls are doing these things, they have enough to do without worrying themselves over cookery, and they are making a far better preparation for the future than any amateur cook.

As to the question how a girl is to be supported, that is more vital and far-reaching than many of my critics suppose. It is now generally admitted among right-minded people that every child has a moral right to demand support as long as possible. Those who have thrust upon that child the burden of seventy years of earthly existence owe that child everything possible as an atonement. Persons who are not prepared to recognize this obligation, or are too poor, have no business to become parents at all. Now, if the average woman spent as much time and thought in studying her real duties to posterity as she does to the "science" of pots and kettles, the problem of any child's support (and education) would be well-nigh solved before there was the possibility of a child at all.

The whole subject resolves itself into one grand appeal to all women to look forward. Rise above the "weak and beggarly elements." Don't "hug your chains." Don't dwell upon the petty cares and hindrances of the present as divine ordinances which must always necessarily be, but think of them as local and temporary, and do what you can to prepare the way for the royal woman who is to come.

MARGARET B. HARVEY.

"YOUR husband is less at home now than ever," reiterated the minister. "Do you try to make home attractive to him?" "Do I? I should say I did. And not only that, but I've got my mother to come live with us to help make it still more pleasant for him."—*Philadelphia Times.*

HIS FIANCEE: Are you sure you would love me just as tenderly if our conditions were reversed—if you were rich and I were poor? He: Reverse our conditions and try me.—*Brooklyn Life.*

"Life is an accident."
"And is always fatal."
—*N. Y. Herald.*

YOUNG FOLKS' COLUMN.

Blackie Whitehen.

A True Story.

[Written for the RURAL PRESS by KATHERINA BRYANT NOLAN.]

Old Lady Whitehen nestled her family in a sheltered nook behind the barn, and a big, uneasy chicken was perched on her back, warming his toes.

He balanced himself with difficulty and winked his eyes as if he needed to finish up his morning nap; still he appeared to look very comfortable to three or four fluffy little fellows, who stood around and looked at him wistfully from out of the corners of their eyes.

It so fell out that Mr. Whitehen came strutting round the corner just then, and when he saw Mrs. Whitehen he saluted her in most gallant fashion. He was able to crow the longest and loudest of any rooster on the ranch, and was a handsome, noble-looking bird.

Four of the young things, so cosily cuddled under Mrs. Whitehen's soft breast, poked their way out to look at Papa Whitehen, so the three small wait-abouts rushed underneath and nestled uneasily into the vacant places. She stood up to make room for them and the little rooster on her back came down "on the fly," and did not stop until he happened to meet another little rooster, when he came to a sudden halt.

It was war to the two chickens. They glared at each other awhile and then with a spring and spread of wings they touched beaks and tried their spurs. Still it was a harmless, comical, gay little dance they really led each other, although they made a pretense of being very bloodthirsty.

The old gentleman stood on one foot and cocked an eye at them as if he was proud to see so great a fight in the family. The hens set up shrill little cackles, those who could stop eating long enough, otherwise the fight went on without creating any excitement. When these two young warriors were tired of the battle, they walked off together in a very friendly sort of way, keeping an eye out for flies and grubs, and that was the end of it all.

These chickens lived in a lovely place in one of the famous valleys of Southern California. The rancher raised a great many chickens and his wife looked after the young things when they broke out of their shells until they were old enough to go abroad with their mothers. The latter were very ungrateful old hens. They looked upon Mrs. Rancher as an enemy, and no amount of experience ever taught them any wisdom or manners. They were indeed a stupid lot.

Mrs. Rancher flew about in a broad-brimmed hat; she just hated a sunbonnet. It was always blowing off and dancing all over the grounds, carried by the fresh ocean breezes hither and thither, yet she always ran after it patiently until she caught it and plastered it upon her head as if it was sure to stay firm after that, but it never did. It was fully as unruly as the hens.

This particular morning she came out and went up toward the mountain. Multitudes of small houses resembling dog-kennels stood in rows on this elevated, sloping part of the ranch. Opening the roof of one of these affairs and looking in, she said:

"Oh, you little darlings."

Four hens set on four nests, each made within a square box, and there was an opening just big enough for a hen to go out into the little corral made of laths. None of the four biddies moved the least bit; they did not even wink their eyes, but stared stolidly straight ahead. Mrs. Rancher didn't look at the hens, for in one of the nests five black and white downy, fluffy little chicks winked their bright eyes, and were cunningly balancing themselves on the uneven edges of the straw. She put her hand in and cleared out the broken egg-shells, but quickly shut the cover with a slam and went down to the house, Mrs. Crosspatch was so savage and pecked at her so fiercely.

The morning fog had now rolled down from the mountains and rested like a fleecy, billowy cloud in the valley far below, so Mrs. Whitehen started out to scratch for her family and keep their crops full. This was a tedious task, as a chicken's crop never stays full; there is always a hollow waiting to be filled up. So it was scratch, scratch, scratch—work, work, work all the day long for Mrs. Whitehen, who was an amiable old thing. Her chickens were of all ages and sizes, principally because they had been adopted when their brothers and sisters met with disaster. They were a mournful lot. Their relations had been drowned, gobbled by snakes, strange cats, stray dogs, and disappeared mysteriously; so it was a complaining, easily-scared mixed-up brood that followed her around in the daytime and slept under her wings at night.

At high noon, there was a row up in the chicken ranch. Mrs. Rancher ran up and lifted the same cover and four, downy, fluffy, little things lay dead. Two angry hens and broken eggs told the tale.

"Dear me," said Mrs. Rancher, in a vexed tone of voice; "I wish I had taken old Crosspatch out this morning. I might have known she'd do something. I do feel so cross."

At that, she grabbed Mrs. Crosspatch by the leg and sent her flying toward the big henhouse.

"Come, little Blackie," she said, as she took the little fellow left over from the fray in her hand; "I'll take you down to the house and try to raise you."

So Blackie was born and coddled and fussed with until he was strong enough to run with Mrs. Whitehen, and then her troubles began. He was a noisy little, fluffy little, black little Langshan. He was eternally thirsty to begin with, and could not ever get enough to eat to go on with. His legs were so short that it took nearly all his time to run after the others, and he yipped so shrilly whenever he found himself left in the rear that Mrs. Whitehen always ran back and scratched him up something delicious at such times. In this way he became a noisy, fussy, troublesome, spoiled chicken, and was growing up without the least training, which made him very selfish indeed.

One day he was racing along full tilt, chasing a fly, and he ran right upon the back of Bessie, the old red cow. He forgot all about the fly, and fell to scratching with those two tiny feet of his as if in the middle of a fine gravel-heap, and this was rare fun until the cow decided that it was time for her to stand up awhile. She chewed her cud solemnly, blinked her eyes wisely and gazed straight ahead just as if no such thing as a chicken ever existed. This was maddening to a chick of so great importance as Blackie felt himself to be, and he began a series of yells or yips that brought Mrs. Whitehen back in a hurry.

Her beak was close to the ground, her wings spread until they dragged, and every feather on her body stuck out straight, so that she looked very fierce and equal to two ordinary-sized hens. She raced around awhile and then ran off after the rest of her brood, so Blackie settled down to think things over and decide how he could best help himself.

Presently a big horsefly came and buzzed saucily in the cow's ear. She gave it a flop, and he rushed into her eye and then up her right nostril, which tickled her. She gave her head an angry shake and he sailed back toward the chicken who had an eye on him. Whack! went that cow's tail and off went that black chicken, sailing through the air like a little balloon. Mrs. Rancher was looking out of the pantry window, and she laughed and considered it a most excellent joke.

Blackie did not consider it at all funny. He thought it a narrow escape from sudden death, and he grew somewhat sedate, learning to take care of himself and also to make less noise. When he got his growth, he was a big, handsome, shiny, satiny looking bird, with long, drooping tail feathers, that shaded into lovely green tints in the sunlight, and he became the lord and master of the flocks.

He was quite the pride of Mrs. Rancher's heart, and she never tired of telling the story of his hatching out, and of the day he sat on the back of the old red cow.

GOOD HEALTH.

Electrical Remedies.

A contemporary gives the following: The number of electrical appliances for wearing upon the human body are almost numberless. There are many people who believe that electrical belts, brushes, combs, etc., have a strong curative power. There are also found people who will carry a piece of potato in their pocket as cure for rheumatism. The latest fad in this line is to carry a bit of electric arc-light carbon, that some of the electricity left over from last night's lighting may soak into their bodies and ease up on the pain a trifle.

All these notions have not the least foundation; a person may stand between the poles of the most powerful magnet yet invented, and strong enough to lift hundreds of pounds of iron, and never feel the slightest magnetism, either for good or for ill. A theory is in existence that the magnetism attracts the iron in the blood and thus starts up a better circulation. All the iron that exists in the human system is combined with hydrochloric (muriatic) acid and is in the form of the oxide of that metal, and in this form the magnet has no power over the oxide of iron; and if a person's blood does not circulate until it is started up by magnetic effect upon iron contained therein, it would not circulate more than once during the coming century.

There is a great deal in the use and abuse of imagination, and people who are taken violently ill after riding a few blocks on electric cars are ready to be rated as first-class cranks as far as imagination is concerned. A current of *electricity* passing through the body may benefit by agitating and perhaps decomposing certain portions of the tissue, but *magnetism* has no effect whatever upon the human system.

A little electricity goes a great way in this respect; physicians, in giving electrical treatment, use from one to five one-thousandths of an ampere. From two to four amperes passed through the vital parts of the human body is sure death. The tissues cannot stand so violent an agitation. The resistance of the body is so great that hundreds and perhaps a thousand volts pressure is necessary to force this amount of current through the body.

When meaning to take a little magnetism or electricity for the body's good, it might be well to have the electricity applied by a responsible physician, but do not go to the trouble of taking your ride on the field magnet of a light dynamo, or sandwich yourself between the poles of a big alternating current machine.

HEALTH OF THE STATE.—The report of the State Board of Health gives mortality reports for November from 103 localities, with an estimated population of 752,739. It shows an annual mortality at the rate of 18.60 per thousand, which is the largest death rate we have had for many months. This increase is due to the increased area of country in which diphtheria, typhoid fever and acute pulmonary diseases have been present. The mortality from pneumonia, for instance, just doubled that for October, and the deaths from diphtheria and croup were also largely in excess over the preceding month. Consumption caused the death of 157 persons—an increase over last month. Pneumonia was fatal in 110 instances, bronchitis caused 24 deaths, congestion of the lungs was fatal in 19 cases, and whooping cough caused two deaths. Diphtheria is credited with 58 deaths, which is a largely increased mortality over last report. Thirty-seven of these deaths occurred in San Francisco.

DANGER FROM MUSICAL INSTRUMENTS.—A French military surgeon has been making researches on wind instruments which had been used by phthisical bandsmen, and warns musicians of the importance of disinfection. He recommends that instruments should be filled with a five per cent solution of carbolic acid, or, in the case of metallic instruments, that they should be dipped into boiling water. These precautions are of the utmost importance when phthisical persons have used the instruments; for it was found in such cases that liquids used to wash them out presented a virulence similar to that of a pure culture of tuberculosis. Happily, the danger is small as long as the interior is thoroughly moist, which of course it usually is; but when an instrument has been lying by for some time, so that the interior has become dry, there is real danger of air containing dried germs of the disease being drawn into the lungs of the person who next plays upon it.—*New York Ledger.*

DOMESTIC ECONOMY

A Batch of Griddle Cakes.

The approach of cold weather sharpens one's appetite for hot breakfast cakes, with their usual accompaniments of plenty of maple or sugar syrup. It is said that there is no food which supplies so much carbon to the system as sugar or molasses, and now is the time when one needs a good supply of coal. Try a few of these recipes, and see if they are not good.

Put one pint of graham flour, half a pint o white flour, half a pint of Indian meal, one heaping teaspoonful of sugar, half a teaspoonful of salt and two teaspoonfuls of baking powder into a sieve, and sift them. Beat one egg till light, and mix it with half a pint of milk and the same amount of water. Make a smooth batter from these ingredients, adding a little more milk if too thick. Bake as usual on a hot griddle.

Rice Cakes.—Take two cups of boiled rice and mix with half a pint of milk while the rice is warm. If cold rice is used, great care must be taken that the lumps are well broken. Stir in one pint of flour, into which one heaping teaspoonful of baking powder has been thoroughly mixed, one teaspoonful of sugar and one of salt and one well-beaten egg. Beat the batter till it is very smooth before baking.

Indian Meal Cakes.—Take three cupfuls of Indian meal and one cupful of graham flour, one teaspoonful of sugar, one-half teaspoonful of salt and two teaspoonfuls of baking powder; sift together and mix into a smooth batter with two cupfuls of milk—or more if the batter is too stiff. Make the cakes small and bake at least twice as long as other griddle cakes.

Quick Buckwheat Cakes.—Sift two cupfuls of buckwheat flour with two teaspoonfuls of baking powder, one teaspoonful of salt and one tablespoonful of sugar. When ready to bake, add cold water enough to make a rather thin batter.

Raised Buckwheat Cakes.—Take a small half-cupful of nice light yeast and mix with two cupfuls of warm water and one teaspoonful each of salt and sugar. Mix wheat and buckwheat flour in the proportion of two cupfuls of buckwheat to one cupful of wheat, stir the mixed flour into the yeast and water till it will drop from the spoon like dough. Set the batter in a warm place and let it rise at least half. As soon as the fire is built in the morning, stir warm water enough into the dough to make it rather thin batter, set it near the stove, and it will have risen enough to be nice by the time it is wanted for baking. If there is a suspicion of sourness, add a little soda.

All griddle-cakes are better if eaten hot and crisp as when first taken from the griddle. A square of salt pork is the very best griddle-greaser. The griddle should be lightly greased and no accumulation of grease or scraps should be allowed to collect in it while baking. It is better to scour the griddle with salt and wipe carefully before putting away. If the griddle is washed with water, it is likely to stick.—*Albany Cultivator.*

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Business Announcements.

[New this issue.]

Hay Cutters—Baker & Hamilton.
Spray Pumps—Wm. Wainwright.
Stock Sale—B. C. Holly, Vallejo.
Cream Separator—E. D. Sharples.
State Citrus Fair, Marysville.
Seeds—J. H. H. Gregory & Son, Marblehead, Mass.
Stock—J. C. Smith, Oakland.
Seeds—Samuel Wilson, Mechanicsville, Pa.
Stock—M. W. Dunham, Wayne, Ill.
Dividend Notice—German Savings and Loan Society.
Animal Traps—Success Trap Co., Stockton.
Stock—P. Peterson, Sites.
Stock—E. F. F. Musson, San Leandro.

See Advertising Columns.

The Week.

Since our last a moderate amount of rain has reached most parts of the State, and has done much to remove apprehension, though the fact remains that the winter thus far is one of the driest upon record. As we write, however, on Tuesday, the indications in sky and air and the reports from the north combine to indicate rain in California perhaps before Santa Claus can finish his rounds.

We go to press one day earlier this week to give our employes a chance for Christmas enjoyment. As this will be the last issue which can reach most of our readers before the New Year's holiday, we extend to all an earnest wish for a Happy New Year. May it bring comfort to their homes, prosperity to their enterprises and joy to their hearts. May it be a good year in the highest sense in every individual's experience, and then it will be a happy one according to the verdict of the ages, that with the highest good dwells the greatest happiness. Thus may it prove to all of us.

A New Year's Sermon.

We live in an age of enlightenment and in a country notably rich in every form of natural wealth. We enjoy the advantages of liberal institutions and a free Government. Churches and schools abound, newspapers and other means for the cheap dissemination of knowledge being within the reach of all. And yet there are heard complaints among every class and on every hand. Look where we will and we see the evidence of much poverty, suffering and widespread unrest! The tillers of the soil and the toilers in the factories, the wage-payer and the wage-earner, the producer and the consumer, all are dissatisfied and clamoring for a change. Everybody is crying out for reform, an end that everybody hopes to reach by different means.

The grain-growers of the North and the cotton-planters of the South are anxious that the General Government should advance them money, at low rates of interest, on their lands and the products thereof; this done, these honest people fancy they would be prosperous and happy. As a cure for all the ills that flesh is heir to, the Nationalists would have the Government possess itself of all the telegraphs, the railroads and other means of transportation and operate the same in the interests of the people; this accomplished, the Nationalistic heart would be gladdened, and the whole world and the rest of mankind be relieved from the severer burdens of life. Intoxicants, say the Prohibitionists, are the cause of all our multitudinous woes. Stop then their sale and save the race. Give us greenbacks, say the advocates of that species of currency, and we will be all right. Adopt the free coinage of silver, exclaim the friends of the white metal, and the country is safe; gold or ruin, say their opponents. Single tax, shriek the landless disciples of Henry George, to which a great army of cranks respond, co-operation forever, community of interests or equal distribution of property being the panacea of the socialist and other proletarian bands.

Wherefore this clamor? Why this all-pervading discontent? Whence comes it and what does it mean? Let us look a little below the surface and see if we cannot detect other causes for most of these troubles than those ascribed by this vast concourse of malcontents. What about our growth in luxury and extravagance? Our costly amusements and pastimes? What about the time and the money expended in these? Looking back, is it not perceived how great has been the spread of these pernicious and costly practices of late years? How fearfully during this time has been the growth of the alcoholic, the nicotine and the morphine habit! How have the drinking saloons and the opium dens been multiplied among us, the simple beverages and healthful recreations of the olden day having been forgotten or converted into mere money-making devices.

It is now little else than a constant round of horse races, prize fights, rowing or wrestling matches, baseball or billiards, with a score of other pastimes and pleasures equally pernicious and expensive. How can a people hope to prosper whose intoxicants cost more than their clothes and their tobacco half as much as their bread? How can they hope to make money when, in idleness or dissipation, they lose fully ten per cent of their time

How can they expect to get ahead when they spend the bulk of their earnings in the indulgence of pleasure or in the purchase of articles wholly unnecessary if not absolutely hurtful? It cannot be done, and the sooner these suffering and complaining thousands come to realize this fact and act accordingly, the better for them and all others concerned. Let these deluded people emancipate themselves from their evil habits, economize their time and save their money, and there will speedily come an end of hard times. This is the true panacea, compared with which all these other reforms, even if practicable, would count as nothing. It is the case, indeed, that the inhabitants of these United States will have to largely amend their ways in the several particulars mentioned, or it will matter little to them whether these other reforms carry or not. A people who have surrendered themselves to mere pleasure-seeking and sensuality are already lost, or so near it that any effort made in the hope of saving them would be labor thrown away. D. G.



The Ennobling of Silver.

We had an interesting talk the other day with Mr. Albert Montpellier, Manager of the Grangers' Bank, on the financial situation. He called our attention to the significance of the incidents of the recent monetary crisis in England, which was averted by the shipping of $15,000,000 in gold from the Bank of France to the Bank of England. A letter from Paris, describing the incident, says:

This is the third or fourth time that the Bank of France has gone to the help of the Bank of England during the present century, and the explanation of it is very simple. The Bank of England has only one kind of metal in its safes and can only pay in gold, but the Bank of France can pay its way in silver, and so it does not have to go around borrowing gold when short of that metal. If the Bank of France is richer than its brother inssitution in London, it is because its vaults are filled with both gold and silver.

This chapter of French experience seems to have especial significance for us. Our growth as a country and the vastly increased volume of our commercial transactions call for an increased circulating medium. Plainly, we need more money to do business with, but we need also good money, not something which appears to be money but is not. This end could be accomplished by the remonetization of silver, that we could have both gold and silver to meet our needs, as has France.

Irrigators' Convention.

Much space upon another page is given to matters pertaining to a meeting of irrigators to be held in Sacramento on January 8th, prox. This is, as elsewhere stated, a prosecution of the work begun at the Tulare meeting a few weeks ago, and it should attract the attention of all irrigators, especially those working or intending to work under the Wright law. It will be seen that a plan is proposed for centralizing and crystallizing the irrigation interests of the State into a form likely to prove valuable and effective in many ways. Whether this plan is best or whether some other proposition would offer better results, we do not presume to affirm. It is well, however, to have some definite propositions before the people in advance of such a meeting, that they may think over the matter and discover what may be even better than that proposed. Our columns are open to such propositions, and anything of this nature submitted in time for publication in our next issue will reach those interested in advance of the meeting.

We cannot but urge upon all interested the importance of attending the meeting which has been called, and bringing their insight and their experience to the elucidation of the subjects which will be brought forward.

Beet Sugar at Chino.—The construction of a first-class beet-sugar factory at Chino, San Bernardino county, is assured. Richard Gird and Henry Oxnard have signed contracts for the work, and thus assured the construction of the factory and the growth of beets sufficient for its operation. It is announced that $500,000 is to be expended in the works, and the inception of the enterprise will be of great importance to the South and to the whole State.

Sorghum Syrup.

In our last issue we alluded briefly to the manufacture of sorghum syrup, and promised notes from the experience of producers.

Mr. James Linforth of this city, the well-known dealer in sorghum machinery, shows a number of personal letters from interior sorghum-growers and syrup-makers, from which we quote briefly to show the drift of the business. T. J. Henderson of Butte county writes: "We have just finished and there was a merchant waiting with an express wagon for the last 30 gallons. We have had orders since which we could not fill." John Blackiston of Placer county writes: "My experience demonstrates that cane can be raised here, and that at a profit. We will go into the business extensively next year." J. F. Butler of Fresno county says: "Our 35 acres yielded over 4000 gallons of syrup. The people generally are disgusted with the fancy 'drips,' and anything pure is hailed as a godsend. Sorghum grows well here, but requires a great deal of water and much labor, so that the profit is less than it should be." B. L. Musseter of San Bernardino county sent up a sample of syrup which we had the pleasure of examining. It is very fine in appearance and flavor. It was shown at the San Bernardino fair and was much praised. Mr. Musseter does not yet find the market as good as he would like, but there is often difficulty in beginning an enterprise. It seems likely that at first the best market will be found in the smaller interior towns and mining camps, and although this requires some effort and peddling, the producer can save freight as an offset for his time in developing his market.

The Squirrel Ordinance Rejected.

Our readers will remember the squirrel ordinance adopted by the Supervisors of Contra Costa county declaring ground squirrels infesting the lands in the county to be a public nuisance, and ordering all owners and occupants of lands within the county to exterminate and destroy them within 90 days after the passage of the ordinance, and thereafter to keep their lands free from the pests. Any person violating the ordinance was guilty of misdemeanor. Such a person, tried and convicted in the county court, appealed to the Supreme Court and was released. The Supreme Court held as follows:

It is certainly a most effective means of abating a nuisance, viz., the squirrels, and bringing about a very desirable end. We regret exceedingly that we cannot see our way clear to uphold and enforce such an important and original piece of legislation. Indeed, it would give us great pleasure to see the power here assumed applied to snakes, tarantulas, ants, flies, fleas and other reptiles, insects and pests which tend to make man's life a burden, and to have it exercised and enforced in every county in the State. But we are unable to see by what right or authority of law a board of supervisors can impose upon a land-owner the burden and expense of exterminating animals *terræ naturæ* on his own land or elsewhere. We know of no law which can be held to authorize a board of supervisors to enact such an ordinance and we are quite clear that it cannot be enforced for the reason that it is unreasonable and burdensome in the extreme. Let the petitioner be discharged.

General Schofield has received a telegram from General Ruger confirming the reported capture of Big Foot and his followers and Sitting Bull's fugitives in Cherry Creek district. The surrender and disarmament of these Indians, Ruger declares, practically ends the probability of any serious trouble with the Indians at Cheyenne River and Standing Rock reservations, and is a good step toward ending the whole trouble.

A new decision of the Supreme Court of the Empire of Leipsic is to the effect that if you remain seated when the health of the Emperor is proposed you are guilty of the crime known as *lese majestas*, a sort of petty treason, punishable by various degrees of imprisonment on prison diet.

Lake Superior Iron Ore to the amount of over 8,400,000 tons was mined this year in that region. This is said to be 1,000,000 tons more than the output of 1889. The Escanaba and Marquette mines produced 5,000,000 tons.

Appalling Reports of starvation at the east end of London have startled the aristocratic west end.

HORTICULTURE.

The Rational Manufacture of Olive Oil as Practiced in Europe.

[An essay read at the Santa Cruz Convention by L. PAPARELLI, First Assistant in Viticulture at the State Experiment Station.]

The following remarks on the operations preliminary to making of olive oil form part of a more exhaustive paper on the whole subject now being prepared by Mr. Paparelli:

Ripening and Picking of Olives.

Ripening.—The ripening and picking of the olives affect very materially the olive-oil industry, and therefore in gathering them their degree of maturity should be closely noted, for on that depends in great measure the quantity and quality of oil that will be obtained.

The ripening of olives varies greatly according to the nature of the soil and of the climate, of the exposure of the plantation and of the tree, also according to the variety cultivated and the kind of manure used.

In warm climates and under the influence of strong sunlight the olives ripen more quickly and in general give a heavy-tinted oil, rich in special aromatic matters. In cold climates, on the contrary, the ripening is retarded and the oils produced are lighter, clearer and whiter. In moist or rainy climates the olives ripen very late, and the quantity of oil they give is less.

In poor, clayey soils the maturity is retarded and the yield of oil small; in a fertile, calcareous soil, slightly moist, warm and rich in phosphates, the ripening is generally normal and the yield much more abundant. The olive-grower in seeking to improve his soil should choose those manures [illegible] will hasten the maturing of his crop and [illegible] the same time increase its quantity and quality.

Finally the maturity will be early or late, according to the variety cultivated and according to the northern or southern exposure of the tree or of its branches; also according to the form given to the tree in pruning, and to the amount of cultivation given to the soil.

In olive-oil making the maturity of the olive should be considered from an industrial standpoint, not from a physiological one; thus, the gathering of the olives should be governed by the quantity and quality of oil that it is desired to produce.

The ripening of the olive is marked by four variations in the color of the pellicle: 1st, from olive-green to lemon-yellow; 2d, from lemon-yellow to red or purplish-red; 3d, from purplish-red to wine-red; 4th, from wine-red to a velvety-black.

Generally, under moderately favorable conditions of soil and climate, the velvety-black color will mark the proper time for gathering the olives for industrial uses, though the ripening is physiologically continued for some time longer.

However, the exterior coloration of the olive is not an infallible sign of its ripeness, for there are modifications in this coloration and variations in its intensity dependent on the different varieties cultivated. It should also be borne in mind that the velvety-black tint in olives grown in a cold climate does not represent the same degree of ripeness that the same tint does in olives grown in a warmer one; so that these and other general considerations, though giving an approximate idea of when to gather the crop, must be supplemented by local experience, which alone can determine the exact time. While noting the color of the outside of the olive, it must also be cut and the pulp examined, to see whether it is whitish or colored, observing also the quantity of water and the droplets of oil it contains; notice should also be taken of the stone, whether it is still white or has become brown, and of the taste of the juice, whether sweet or bitter, and so on.

If, in the extraction of the oil, high quality is the object in view, the olives must be gathered when they show the black-velvety color in cold climates; but as in warm climates this color corresponds to a certain over-ripeness, in order to obtain an oil of equal delicacy the fruit must be gathered while still yellowish and hardly commencing to redden.

If, on the contrary, the oil-maker cares little about the high quality of his oil, but aims principally at quantity, he can gather his olives at their complete maturity. He ought, however, never to leave them on the trees longer than this, for they will gain nothing in oil and run the risk of being spoiled by climatic causes or by birds and insects; and in this case the oil he will obtain will be of even inferior quality to that intended, and it will keep poorly.

Summarily, then, it may be said that olives gathered a little *before* their perfect maturity, yield an oil of superior delicacy and fruity taste; those gathered a month later give an oil of ordinary quality, while those gathered very late give a very inferior oil, which can only be used in the manufacture of soap, or for illuminating or lubricating purposes, etc.

The oils furnished by fruit of different degrees of maturity may be characterized thus:

Very ripe olives furnish a bitter oil; those which are nearly ripe give an oil which has a fruity taste and everything considered is better than any of the others; olives which are completely ripe produce an oil with a strong flavor which is hardly agreeable and is subject to becoming rancid; over-ripe olives yield a very greasy, thick oil, which it is very difficult to keep from spoiling.

Methods of Gathering the Olives.—The ripening of the olives not being uniform on all trees and varying even on the same tree, two or three separate pickings are generally made.

This should be done in good weather when the atmosphere is clear and dry, and when the soil is not damp from previous rains.

Four ways of gathering the olives are practiced: 1st, picking up those which have fallen on the ground; 2d, picking by hand; 3d, beating the trees; 4th, shaking the branches.

The falling of the olives may be caused by climatic influences, or by animals, or finally by overripeness. These fallen olives are gathered and kept separate to be used for the making of an oil of inferior quality.

Hand-picking is the method most to be recommended, as it does not injure the fruit in any way; and in a country like California, where the olive trees have not yet arrived at any great hight, it should be practiced exclusively. Hand-baskets are the best receptacles to use in this way of gathering.

Beating the trees with a pole or stick is the worst possible way of harvesting, and should only be practiced in exceptional cases, as it damages both the fruit and the crop, doing harm also to future crops.

Shaking the branches to make the olives fall, though less pernicious than beating the tree, is not to be recommended except in certain cases; that is, when, from the hight of the tree or the extent of the branches, the olives grow out of reach of the workman's hand. As shaking the tree only detaches the spoilt or overripe fruit, it cannot be considered as a rational mode of harvesting. The conclusion, then, is that it is absolutely necessary to pick by hand if we wish to avoid all danger of injuring the quality of the oil, or of lessening the future production of the tree. Beating and shaking should be limited to those exceptional cases where the olives cannot be reached, by any available means, by the hand of the workman. It must not be forgotten to spread cloth sheets under the trees to save the olives from being still more damaged by falling directly on the bare soil.

Selection and Preservation of Olives.

The olives should be selected to a certain extent during the gathering, and more completely and carefully afterward at the oil-mill. This selection is of great importance, as the fruit communicates to the oil all the qualities and all the defects that it possesses when worked.

To transport the olives from the orchard to the oil-mill, sacks should never be used, but some receptable with unyielding sides, in order to protect the fruit from being damaged on the way.

For this purpose baskets of different sizes and shapes the the most suitable, but in case they cannot be procured, whatever is used must dry easily, and not be too porous or absorbent, like soft wood.

The handling of the olives in filling and emptying the baskets should be done very carefully in order not to break the skin, for in that case, are pulp being exposed to atmospheric agencies, fermentation is likely to set in and extend to the rest, rendering it impossible to preserve them till the time desired. Oil made from such fruit will not only be inferior from the beginning, but will very quickly acquire a very disagreeable rancid taste.

The object in selecting is to separate the fruit into four different qualities; 1st, the good olives; 2d, the dry or frost-bitten ones; 3d, those which have been broken, crushed, or in any way damaged in gathering; 4th, the spoilt olives. It is unnecessary to say that in sorting over, all leaves, twigs, etc., must be picked out.

It may be objected that to put all these details in practice would entail too great an expenditure of time and money; but when we consider the much greater price for which superfine oils can be sold, and the loss there will be in making only one grade of oil from the olives of different qualities, the practice of sorting will be found to be an economy.

Sorting by hand alone can only be practiced on a small scale, but by the use of an appropriate apparatus, moved by some motive-power, large quantities can very quickly be sorted. This apparatus does not make a very complete selection, but is a great saving, even if the separation has to be finished by hand. Such a machine will be described hereafter.

Conservation of Olives.

In a rational treatment of olives they ought to be kept as short a time as possible after picking, for to keep them for any length of time in order to work them at one's convenience is as little practicable as would be the keeping of a similar quantity of grapes to be crushed later. The principal end to be kept in view in the keeping of olives is the prevention of all heating of the mass that would cause fermentation; but as the time which elapses between the picking and the working should be as short as possible, the capacity of the oil-mill should be proportionate to the size of the olive plantation. In this way the delays and losses which are so common in many oil factories will be avoided.

Of course it is useless to attempt to preserve any but the olives picked by hand and in the very best condition; all others must be crushed immediately, as they cannot be preserved by any practical means.

The only good method of preservation is to make use of trays or shelves of willow or cane; all other methods offer insuperable objections.

The trays are arranged on shelves in a cool and well-ventilated room facing north. The thickness of the layer of olives on each tray ought to average about two inches and a half, and under no circumstances should it exceed four inches. Frequent observations of temperature should be made on each layer, and if the temperature rises above 59° F., they had better be taken to the mill at once. In order to prevent any elevation of temperature, it is necessary to turn over the olives often, and so cool them by aeration.

With regard to the quality of the oil, the keeping of the olives should be as brief as possible. It is always better to work them immediately, but as that is not generally possible, three or four days should be the limit. In this time the olives lose a portion of their water of vegetation, which in a rainy season is doubtless of some advantage.

Even when all the conditions for the preservation of the olives are favorable, they must not be kept too long, as the oil may lose but will never gain in quality. In conclusion, I may say that the oils of Nice and Lucca owe their reputation to the fact that there the olives are worked immediately after gathering, or are only kept for a very short time and with all the care demanded by a rational method of treatment.

Practical Olive Culture.

[An essay read at the Fruit-Growers' Convention at Santa Cruz by W. ALSTON HAYNE, JR., of Santa Barbara.]

Feeling sure that olive culture is to become one of the leading industries of California, I deem it of more importance to give my own practical experience than to write anything about the historical olive tree or give any flowery picture of what was done thousands of years ago with this famous tree.

My own experience in olive culture might be of benefit to those who are contemplating planting olives; I therefore venture to give some of my ideas. I say my practical experience, because I believe in this lies the only true road to success. Much has been written about olive culture, and mainly in regard to European experience. From what I have read in French, Italian and Spanish works, while at the same time I have steadily grown the olive for nine years, I do not believe that foreign ideas will do to follow out, nor do they apply to California. I certainly would not have known this had I not found it out by the practical manipulation of olive cuttings and olive trees as the thing is worked here in this State. One idea which seems to prevail is that the olive trees will grow and thrive on thin, poor land, rocky land, in fact any sort of land; that all the useless spots on a place will grow olives finely; that the Lord made these spots on the earth for the olive. I do not blame a man who has had no experience for at once believing this; it is natural that he should. I at one time thought it must be so, My experience, however, has taught me better. I will admit that the olive tree is hardy and that it will live with very little care, but those of us who plant olives do not propose to be satisfied with merely seeing the tree live; we want it to grow, and grow big, and hurry up in every respect. I have planted the trees where I could not cultivate them, among the rocks, and at the same time I have planted them where I could do good cultivating, and at the end of two years it would be hard to convince a stranger that the trees thus cared for were really of the same age, and planted out in orchard at the very same time.

The idea of sterile, thin, rough land being good for the olive is all nonsense. I dare say that many a man has refused to purchase good land for his orchard of olives, because he was led to suppose that two-dollar land was as suitable. I do not pretend to say that one must have rich, heavy, low land for olives; this would be almost as bad for the tree as the poor land which I have described. The first described land I would recommend for goats; the second, heavy, low land, for corn and pumpkins; we have plenty of other kinds of land; soil that is better than the goat land, and yet not so expensive as the corn land. My experience has shown me that the olive tree does best in places where the soil is deep, and especially where the land is new, but the ground must be of a light character, easy to keep loose; sand or gravel mixed in is very good, but not necessary; especially must it be naturally well drained and have a good exposure. The water must drain off from the roots, leaving the ground moist but not soggy.

Most of my trees are planted 30 feet apart; some are 25 feet; I should prefer a greater than a less distance.

To save expense have your land as near level or gently sloping as possible; leave the ends of the rows far enough from the fence, so as to enable the plowman to easily swing a four or six horse team; in this way much money will be saved in cultivating. Where land is out or broken, or rough and stony, one, or at the most two horse teams must be run, and thus four or five men must be employed where one man would do, if the above plan is carried out in laying out an orchard. One live man can cultivate an orchard of 5000 trees for three or four years, with only occasionally having a little help; of course, after this time there will be considerable pruning, and soon after fruit picking will require more labor. Children, however, if looked after, can gather the berry as well as men, and it costs very much less.

In regard to propagating the olive, I have had much experience. I first commenced to propagate them from cuttings, 15 inches long, and of all thicknesses. I planted them in ditches, four feet apart, and in the row from 10 to 12 inches, covering nearly the whole cutting, hardly exposing any of the top. I cultivated them well, and those that grew, when two years old, were ready to plant out in orchard form. In using large cuttings, however, many will die and one cannot count on getting a good percentage of them to come. In fact, this old method does not pay any longer, when one raises trees as I do, for the market, and as I raise many thousands for sale, I have about abandoned this method.

Besides what I have here mentioned, there is another very important thing. The larger the cuttings are, the less roots they develop. Most all of the nurserymen now are propagating from what they call "tips," that is, the extreme ends of the branches; these are easily obtained, which makes it an inducement. This method I have carefully experimented with and have about abandoned it—it is a very slow way—and those that do root, when a year old are such little bits of things that it is really discouraging. The roots, however, that they develop are pretty good, only they seem feeble and make slow growth.

The plan that I have now hit on is a much surer way and develops remarkable roots and grows five times faster than the "tip" method. I use sprouts taken from trees in bearing; they make a very thrifty, fast-growing tree. I now have over 80,000 started in this way, and I shall for the future propagate after this method. One thing I should advise never being done, and that is to plant a large cutting where it is always expected to remain, for this reason: The olive tends to have a surface root, and if the tree is never transplanted and set deeper, the roots will be too near the surface, and when the tree grows a good heavy top and the happy orchardist thinks that all is well, there will come a heavy rain, making the ground like mush; a wind then following the rain, will lay the trees as flat as a flounder, and no staking will ever insure the tree against other storms that will follow. Nothing is more discouraging than after four or five years of care to wake up some fine morning and see hundreds of your trees flat on the ground. What I here mention is only what experience has taught me; transplant, therefore, from the nursery and get all roots well down.

I have planted several large orchards in the Santa Ynez valley, in Santa Barbara county. The one I am now interested in has 114 acres in olives. There are about 30,000 olive trees growing in the valley, most of which I have raised. The trees are now coming into bearing. This part of the county is attracting much attention, and it is looked upon as a grand place for olives. A company has recently been formed and 2000 acres of land has been purchased, all of which is to be planted in olives. I doubt very much if there will be or is such a vast olive orchard anywhere in California as this contemplated one. The Santa Ynez olive oil is to become a famous brand, as the company I have mentioned will spare no expense to make it known the world over.

ENTOMOLOGICAL.

Lecanium Scales on Deciduous Trees.

In the southern part of Alameda county there seems to be unusual trouble with lecanium scales on deciduous fruit trees. These lecaniums are the common black scale of the olive and the apricot scale. A correspondent of the *Call* writing from Niles seems to refer especially to the black scale when he says the pest was brought in on orange trees, but includes the apricot scale in the comments on remedies. We quote as follows:

The scale was evidently brought into this section by an infected lot of orange trees, which were brought from Los Angeles some eight or nine years ago, and it has only been within the past three or four years that the orchards generally became infected, so the manner of ridding the orchards of this pest is a new one to the farmer in this section. The same spray that is used upon the orange trees in the southern part of the State does not seem to answer for other trees. The apricot and peach were the first to be attacked, but this year they are found on the plum and prune as well, while sometimes a few may be seen upon a stray cherry or nut or even a fig, and it will be only a matter of another season when all the trees will be equally covered.

Of twenty-one orchards personally inspected, with the aid of a good microscope, but one, a young ten-acre peach orchard on sandy bottom land, was clean, it had never been sprayed; one other, a mixed eight-acre young orchard, was also almost clean, one or two only being found; it had been sprayed in January with the soda and potash wash, half a pound of each to three gallons of water; one large mixed orchard, old and young trees, had never been sprayed and was literally covered; of the others, nine had been sprayed late, in the last of January or first of February, with soda and potash, half a pound of each to four or five gallons of water, and were even worse than last season; three had been sprayed in December and January with insecticide, one pound to

four or five gallons of water, and were in good condition, comparatively clean; the others were hard to classify, sometimes the peaches were clean and apricots bad, and sometimes vice versa. As the scale has only hatched out within the past three or four weeks, many were sure they had none, the old ones were dead, but a close inspection usually brought them to view.

The general opinion seemed to be that either wash would do the work if carefully applied. It must be in calm weather, neither too hot nor damp; must be applied either in December or January for the first time, and ought to be ½ pound of caustic soda and ½ pound of caustic potash, 98 per cent each, to 3 gallons of water, or 1 pound of the insecticide to 4 gallons of water. Neither wash can be applied later than the middle of February, as it will burn the tender twigs when sap is in them. The cost of these washes is about the same, from 8 to 10 cents a tree, which is a heavy expense, aside from the pumps and labor necessary. Several farmers are intending to experiment with different washes this season and the results will be watched with the greatest interest.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

ALMOND PROFIT.—Livermore, Dec. 15: J & O. Ramke, owners of the old Eidon ranch, just northwest of this place, sold $265 worth of almonds from the old orchard of 70 trees, covering one acre of land, on the place, this season. The variety is the Languedoc, and the nuts brought but 10 cents per pound, while the Hatch varieties sold for from 15 to 17 cents. The Messrs. Ramke intend planting an almond orchard on their property in the near future.

INCREASING GRAPE YIELD.—Livermore *Herald:* Some idea of the increase in crop production being made by the vineyards of Livermore valley may be obtained from a statement of the yield of the Wegener vineyard, planted in 1882. There are 55 acres in vines. The yield in '88 was 85 tons; in '89, 125; and in '90, 220.

PLOWING.—Haywards *Journal*, Dec. 20: Geo. A. Wiley of the Cook ranch, reports that the farmers were well satisfied with the present weather. Seldom has so much land been cut up at this time of year, and the ground was never before in such fine condition. He has already over 600 acres turned over.

Butte.

AN INDIGENOUS OLIVE.—Oroville *Mercury*, Dec. 19: Erasmus Faul, who owns a dairy farm near Oroville, has placed on exhibition a bottle of "Dutch Olives," which were picked from trees on the Faul & Finch tract. These berries resemble the Picholine in color but are much smaller in size. They differ from other olives in having a double seed and grow on a bush instead of a tree, although they resemble the olive family to which they are closely allied. This olive was a discovery made by Faul and the name is one given it by himself. It is an indigenous variety, and when cultivated, the bushes bear prolific crops. The oil made from the berry, of which a sample is also shown, is of an excellent quality, although many claim that it is not as rich as that made from the standard olive. However, Faul thinks that it is destined to fill a long felt want, will suit the taste of people with thin blood first rate, and will prove indispensable for running machinery. Upon the tract there are now about a dozen of the bushes in full bearing, and it is intended to plant the entire Faul & Finch tract of 10 acres to them. The attention of Mr. Faul was first called to this native olive by a herd of swine which he had feeding in an alfalfa tract. These bushes were growing along the fence, and the hogs partook of the berry with great gusto and preferred them to the alfalfa, and Fred finally concluded that what the hogs considered good must have some merit unknown to man, and he began an investigation which has resulted as above stated.

ORANGE NOTES.—Oroville *Register*, Dec. 18: Judge N. W. Winton has been in Oroville for a day or two. The Judge is largely interested in orange growing in Thermalito, and has one of the finest and best cared-for groves in this part of the State. While in Sacramento he purchased from the W. R. Strong Co. four thousand orange trees to be planted this winter in Thermalito. These trees are for W. W. Carr, a wealthy Dubuque, Iowa, furniture manufacturer. They include 1000 Washington Navels, 1000 Malta Bloods, 1000 Mediterranean Sweets, and the same number of Jaffa orange trees. The Judge will plant these on the forty-acre tract purchased by Mr. Carr from the Thermalito Company in August last. He will also plant for his daughter, Mrs. Waitham, ten acres in Mission olives....Mr. E. A. Platt, who had charge for the Strong Co. of the orange picking in Oroville, gives us the following figures: They picked the fruit from 258 orange trees, which gave 705 boxes. These boxes average 176 to the box, making a total of 124,080 oranges. The trees averaged 2 7-100 boxes, or 480 oranges to the tree. Some of them were large, full-bearing trees, and others were just coming into bearing and had but little fruit on. They picked 22 boxes from three trees owned by Mrs. Z. M Sexton, or an average of 7⅓ boxes to the tree. An acre of orange trees in full bearing, as these trees were, would give 80 times 7⅓ boxes, or 586 boxes, making nearly two carloads. The price paid was but $1.40 per box, but at this rate an acre would produce $820 worth of fruit. Joe Gardella furnished 300 boxes from 80 trees, some being so young that only 25 oranges to a tree were obtained. The price was $1.45 a box or $435 from an acre of trees.

Fresno.

WEATHER FAVORABLE FOR PLOWING.—Sanger *Herald*, Dec. 20: Farmers generally state that the ground is in better condition for plowing this year than ever before known. Every available team has been put into service this week, and the area devoted to grain this season will be larger than heretofore. The damp, foggy weather we have been experiencing several weeks past, has kept the ground moist, but fair weather would be more beneficial to the crops.

FRUIT PRODUCT.—Fresno *Expositor*, Dec 17: The shipments of raisins, dried grapes, green fruit, dried fruit and wine in 1890 from Fresno will be considerably more than double those of last year. They already amount to 1286 carloads, against 629 carloads for last year. These big figures show plainly the rapid increase in these industries and explain the prosperity so plainly evident on all sides. The shipments from this point during the time between Jan. 1st and Dec. 10, 1890, are as follows:

Products.	East, Carloads.	Pac. Coast, Carloads.	Less than carloads in lbs.
Raisins.....	602	16	114 215
Dried grapes...	162	2	25 690
Green fruit....	140	59	100 915
Dried fruit....	61	3	34 800
Wine.....	32	186	.
Totals.....	1007	266	*275,610

*Amounting to 13 carloads.

Humboldt.

MORE STRINGENT FRUIT-PEST LAW.—Eureka *Times:* The most important question in regard to fruit-raising in Humboldt is the guarding of our orchards against insect pests. We certainly believe that the Legislature should devise a plan by which the Horticultural Commissions are given more power. The Commissioners, in almost every county, are hampered by the delays of the law, and the opposition and violations of law, by those who care nothing about fruit-raising generally, but persist in endangering the industry and property of others. The Commissioners should have power to condemn and secure speedy execution of their action. Some power similar to that vested in case of glandered horses should be conferred on them. In many instances already the slow operations of the law have allowed the rapidly increasing pests to propagate themselves, where much trouble and serious loss might have been avoided had the Commissioners been empowered to act promptly.

Kern.

PREPARATIONS FOR TREE AND VINE PLANTING.—Bakersfield *Echo*, Dec. 18: Work has begun on the preparation of fields for trees and vines. Where leveling is required, that is being done, and will be followed by deep plowing. Early planting seems to be preferred by experienced orchardists and vineyardists. A gentleman in charge of one of the largest vineyards in the county said recently that he did not consider December too early for the planting of vines. That gave the ground a chance to be settled around the roots by the rains, and less irrigation was required. January and February will be busy months, though many acres will probably be planted by late arrivals from the East as late as March and April. Some of the Rosedale vineyards were planted in the latter month last spring, and the result was very satisfactory.

Lassen.

FREIGHT CHARGES ON LIVE-STOCK.—Susanville *Mail*, Dec. 18: Live-stock may be shipped from Amedee to Oakland or San Francisco at the following rates: Horses, $94 per car; cattle, $80; sheep, $55, transfer at Reno to be performed by owner at his own expense.

FEED FOR STOCK.—Susanville *Advocate*, Dec. 18: Ben Neuhaus, one of Willow Creek's solid farmers, came in from that place on Tuesday. He says stock is still on the range, and the people have plenty of hay now to feed until warm weather in the spring.

FARMERS PLOWING.—Susanville, Dec. 18: Advices from points throughout Honey Lake valley state that enough rain has fallen during the past two weeks to enable the farmers to commence plowing, there being no snow in the valley.

Los Angeles.

ORANGE CROP.—L. A. *Mirror*, Dec. 20: According to estimates, the orange crop of Los Angeles county for the present season will approximate 2750 carloads. This is above the crop of a year ago. Accurate statistics show that about 1700 carloads of oranges will be produced in the following localities: In the San Gabriel and Alhambra districts, 500 cars; in the Azusa and Glendora districts, 130; in the Pomona district, 148; in the Pasadena district, 300; in the Los Angeles district, 316; in the Downey district, 107; and in the Rivera district, 200 cars.

TIMELY WARNING TO FRUIT-GROWERS.—Pomona *Progress*, Dec. 18: Commissioner Mitchell informs us that some of the careless and thoughtless nurserymen in Los Angeles are putting the fruit orchards in this region in jeopardy by the importation of thousands of peach trees from New Jersey. It is high time something was done to stop this importation. The widely-known disease, the yellows, is widespread throughout New Jersey, Michigan, Maryland and Pennsylvania. The disease has killed millions of thrifty peach trees in the East, and no cure has ever been found for it. It is a dangerous trouble in any peach orchard, and spreads with unusual rapidity. The Eastern peach-growers and buyers have repeatedly said during the past few years that, while the yellows is fast reducing the quantity of that fruit grown there, the California orchards have been clean and thrifty. For that reason it was predicted that in a few years California would have the only real peach orchards in the United States. Now that trees are brought into this section from the worst region in the East for diseased peach trees, it is alarming.

PROSPEROUS TIMES.—Los Angeles, Dec. 20: As an evidence of the general prosperity of the producers of this county, 40 per cent of the mortgages on farms in the county have been paid during the year, and it is estimated that a corresponding amount of mortgages will be paid during the next 12 months.

VEGETABLE GROWING.—Los Angeles, Dec. 20: The raising of winter vegetables for shipment East has lately become quite general, and it is anticipated that during the coming three months large quantities will be sent out. Already string beans, green peas, tomatoes and peppers are being shipped, and as near as can be estimated, 3,000,000 pounds will be shipped during January and February.

Merced.

FRUIT PLANTING.—Merced *Star:* On all sides we hear of colonization prospects and plans for planting figs, raisins and other fruits. Merced county, or at least that portion of it under the great canal, seems to be thoroughly wide awake and in earnest on the proposition of fruit and vine culture. There is now more work planned for the coming season than can be done by the people and stock now within the confines of the country. The remainder of California will be heavily drawn upon for supplies and for machinery. Five hundred mules are under charge of Foreman Rouse at Rotterdam colony. The 200 acres owned by the Company de Esplotta, which is to be planted to olives, has all been leveled and the land is now ready for use. The force is now working on the 300 acres southwest from Yosemite Lake. Rapid progress is being made in all directions.

EXPECT LARGE CROPS.—Merced *Argus*, Dec. 20: Farmers have commenced plowing since the late rain and say if rains are favorable after the holidays, crops will be larger than ever before known in the valley.

Sacramento.

NEW SYSTEM OF STRINGING HOPS.—Santa Rosa *Republican*, Dec. 20: One of the most extensive hop-raisers of the county recently visited Sacramento county and carefully examined the method of stringing hops employed by a large number of the growers there. Instead of the usual method known here, big poles about 20 feet long and as thick as the ordinary telegraph poles, are procured. They are set in the ground only on the sides of the hop-field, about 50 of them being used on an acre. A heavy wire is strung from post to post along the side of the field, and from these wires, which are about 18 feet from the ground, are strung lighter ones across the field. From these, wire strings go down to the hop stakes. The plant or vine travels up the string, and can keep on growing until it has grown seven or eight feet higher than it can by the old system. The gentleman said that the new system is a great improvement over the old one, first, because it will permit of nearly twice as many plants to the acre being grown; second, because on account of the vine growing straight up the sun has a better chance at it and develops the crop much better; third, because the system would last almost forever, or many times longer than the present one; and lastly, because he found that the hops raised by the farmers who used the new way turned off about double the yield realized here.

San Benito.

A LARGE ORCHARD.—Hollister *Free Lance*, Dec. 19: Four years ago a tract of 325 acres lying two miles southwest of Hollister, known as the Brewster ranch, was purchased. The new owners began improving it, setting out orchard and vineyard where wheat and other cereals had hitherto grown. To a limited orchard consisting mostly of Bartlett pears, they have made additions, until 1400 fruit trees were in bearing this season, all of which produced abundantly fruit of superior size and flavor. Encouraged by the success of this experiment, it was determined to set the entire place in orchard and vineyard, and an extensive nursery was prepared and placed in charge of an experienced orchardist, and in addition to the 1400 fruit trees mentioned above, there are now growing thriftily 850 French prunes, one and two years old, 3000 grapevines of the Muscat of Alexandria and Rose of Peru varieties for table grapes and raisin culture, and 37 acres have been set out to figs of the White Adriatic variety. In addition to this there are now in the nursery, ready for planting during the present season, 3000 young almond trees grafted on almond stock, 3000 peaches on peach stock, 3000 apricots on Myrobolan roots, 4500 Silver prunes on Myrobolan roots, and 12,500 French prunes on Myrobolan roots, besides a splendid lot of grafting stock on which 50,000 young trees will be grafted this season, mostly French prunes and almonds. A tract of 160 acres will be set out this season, mostly to French and Silver prunes, peaches, apricots and almonds, while a new tract of over 30 acres is being prepared for a nursery for the young trees intended for future planting. The varieties of apricots are the Blenheim and Ambrose principally.

San Bernardino.

CORN YIELD.—Chino *Champion*, Dec. 19: Several teams have been hauling sacked corn from Chino to Pomona for several days past. It was all grown on sod land after the first plowing, without irrigation, and hardly any cultivation. It was at one time feared that the wire worms had almost destroyed the crop, but several ten-acre tracts yielded from 30 to 50 bushels, and it is reported that in some instances higher yields were obtained.

San Joaquin.

GROWERS STORING.—Stockton *Independent*, Dec. 17: The potato crop of the county is being stored in Stockton warehouses for better prices. The market is firm, but growers are disposed to hold for top prices, as the San Joaquin county crop is the best in the general market and must be in demand throughout the season. It is estimated that 40,000 sacks of potatoes will be stored in the Stockton warehouses before the owners conclude to supply the San Francisco market. About 10,000 sacks are now on storage at Miller's warehouse, and several more shipments are to arrive. Frank Madden and W. R. Clark have made a profitable speculation in potatoes and hope to add to their profits now in sight. They raised about 6000 sacks of choice potatoes on leased ground near Lockeford and have stored 3500 sacks with Frank Lane, leaving 2500 sacks on storage at Lockeford.

WEALTH IN WALNUT-TREE GROWING.—Stockton *Independent*, Dec. 17: The cultivation of walnut trees for timber is receiving considerable attention from the press of California. An experiment made this year in a garden in this city shows that it requires plenty of water and soil well prepared. No mere sprinkling or ordinary irrigation though is to. It wants either a flood or else that the hardpan be perforated, a large excavation made and filled with soft earth to permit its taproot to penetrate deeply for a sufficient water supply and to admit of the expansion of the trunk. A couple of dozen walnut sprouts were set out in a Stockton garden last spring after they had attained a growth of from three to six inches from the nut. Four of these were located near a drain which received the overflow from a windmill tank. The others were in beds prepared for flowers or vegetables. Those that received the overflow are now about six feet high, while the highest of the others is not over two feet. Some of the small ones were dug up a few days ago and it was found that the taproot had encountered the hard subsoil, and in the effort to penetrate it, had been doubled backward and curled like the letter S. This arrested the growth of the tree, and the consequence is that most of those that did not receive proper treatment are scrubby and not worth transplanting. The best way to plant them for shade trees is to make excavations through the hardpan large enough to admit of the trees' growth to two feet or more in diameter without crowding the hardpan. They should be filled with soil well mixed with sand, and then given abundant moisture. By similar treatment, walnut trees in this city have attained a girth of about 30 inches in seven years. This seems sufficient evidence that with due care cabinet timber could be raised in 12 or 15 years. A Stockton man makes a rough estimate that 115,000 feet of walnut lumber can be raised on one acre in 15 years? This, at double the price of redwood, or say $50 a thousand, would be at the rate of $5750 an acre for the timber alone, with no labor whatever after four years' cultivation, if properly irrigated.

THE WOODBRIDGE DITCH.—Lodi *Review*, Dec. 18: After a long siege of hard work in securing rights-of-way, the promoters of the Woodbridge canal have resumed the work of making ditch, and the directors are in hope that they will be able to supply water to the farmers who have been fortunate enough to give rights-of-way in order to have the waters of the Mokelumne river poured over their broad acres for next season's crops. If the several water schemes that are being agitated in this county at present meet with success, San Joaquin will be the banner agricultural and fruit-growing county in golden California. We know that this county has the resources to make its people a most prosperous one, and all we need is water and plenty of it to develop these resources.

Santa Clara.

A GOOD MOVE BY PRUNE-GROWERS.—San Jose *Mercury*, Dec. 19: At the regular semi-monthly meeting of the Doyle Fruit Growers' Association, D. W. Miller advocated the organization of the prune-growers of Santa Clara county and raising a sufficient sum of money to send a reliable person to France and have him keep the growers here posted as to the crop and prospects there. By doing this, growers would not be at the mercy of speculators, as now, but would wait until they knew whether the foreign crop was to be light or heavy, and then set their prices accordingly. He referred to the reports that reached us last spring from France: one week it was a large crop and the next week the crop was a failure, to be followed in a few days by another report, this time that the French crop of prunes would be very large. The reports that the growers get through the papers are unreliable. Mr. Woodhams favored the project and said that there was not a paper published in San Francisco that would for one moment stand for the grower if the interests of the buyer and moneyed men were at stake.

If the growers were united, we could set the price on our products. Several others spoke in favor of the plan, and on motion of Mr. Braun the chair appointed a committee of three to ascertain the cost of sending a man to France and also bring the matter before the other horticultural societies in the county. D. W. Miller, E. T. Petti and A. R. Woodhams were appointed on the committee.

Santa Barbara.

EDITORS PRESS:—Began to rain at 7 A. M. the 3d instant and continued most of the time for 24 hours, giving us 2¾ inches of water. Since then there have been a few showers which will make three inches for the storm. Land in splendid condition to work. If the weather continues favorable, plows will be busy turning over the ground for seeding. The rain came just in time, which found nearly everybody ready for it. Hay, of a quality not comparable to the price, had reached $20 per ton, and not a few began to wish they had big stacks for higher prices, in case the rain did not come. Now hay and other feedstuffs cannot run up to famine prices. November was a very warm, dry month. There was a dash of rain from the west the 6th of about a third of an inch; balance of the month dry and clear. It is somewhat cloudy now with appearance of more rain. The wet season never started in here with a more favorable prospect.—O. N. CADWELL, *Carpinteria*. [This letter has been unfortunately delayed, but is none the less interesting.—EDS. PRESS.]

Santa Cruz.

LATE STRAWBERRIES.— Watsonville *Pajaronian*, Dec. 18: The berry-growers are sending chests of strawberries to San Francisco every day—the shipments aggregating about 20 chests daily. Only one week to Christmas and plenty of ripe strawberries in the Pajaro valley. The strawberry comes very near being an all-year bearer in this valley.

SHEEP SCARCE.—Watsonville, Dec. 18: Some of our butchers are buying dressed mutton in San Francisco. Sheep are scarce and high in price.

Sonoma.

TREE-PLANTING.—Suisun Cor. Dixon *Tribune*, Dec. 20: A. T. Hatch owns a tract of land some two or three miles southeast of Lincoln, and this week he put some men to work on it to prepare it for trees. He intends to plant about 100 acres this winter and spring to fruit, mostly peaches, pears, prunes, nectarines and apricots.

Sonoma.

FARMERS ENCOURAGED.—Santa Rosa *Republican*, Dec. 11: "Nearly every farmer in Sonoma county is plowing to-day," said a dealer who stands in close relationship with our agriculturists. "Last Saturday I sold over a dozen plows, and the farmers told me that the rains had put the ground in good condition and that they would all go to plowing to-day in real earnest. A number of harrows was also bought last Saturday, and in every instance the buyers said that farm work would be in full blast to-day. The farmers feel much better than they did a year ago. They have had a profitable year and they feel greatly encouraged. I can tell by our trade. Our business is 25 per cent better than it was a month ago and 10 per cent better than it was at this time one year ago. Everything looks favorable for a prosperous season here, and the farmers seem to be in it," he concluded.

THE HOP INDUSTRY.—*Republican*, Dec. 11: John McMinn, Jr., Secretary of the Sonoma County Hop-Growers' Association, said: "There will be an increased acreage in hops because the hop-raisers of Sonoma county had such a bonanza this season that, appreciating a good thing, they will try and secure more of it. Some of our farmers have almost grown rich this season by reason of their hops. The increase in acreage will be mostly in the Russian river district. About 300 acres are being prepared for hops there. Rayford Peterson and the Farmers are getting a very large field ready, and there are a number of others. The crop this year was 1250 bales short of what it was last year, but last year was an exceptionally good year. Several farmers have contracted for one-half of their entire product. They are contracting their hops at from 15 to 17 cents per pound. This guarantees them a fair profit, and practically secures them for the next year. With one-half of their crop contracted for at those prices, they can afford to wait and run the risk of getting better prices on the other half. The farmers like the Indians as hop-pickers much better than they do the Chinamen. They are more careful, and are not so apt to neglect anything in the scramble to earn their money as the Chinamen. Buyers generally prefer hops that have been picked by the Indians, and will give more for them. The prospects are certainly very favorable for a great increase in hop-culture in Sonoma county from this on."

Sutter.

USING WHEAT FOR FEED.—Yuba City *Farmer*, Dec. 20: Owing to the scarcity of barley this season, many of the farmers are using wheat for horse feed. Having been in localities where wheat was the principal grain used for horses, we would like to state to those who use it, that they will find it much to their advantage to soak wheat 10 or 12 hours before feeding. It will produce better results, and is less liable to injure the horse.

Tehama.

A FRUIT CANNERY.—Red Bluff *People's Cause*, Dec. 20: The fruit-growers are beginning to move in the matter of having a fruit cannery established here. They say it will be necessary to have a cannery in operation here next season. Wherever canneries have been established they have made a financial success, and there is no reason why one should not be successful in Red Bluff.

Tulare.

TREE AND VINE PLANTING.—Visalia *Times*, Dec. 18: The *Times* stated, a few weeks since, that at least 1000 acres of land in the vicinity of Visalia would be planted to trees and vines this season. The indications now are that the acreage will be double that, or 2000 acres.

ARIZONA.

ARIZONA SHEEP TO COMPETE FOR THE WORLD'S CHAMPIONSHIP.—Flagstaff *Champion*: Daggs Bros., the largest sheep-owners in the Southwest, have about fifty head of their finest sheep grazing on alfalfa at their ranch near Phœnix. They will be kept there until 1893, when the World's Fair opens, and six of the best ones will be taken to Chicago for exhibition. Three of them will have fleeces about three years old, and three will have no fleeces. Sheds will be built, so that the animals will have shelter from rain and shade during the hottest part of the day. They estimate that the sheep will have a 16 inch fleece by that time, and that they will carry off the ribbon on range sheep at least, if they do not secure the championship of the world.

RAISING HOGS.—Tucson *Citizen*, Dec. 13: A business which can be made lucrative in Arizona is the raising of hogs for market. The valley of the Santa Cruz is prolific in the production of corn, as the many loads of the article brought to the city for disposition this fall will testify. With almost no care but the planting, it will yield 40 or 50 bushels to the acre. Parties engaged in the pursuit, state that with cultivation 100 bushels to the acre is easily produced. The raising of the cereal has been largely engaged in in the vicinity of Tucson. Mr. Berger of San Xavier raised 15,000 bushels this summer, and Mr. Kennedy, north of town, also raised several thousand bushels. Mexicans have also made a very good thing of corn-growing. The cereal now brings a cent a pound in town, which of itself makes corn-raising profitable, but to bring the largest and surest returns it should be turned into pork. Pigs can be safely and surely grown on the bottom lands, requiring no feeding whatever, arriving at the age for fattening, strong, and growing, and without a cent of expense for feed. To a fat pig six months old to bring it to the weight of 200 pounds will require, say 300 pounds of ear corn, from four to five pounds per day being ample feed. Ten bushels of corn will, therefore, fat a pig which will bring at least $10. Corn is worth $1 per hundred pounds, leaving a net profit on the pork of $7 on each pig, not including the profit on the corn. As a substitute for corn, sugar beets are a practicable feed, and pigs are now being purchased for the purpose by Mr. Sanders, who is connected with the Mohawk Ranch Co. of Mammoth. Beets are also a beneficial crop to the land, counteracting the alkali in the soil which is so prevalent in Arizona.

FRUIT CULTURE.—Phœnix, Dec. 15: We have about 1500 acres in bearing peach and apricot trees; also White Adriatic figs (figs of commerce) and about 2500 vines, mostly of the raisin grape, in bearing. In the last two years we have planted about 4000 acres of orchards and vineyards, and still the good work goes on with a fair prospect this season of planting as many acres as we have, all told heretofore. But the old idea that we could not raise fruit has been expelled and experiments and experience give us new light so that we can plainly see that the majority of deciduous fruits thrive well here; also experiments in citrus fruits are proving satisfactory. Josiah Harbert and David Turner have each an orange orchard with little fruit the second year, looking as fine as the best in any country, and small fruits—blackberries, raspberries, strawberries—produce as well.

NEVADA.

WHEAT-GROWING.—Reno *Gazette*, Dec. 18: The farmers on the Big Meadows raised 3000 tons of grain this year, and would have raised 5000 tons if they had not had the misfortune of losing their dams across the Humboldt river. Next season they will gather fully 6000 tons of cereals, besides a large quantity of alfalfa.

HAY AND STOCK.—Reno, Dec. 18: It is estimated that farmers in Big Meadow have hay enough on hand now to feed 5500 beef cattle from now until the 1st of April. Joseph Marzen is feeding 400 head now; Joe Hill, 400; Henry Thies, 75; Stauffer & Sweetser, 150; L. N. Carpenter, 65; besides 250 head that will be driven in next week by Col. Hardin. He has bought all of W. C. Ruddle's hay and will feed 50 head at his place, and the other 200 at L. N. Carpenter's.

NEVADA WHEAT.—Marysville (Cal.) *Appeal*, Dec. 12: Residents of this section of the country will be surprised to learn of the wheat-producing quality of Nevada lands. That State has never been considered a wheat-growing country, yet it appears that in quality and in the quantity of the wheat she produces, she compares favorably with any other State. There are a few instances where Nevada's lands produced from 65 to 70 bushels to the acre, and the average is about 35 bushels. When one considers that Ohio does not produce more than 13 bushels, and that the average throughout the United States is only 15, this is certainly a good showing. Nevada farmers are being encouraged to devote new land to the cultivation of wheat and other cereals, and it is said her bright days are near at hand. There is an ample market, as California flour-mills now ship over the mountains 100 barrels a day. H. H. Beck, a prominent millman of Reno, Nev., says his company took over from California, last year, three carloads of seed wheat, and sold it at $1.70 a cental. He told the Nevada farmers that he would buy all they raised at that price, if it was as good as the seed. Many broke up alfalfa ground and raised wheat, all of which he bought. The Nevada farmers are well satisfied, and say they will double the acreage in wheat next season.

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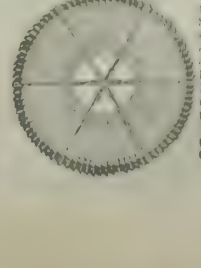
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ANNUAL MEETING.

THE REGULAR ANNUAL MEETING OF THE Stockholders of the GRANGERS' BANK OF CALIFORNIA, for the election of Directors for the ensuing year, will take place at the office of the Bank, in the City of San Francisco, State of California, on TUESDAY, the 13th day of January, 1891, at one o'clock P. M.
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SHEEP AND WOOL.

Mountain Sheep.

Nearly all the lofty mountain chains of the globe are inhabited by wild sheep, that rank the highest among animal mountaineers. Possessed of the keenest of sight and scent, with strong limbs, they live, says the St. Louis *Globe-Democrat*, secure amid the loftiest peaks, leaping unhesitatingly from one crag to another or jumping unscathed down the side of bold precipices. Although exposed to the wildest storms and most rigorous weather, they show no evidence of suffering, but apparently enjoy the best of health. Naturalists classify these wild sheep under five distinct species. There is the American bighorn, or Rocky mountain sheep; the argall, found in the principal ranges of Asia; the burrhal of the upper Himalayas; the Corsican mouflon, and the African wild sheep. To the American bighorn species belong the wild sheep of the Sierra Nevada. They are found in the Upper Missouri and Yellowstone regions to the Rocky mountains, south as far as the Rio Grande and in the ranges of Washington and Oregon. All the many mountain summits within these limits, rising thousands of feet above the sea-level, are more or less inhabited by them. Compared with the best-known domestic breeds, the wild sheep are more than twice as large, with the wool covered by smooth, soft, thick hair. The color is brownish-gray, with the under parts and haunches white and the tail black, bordered with yellow. The wool is always white, and grows in beautiful spirals down out of sight among the straight, shining hair, like delicate climbing vines among stalks of corn.

The horns of the male are of immense size, measuring in their greater diameter from five to six and one-half inches, and from two and one-half to three feet in length around the curve. They are yellowish-white in color, and ridged transversely, like those of the domestic ram. Their cross-section near the base is somewhat triangular in outline and flattened over toward the tip. In rising from the head they curve gently backward and outward, then forward and outward, until about three-fourths of a circle is described, and until the flattened, blunt tips are about two feet apart. Those of the female are flattened throughout their entire length, less curved than those of the male, and much smaller, measuring less than a foot along the curve. The average weight of a full-grown male is 344 pounds.

Another difference from the tame sheep is that the wild is bold, daring and graceful, with every bit of the body and feet as smooth and clean as the grass of the mountain pastures. In the writings of many of the earliest travelers in America, reference is made to the "bighorns." A Catholic missionary to California in 1797 tells of a wild deer with a head like a sheep, that has flesh tender and delicious to eat. Where they have long been hunted, as in the neighborhood of the passes in the California Alps, they become very shy, but in the retired wild canyons and about the almost inaccessible peaks, they are no more timid than the sheep in a farmer's field. In the months of November and December, and probably during a considerable portion of midwinter, they all flock together, male and female, old and young.

In spring and summer the full-grown rams form separate bands of from 3 to 20, and are usually found feeding along the edges of glacier meadows or resting among the castle-like crags of the high summits; and whether quietly feeding or scaling the wild cliffs for pleasure, their noble forms and the power and beauty of their movements never fail to strike the beholder with living admiration.

Their resting-place seems to be chosen with reference to sunshine and a wide outlook, and most of all to safety from the attacks of wolves. Their feeding-grounds are among the most beautiful of the wild gardens, bright with daisies and gentians and mats of purple bayanthus, lying hidden away on rocky headlands and canyon-sides, where sunshine is abundant, or down in shady glacier valleys, along the banks of the streams and lakes where the plushy sod is greenest. Here they feast all summer.

When winter storms set in, loading their highland pastures with snow, then, like the birds, they gather and go to warmer climates, usually descending the eastern flank of the range to the rough, volcanic tablelands and treeless ranges of the Great Basin adjacent to the Sierra. They never make haste, however, and seem to have no dread of storms, many of the strongest only going down leisurely to bare, wind-swept ridges to feed on bushes and dry bunchgrass, and then returning up into the snow.

In the months of May and June they bring forth their young in the most solitary and inaccessible crags, far above the nesting-rocks of the eagle. I have frequently come upon the beds of the ewes and the lambs at an elevation of from 12,000 to 13,000 feet above sea level. These beds are simply oval-shaped hollows, pawed out among loose, disintegrating rock-chips and sand upon some sunny spot commanding a good outlook, and partially sheltered from the winds that sweep those lofty peaks almost without intermission.

Like the Ibex of Europe, the Rocky Mountain sheep do not hesitate to plunge headlong down the face of a precipice and alight on their horns. The horns are so large at the base that they cover all the upper portion of the head down nearly to a level with the eyes, and the skull is exceedingly strong; but more often, when making a big jump, the sheep will alight on their feet. Not only are their legs strongly muscled, but on the bottom of the feet are bulging pads. These serve to break the shock of a jump and enable the sheep also to keep their feet on an incline.

The only animal that may fairly be regarded as a companion of the sheep is the Rocky Mountain goat, which is more antelope than goat. He, too, is a brave and hardy climber, fearlessly accompanying the sheep on the wildest summits and braving with him the severest storms, but smaller and much less dignified in demeanor. His jet-black horns are only five or six inches in length, and the long white hair with which he is covered most obscures the expression of his limbs. In some portions of the Rocky and Cascade mountains it occurs in flocks of considerable size, where it is eagerly pursued by the Indians, who make use of its skin in various ways as clothing, that of the head with the horns attached being sometimes worn as a cap.

Fashion Notes.

Ladies' Costume.

FIGURE 1.—This illustrates a ladies' costume. Camel's-hair, velvet and crepe de Chine are united in the costume, and a handsome garniture is provided by Kursheedt's Standard steel bead boleros, cuffs, skirt trimming and girdle. The foundation skirt, which is in the usual four-gored style and may be worn with or without a small bustle, is overhung at the front by a drapery that is disposed in graceful folds and wrinkles by plaits at the top, the back edge of the drapery being tacked to the side-gores of the skirt. The skirt trimming mentioned is applied to the lower part of the drapery, with rich effect.



Fig. 2—MISSES' DRESS.



Fig. 1—LADIES' COSTUME.

The superb adjustment of the stylish overdress is accomplished by the usual number of darts and seams, and full surplice-fronts cross over its smooth fronts in characteristic style. The front edges of the surplice fronts flare in V shape to reveal a vest of crepe de Chine, which is shirred at the top to form a pretty frill at the throat, and the fullness below is collected at the lower edge in deep, overlapping plaits. Short jacket fronts of unique design pass into the shoulder and under-arm seams and are overlapped at the top by the rolling collar, and a pointed girdle conceals the lower edge of the surplice fronts. The fanciful back is arranged in plaits that flare becomingly upward from the lower edge, and the drapery, which is joined to the basque portion of the over-dress, is disposed at the center of the back in deep, overlapping plaits that flare stylishly in fan fashion and are overlapped at the top by bournous folds. At the sides the drapery is arranged in deep, backward-turning plaits, which are well pressed in their folds and fall with panel effect to the edge. The full sleeves are arranged to curve fashionably over the shoulders, and the wrists are trimmed with round cuff facings of velvet, to which handsome steel-bead cuffs are applied. The girdle is overlaid with a steel-bead girdle, and bolero ornaments of steel trim the jacket fronts and are continued over the shoulders to form square ornaments at the back.

Many charming color contrasts may be effected in a costume of this kind, and the mode will develop stylishly in one material. Wool goods and velvet or faille form an appropriate combination, and cashmere, serge, cloth and other fabrics of similar texture will make up nicely with Bengaline, corded silk, armure, etc. Crochetted lace, passementerie, gimp, novelty bands, etc., may be added in any suitable manner for garniture.

Misses' Dress.

FIG. No. 2.—This illustrates a Misses' dress. In this instance the dress is shown developed in a charming combination of pale Goblin-blue and old-rose cashmere and old rose velvet. The body is made up on a closely adjusted lining, and from it the skirt hangs in natural folds at the front and sides and in two double box-plaits at the back. The skirt is prettily trimmed at the foot with three encircling rows of velvet ribbon. Graceful fullness is collected in rows of shirring at the lower part of the front, and above the shirring it spreads becomingly in soft folds toward the neck, where it is confined by a row of gathering. Opening over each side of the fullness is a jaunty jacket-front that rounds away from the shoulder and is trimmed at its edges with a band of velvet. The back is smooth across the shoulders, but has fullness collected in short rows of shirrings at the bottom, with somewhat the effect of a French waist. Velvet ribbon follows the lower outline of the body, its ends meeting at the closing of the fronts under a rosette and long loops and ends of velvet ribbon; and two rosettes of velvet ribbon are placed at the back over the tops of plaits in the skirt. The collar fits closely, and the rolled-over part flares at the throat. The full sleeves are finished in frills at the bottom and are mounted on coat-shaped linings, which show below the sleeves with the effect of under-sleeves and are encircled near the lower edges with velvet ribbon.

Numerous attractive combinations of colors and textures may be easily effected by the mode, dove-gray and a rich shade of yellow forming one of the newest and most pleasing of the recent color contrasts. Fluffy ruchings or rose-quillings of silk will trim the costume beautifully, and they may be applied to the edge of the skirt and to the neck and wrists with becoming effect. Dress goods of all kinds are well adapted to the mode, which is a graceful and artistic style.

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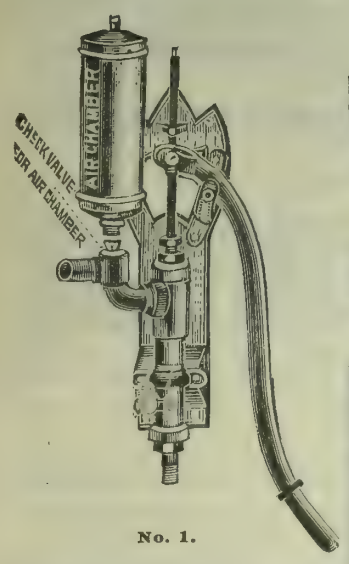
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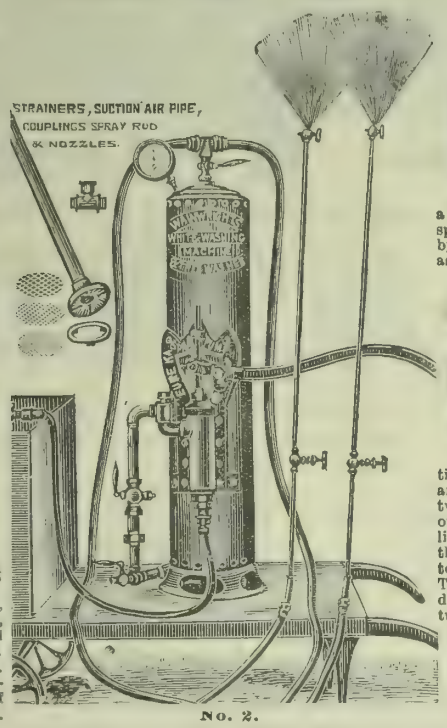
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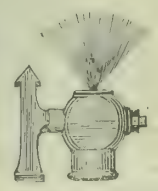
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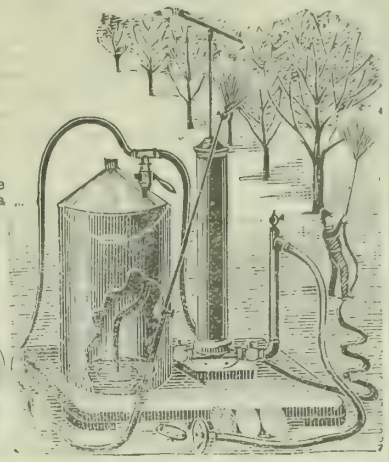


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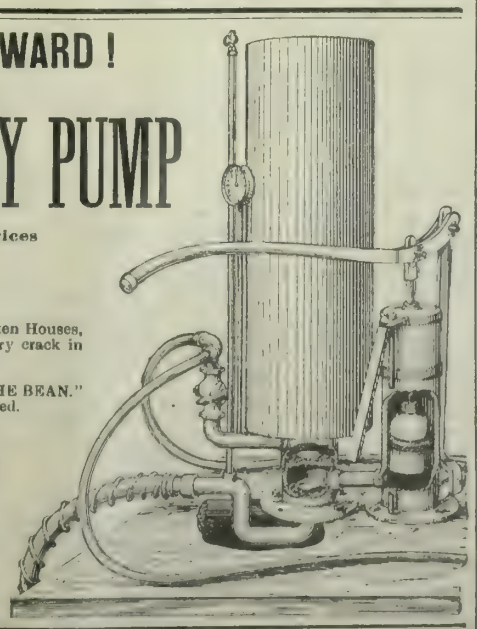
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Death Valley.

A Government Expedition to Visit it Shortly.

"Valley of Death."

Long before a white man ever looked upon the direful spot, the Indians of California and Nevada knew it by that name.

Imagine a narrow strip of arid plain, shut in between two mighty mountain walls, the peaks stretching up 10,000 feet into the burning sky. So precipitous are these rocky barriers that in a journey of 14 miles you pass from an eminence of two miles above sea level to the plain 175 feet below the ocean tide mark. The surface of this plain is composed of salt and alkali and it is impossible to go over it on horseback, because it is a mere crust through which the animal you ride breaks up to its knees into a thick alkali paste which eats both hair and hide. There are paths by which one may make one's way across if one knows where to find water on the opposite side.

There is something unearthly about the whole appearance of things in the valley, the two ranges of gigantic peaks that hem it in between them looking like the backbones of a couple of monstrous beasts, and a gray haze that never lifts, making everything indistinct to the view. No vegetation is to be seen save a very scanty sagebrush, with leaves that are not green but gray, with here and there a tall cactus, which looks in the night like a dead man standing erect with arms extended. But the supreme horror of the place is the heat, which is unspeakable. There is a breeze which, instead of being cool, is so scorching hot as to blister your face. Into this natural furnace the sun pours its rays with never a cloud interrupting from one year's end to another. When the famous geologist, Professor Gilbert, succeeded in crossing the valley, nearly 20 years ago, barely escaping death from thirst, the thermometer inside his saddle-bag went up to 130 degrees and then burst.

A suggestive feature of the Death valley landscape is the color of the mountain rocks, which are actually sunburnt to an iron brown hue. Chip off a little flake and you find the stone of its natural lighter hue underneath. Streams flow from mountain springs down toward the valley, but never reach it because the heat dries them up on the way. Once in a great while there is a tremendous storm in the Amargosa desert to the eastward, and a river a mile in width flows from the desert around the south end of the Amargosa range and northward through the valley. Does it flow out again at the other end? Not much. It is dried up and lost before it gets that far.

Such is the Valley of Death—itself simply the most horrible spot in that great region of despair. The object of the Government in exploring it is simply to learn what kinds of animals live there. This enterprise is part of a great work which the Department of Agriculture has been for some time carrying on, the purpose of which is to map out the whole United States into what are called "faunal areas." For example, suppose it is determined what are precisely the limits of the area occupied by the jackass rabbit. When that much is known, it must necessarily be true that any plant which thrives in one part of that area will do well in any other part. There is such an intimate relation between animal life and plant life in this world that, having found out the various areas inhabited by different birds and mammals, you have learned just where each form of vegetable growth can be produced to advantage. When the Government has completed this important task, the farmers of the country will have placed before them maps outlining with the closest accuracy the regions within which each kind of vegetable or fruit is susceptible of profitable cultivation. Thus the agriculturist, wherever he may be located, will know with certainty what he ought to plant.

At the beginning, the expedition will be divided into two parties. One of these is now at Owens lake in California, on the point of starting out. It is under the command of Vernon Bayley, and will begin work at the foot of the Inyo range, to the west of which Owens lake is. Bayley will not go far, however, until joined by Professor T. S. Palmer with the other party.

The first thing done will be to locate all the places where water is to be found. Hundreds of people have lost their lives in Death valley through starting off in the morning without knowing where they were going to find water at night. There will be no such foolishness as that indulged in by the expedition. With every precaution, a sufficient amount of suffering will of necessity have to be undergone. Water is the great desideratum in that horrible place, where the air is much drier than that of the Sahara, and the heat so great as to put the body through a sort of evaporating process such as that to which a dried apple is artificially subjected. So rapid is this evaporation of the bodily moisture that three gallons of water a day are absolutely necessary for each individual, instead of the three pints one ordinarily consumes. If one were to sit down in the desert all day long and do nothing but drink water, he would still feel thirsty. Even with a supply of three gallons a day the blood of the traveler across the waste becomes thickened, the features grow thin and peaked, dreadful constipation sets in and fever threatens madness. In crossing the valley one cannot very well carry with him more than enough water for one day's supply. The only way to do is to hurry over and try to reach the other side—only about 15 miles distant—before one succumbs for want of drink. If you know precisely in which of the gorges of the mountains springs are to be found, it is well enough, but if you are not certain on this point, you are likely to become so exhausted after traveling up to the heads of one or two gorges fruitlessly as to find nothing better to do than to lie down and die the most horrible of deaths. You will not need burial, for your body will not decay, but will simply be shriveled up to a mummy and lie there in the Valley of Death to all eternity, imperishable, staring up at the burning sky. Here and there all over the awful plain of salt and alkali are scattered the dried bodies of men and animals, preserved for all ages to come. During the mining fever in that neighborhood, from 1872 to 1878, hundreds of people were lost in trying to get across. You may have heard of an "alkali sink." That is what Death Valley is. As has been said, the plain of the valley is below the level of the sea, and the alkaline river flowing into it at certain seasons from the Amargosa desert deposits its alkali in the crust, through which the foot in stepping breaks into the abominable paste beneath.

It will be the work of the expedition to kill and capture every sort of living creature that can be found in Death Valley and its surrounding region. Every specimen of animal life to be discovered there will be represented by from a dozen to a score of specimens in the collection which will be brought back to Washington. Mammals, birds, reptiles and batrachians will all be grist to the mill of the naturalists. It is expected that many new species will be secured, such as are not at present known to science. The birds will be shot and the mammals will be trapped at night. All of the gentlemen engaged in this exploration are most expert trappers and they will carry with them many dozens of small steel-wire contrivances of a sort that are found most effective in the capture of all kinds of little quadrupeds. It is not anticipated that the valley itself will afford many examples of animal life, save for reptiles and insects, but in the mountains and around about the case will be different. As for the reptiles, they will be caught with the hand or by throwing something over them. Doubtless a valuable assortment will be secured of lizards of different colors, and of the peculiar rattlesnakes with horns over their eyes which belong in that country. There are no frogs there, it is supposed, but there are some queer desert toads that live in "washes" where there is water for part of each year. When the water dries up, the creatures bore their way down into the mud deeper and deeper, and when it hardens over them like so much brick, they simply stay there buried until the water comes a few months later to release them from their baked prisons. The entomologist of the expedition will devote his attention to gathering the desert beetles, ants, scorpions, centipedes, and the like.

Very particular attention will be paid to the birds, which, as soon as shot, will be carefully measured in the flesh, skinned and stuffed on the spot. After being stuffed, they will be packed in chests of drawers, which are very hard to carry on muleback, until they are dry. Then they will be put into small boxes with cotton wool and sent to Washington whenever a chance offers. Necessarily communication will have to be constantly kept up with civilization, inasmuch as enough provisions cannot be carried along at a load in the wagons to last for the entire season. The town called Keeler, at Owens lake, will be the intermediate point utilized between the expedition and the world. All the mammals captured will be treated just like the birds. The reptiles will be put at once into alcohol. Greatest interest will be felt in discovering what forms of life are able to exist in so mad a country. Such vegetable life as is found there will afford the botanist material for his collection. Incidentally, the mountains will be explored and covered by the operations of the parties.

The first white man who ever visited Death valley was Capt. Bendire, who told your correspondent yesterday that on the occasion referred to, in 1869, he did not attempt to cross the valley, but simply skirted around its edge, as he expressed it, "like a cat on the edge of a plate of hot mush." Captain Bendire, while doing the act of the cat on the plate of hot mush, came across only three dried mummies of men in Death valley.

Investigation will be made by the expedition of the strange fishes that inhabit certain springs at the south end of Death valley. These are deep pools, and in them are found fish unknown elsewhere in the world, which have no eyes. The whole country thereabout is certainly a most extraordinary one. Seventy miles south of the valley is so-called "Devils' Playground"—a dreadful desert, across which a wind like a furnace-blast continually blows, the black lava and hot sand of its great plain radiating back the sun's heat so that the whole landscape is tremulous to the eye. Southeast of Death valley 100 miles, is "Dead mountain," on the side of which thermometers have registered 140 degrees in the shade. On the east side, the precipitous rocks are much broken up and the sun shining on their white points and angles makes the mountain look from a distance as if whole conventions of ghosts were assembled upon it. The Indians believe, on this account, that the mountain is the abode of their dead warriors. Hence the name.—*Examiner.*



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It can be prepared to suit any land, with or without potash, as occasion may require. It is rich in PHOSPHORIC ACID, and can be made as rich in NITROGEN as the most deficient soil may exact.

WE GUARANTEE ALL WE CLAIM FOR IT,

Viz.: TO BE THE MOST COMPLETE FERTILIZER ON THIS COAST.

For Sale in Lots to Suit by

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N. B.—By courtesy of the Southern Pacific Company we have low rates on this Fertilizer to all parts of the State.

THE
SHARPLES IMPROVED
Cream Separator.



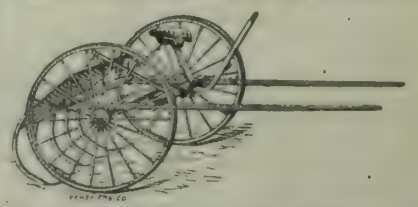
has taken every first prize where exhibited for two years.
The only Separator having automatic sight Oil Feeder.
The only Separator that will skim without frothing the cream.
Twenty per cent cheaper than any other Separator.
More work with less power.
Guaranteed to give 2 per cent more butter than any other Separator and 10 per cent more than pans.

E. D. SHARPLES, Pacific Coast Agent,
208 Fremont Street, San Francisco, Cal.
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Kitchen and Bakery Outfits, Grate Bars, Bake Ovens and Furnace Castings.
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VINE PRUNERS, ATTENTION!



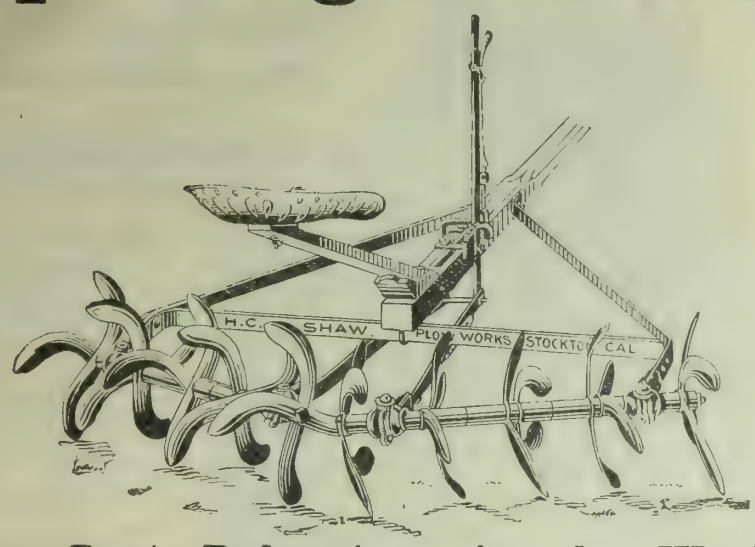
Use E. M. T. Hilgard's
GRAPE BRUSH RAKE,
With which one horse and a boy can do the work of eight or ten men in gathering and bunching the prunings ready for loading on wagon. Its cost will be saved in one season's work on 65 acres of vines. Address TRUMAN, HOOKER & CO., 427 Market Street, San Francisco



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And Plain Vertical Boiler.
Mounted on a Combined Base.
A very Cheap and Economical Engine.
Made of the very best material.
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Remedies for their Extermination.
By MATTHEW COOKE.
Late Chief Executive Horticultural Officer of California. Illustrated with over 750 wood-cuts and 25 pages of classified illustrations. This book is designed for the use of orchardists, vineyardists, farmers and others interested in the subjects treated. It is designed to convey practical information concerning some of the species of insects injurious to the industries of cultivators of the soil, and those interested in earth produce generally. Price $4, postpaid. For sale by Dewey & Co., publishers, 220 Market St., San Francisco.

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—ALL METAL—
Spading Harrow.



The Best Pulverizer in the World!

JUST THE THING FOR WORKING SUMMER FALLOW LAND.

Specially Adapted for Orchards and Vineyards.

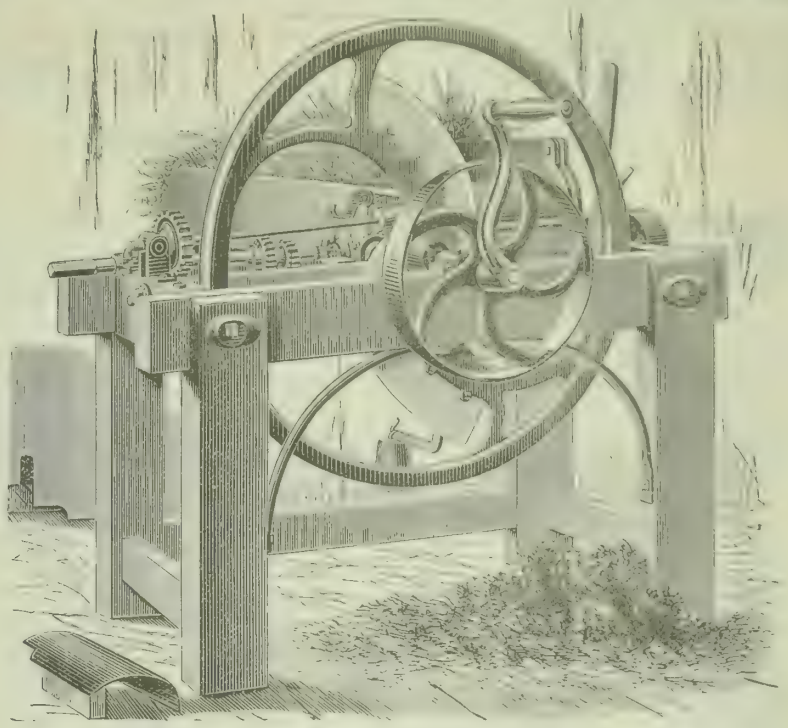
FOR TWO HORSES. Works the soil about six feet wide. Angle of teeth adjustable to work the soil at desired depth. THIS HARROW is something entirely new. IT IS THE GRANDEST ACHIEVEMENT of its inventor, C. LA DOW, who is the recognized authority on Harrows, there being but few leading Harrows at the present time not built under his patents. We have made exclusive arrangements for its sale and it can be obtained only through us or our agents.

THE NAME "SPADING" refers to its action on the soil. The action of each cutter is like that of a small spade, lifting and turning the soil from a depth of four to six inches, doing more perfect work than is possible with any other Harrow in the world. THE BLADES are made from spring steel, in operation vibrating and shaking off sticky soil. IT NEEDS NO SCRAPERS to clean the revolving cutters.

Considering the immense amount of labor done, the draft is very light, as the pulverized soil passes through the gangs of revolving cutters, being left smooth. THE GANGS are so arranged that the most uneven ground is thoroughly harrowed and left level. IT LEAVES NO FURROW or ridge; when the field is harrowed it is all left smooth. 10, 12 and 14-ft. sizes in stock. Send for circular.

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HAY CUTTERS.

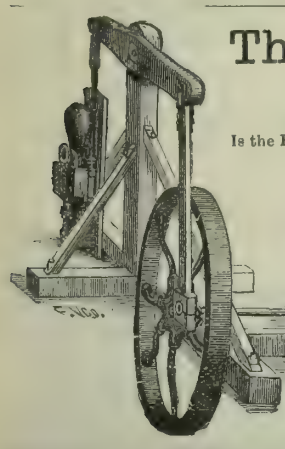


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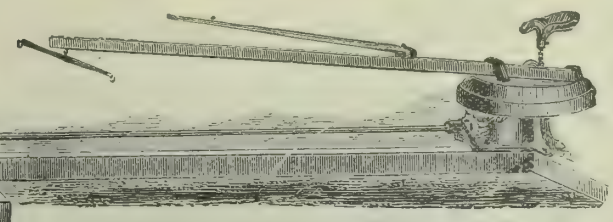
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WITH FLY-WHEEL, WALKING BEAM AND PUMP
Is the Best for Pumping Water for Stock, Irrigating and House Use. Send for Catalogue and Price List.



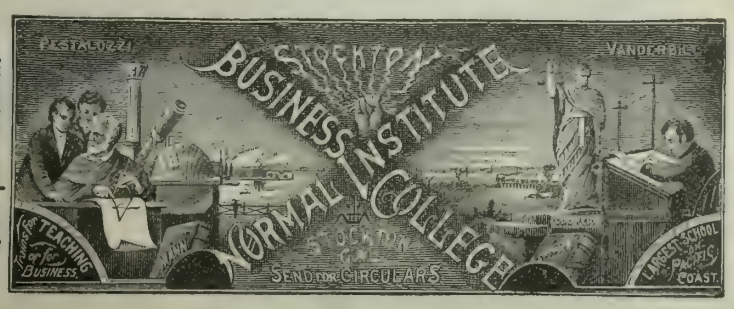
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E. H. DYER & CO.,
Sugar Chemists, Engineers and Draughtsmen, and Practical Manufacturers of Beet Sugar.
ALVARADO, CAL.

The members of this firm have spent many months in the largest beet sugar factories of Europe, studying the details of German and French methods of manufacturing sugar from beets, and also at works of the leading manufactories of beet sugar machinery. Having had many years' experience in manufacturing sugar from beets in California, and having fully demonstrated the feasibility of producing sugar from beets in this country in almost unlimited quantities, and in successful competition with cane sugar imported from foreign countries, we are prepared to furnish designs for factories, plans and drawings of the latest improved machinery now in use in Europe and this country. Can also furnish skilled engineers to superintend the construction of factories and the necessary technical skill to operate the works successfully when completed. Will make personal examination of localities with regard to their fitness for the production of beet sugar, free of expense, except traveling expenses. Successful results guaranteed when the conditions are considered favorable.

EXCELLENT BOARD, $10 per Month.



FURNISHED ROOM $3 per Month.

Occupies two elegant buildings, containing over 70 rooms. Employs the ablest teachers, has the largest attendance and is the most highly recommended of any private school on the Pacific Coast. Board, Room and Tuition for six months, $128. Board, Room and Tuition for fifty-two weeks, $244.

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PRESERVATIVE COMPOUNDS FOR WOOD, IRON OR METAL
Acid and Alkali-Proof.

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Water-Proof and Odorless. No Dearer than Common Sheathing.

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DISTRIBUTES FERTILIZERS

The Triumph of Modern Invention.

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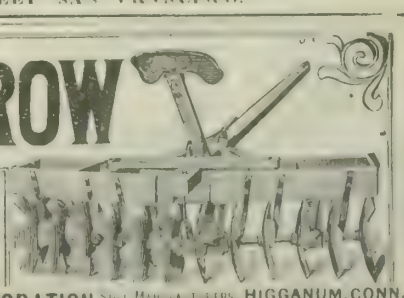


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SUPERSEDES THE PLOW
Makes a PERFECT SEED BED.
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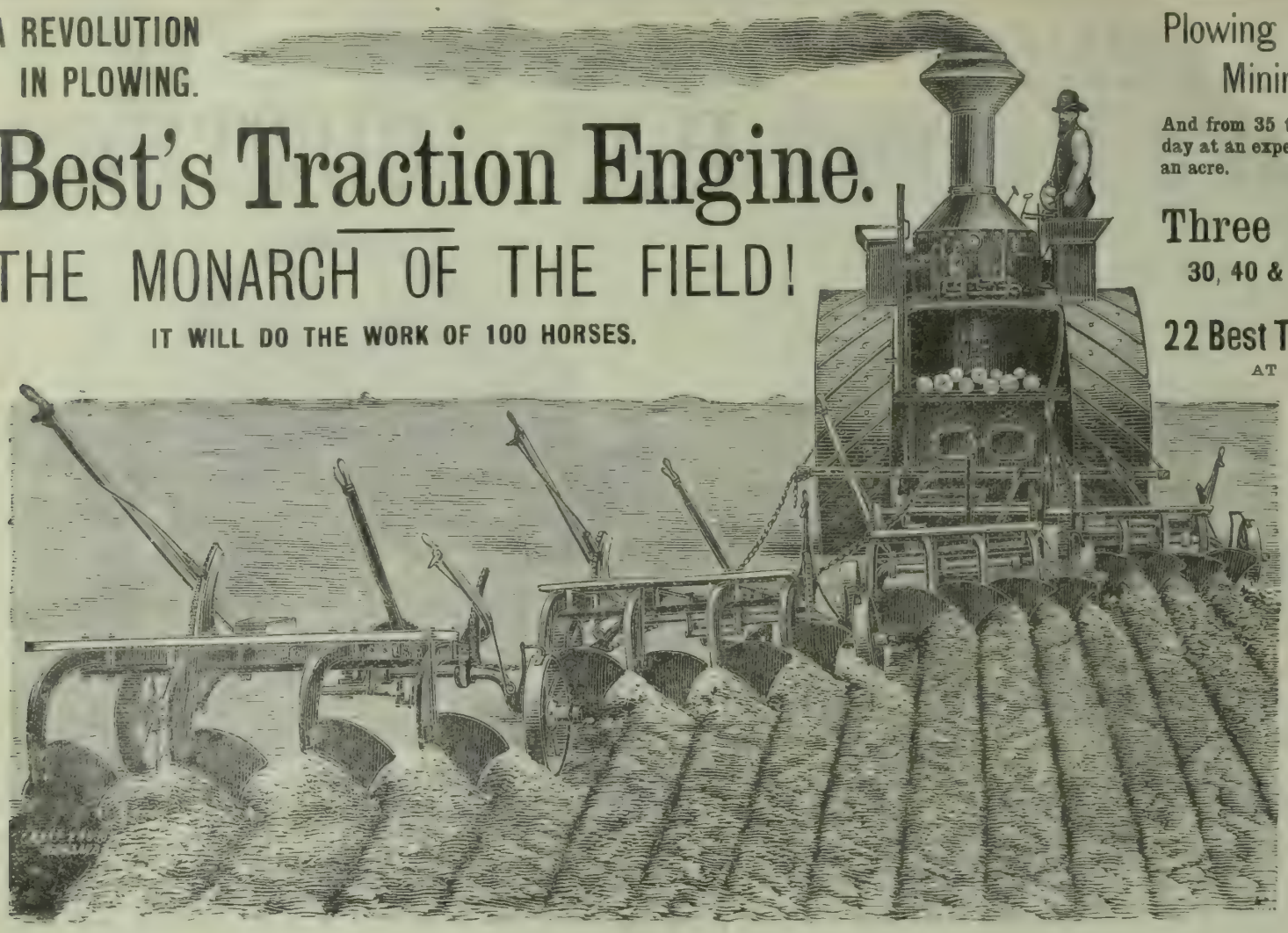
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THE MONARCH OF THE FIELD!

IT WILL DO THE WORK OF 100 HORSES.



Plowing Reduced to a Minimum Cost,

And from 35 to 45 acres plowed each day at an expense of 50 cts. to 60 cts. an acre.

Three Sizes Built,

30, 40 & 50-Horse Power,

—AND—

22 Best Traction Engines

AT WORK NOW.

A Fifty-Foot Harrow is Used,

With which from 100 to 125 acres are harrowed each day, doing the work much better than horses.

Messrs. Reed & Frisbie of Kings City are pulling a gang of 25 ten-inch plows, moving at the rate of three miles an hour and plowing eight acres an hour with a Best's Traction Engine.

Plowing by Sunlight by Day and Headlight by Night.

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Awarded the Best Traction Engine by

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At Sacramento, 1890.

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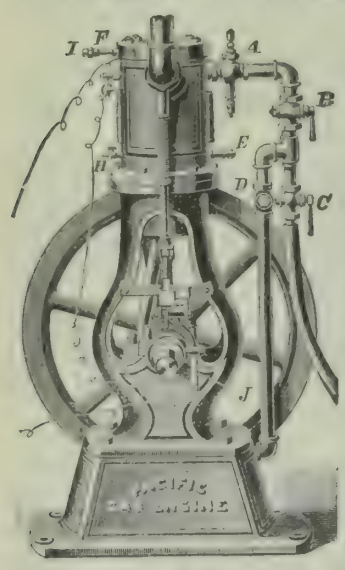
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THE PACIFIC GAS OR GASOLINE ENGINE.

Patented June 17, 1890—Nos. 430,504, 430,505, 430,506—also in Great Britain and Other Foreign Countries.



Starts Instantly Without the Necessity of Boiler, Fire or Experienced Engineer.

OVER 150 IN ACTUAL OPERATION.

The Engine uses from 20 to 25 feet of Coal Gas, or about one-eighth of a gallon of Gasoline, per hour per horse-power. Is now in use for Pumping Purposes, running Printing Presses, Small Factories, Elevators, Jewelers' Lathes, Polishers, Dairymen's, Agricultural, Mining and Wood-working Machinery, Well Boring and all other purposes requiring cheap and convenient power. Persons having but little space will find this the most suitable of all Motors.



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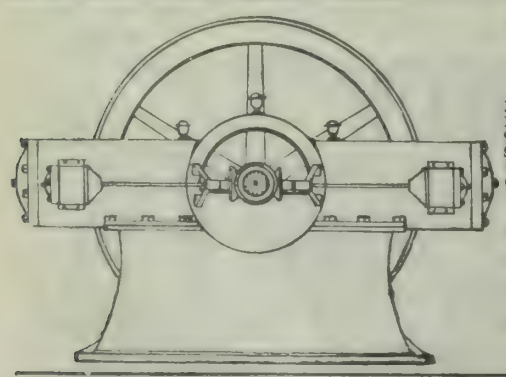
The Company makes a Specialty of

ENGINES FOR SMALL BOATS AND LAUNCHES.

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Send for Circular and Price List.



Cheaper Than Windmills for Farmers!

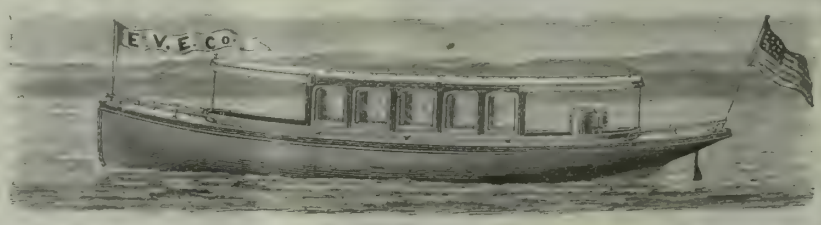
Our Perfected "Safety" Engines cost to run only 6 cents per working day and upward; they make their own vapor, and REVERSE instantly.

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Boiler, Fire, Smoke, Steam, Ashes, Or Heat

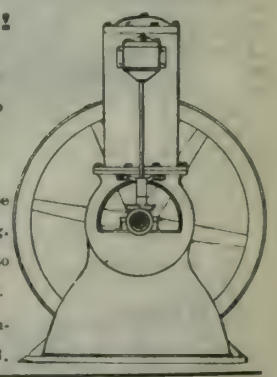
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Pumping Plants, Yachts & Launches, Street Cars, Fire Engines, Water Works, Etc.

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Complete Plants of all kinds, Stationary or Mounted on Wheels.

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A. T. DEWEY, W. B. EWER, GEO. H. STRONG. } Dewey & Co.'s Scientific Press Patent Agency { ESTABLISHED 1860

INVENTORS on the Pacific Coast will find it greatly to their advantage to consult this old, experienced, first-class Agency. We have able and trustworthy Associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 220 Market St., S.F.

The Veterinarian.

Neurotomy for Navicular Disease.

EDITORS PRESS:—I would like Dr. Buzard's opinion of neurotomy (unnerving) for navicular in horses. Does the operation cure the disease? Has it been performed often on this coast? Is the operation a difficult one? Is there a veterinary operating table on this coast? If so, who has one? What is the cost of the operation? I should like the above questions answered in the RURAL PRESS, and oblige F. H. S., *Sacramento.*

EDITORS PRESS:—For navicular disease there is no cure. A measure of relief may be given in the early stages, and the horse can be worked for a time, but sooner or later the lameness becomes so great as to render this out of the question. Unnerving is the grand remedy for this disease. It does not cure the diseased structures, but it takes away all pain and consequent lameness, and makes the horse useful.

Neurotomy is an operation of long standing, and it has been performed very often on this coast by myself and other veterinary surgeons who have practiced here for years.

The operation is one of the simplest that the veterinary surgeon is called upon to perform. Of course it is necessary to know something of the anatomy of the parts, which can be learned in a very short time. Dr. Carpenter of this city was the first to own a veterinary operating table on this coast. He has had one several years, and I believe the only one in this city. I have used it myself, and consider it a boon to the operator.

The cost of the operation depends a great deal on the value of the horse, and whether the operation takes place here or in the country, as a veterinary surgeon's time has to be considered.

A. E. BUZARD.

Cow with Swollen Tongue.

EDITORS PRESS:—I have a valuable cow with the tongue enormously swollen. Please tell me what is the matter and advise me what to do.—W. M., *Pasadena.*

EDITORS PRESS:—This animal is suffering from *glossitis*, which is dangerous, as the patient, if not relieved, is liable to suffocate.

The remedy is free and deep longitudinal incisions; they should be made along the upper rather than the under surface to avoid the ranine arteries. When one side is involved the œdema may be so great as to cause the lower surface, which yields the more readily, to be turned directly upward, when the incision must be made with great care.

A. E. BUZARD, M. R. C. V. S. L.
11 Seventh St., S. F.

Another Foe of the Icerya.

EDITORS PRESS:—You will doubtless be pleased to learn that the *Lestophonus iceryæ*, which was imported into this State at the same time that the Vedalia was, is at the present time living and infesting the iceryas at Mr. Chapman's, in the San Gabriel valley. Yesterday, Mr. A. Scott Chapman brought me several specimens of iceryas in whose bodies were the puparia of this fly, and in the same box that these were brought in was a living adult *Lestophonus*. It is indeed interesting to learn that this useful but slow-going friend of ours has been enabled to maintain itself, notwithstanding the fact that it has been so nearly starved out through the voraciousness of its more energetic co-laborer, the Vedalia.

Los Angeles. D. W. COQUILLETT.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

THE rapid increase in the wealth, business and prosperity of the United States during the past ten years is simply marvelous. The total wealth of the country is now $71,459,000,000, equal to nearly $1000 per head. This is an increase in ten years of $17,000,000,000, or 42 per cent. England's wealth in 1885 is given as $50,000,000,000, giving an average wealth per head of $1545. The average in Scotland is $1215 per head, and Ireland $565. The total wealth of France is estimated at $36,000,000,000. England exacts in taxes $20 per head of population, while each individual in the United States pays but $12.50. America will produce 9,000,000 tons of iron this year, while England's production is 8,600,000 tons.

THE statement is made at Berlin that the German Government will grant Koch 100,000,000 marks for the privilege of manufacturing Kochen.

As Ayer's Sarsaparilla outstrips all other blood purifiers in popular favor, so Ayer's Almanac is the most universally familiar publication of the kind in the world. It is printed in ten languages and the annual issue exceeds fourteen millions of copies. Ask your druggist for it.

TIMBER FORESTS GOING FAST.—The rate at which the timber forests of this country are becoming exhausted is something that people in general have no proper idea of, says the *Ohio Valley Manufacturer*, and it is evident that if a substitute for timber for furniture and buildings is not produced, there will soon be serious consequences. From a recent authentic statement it appears that the amount of timber converted into lumber in Michigan, Wisconsin and Minnesota last year reached the enormous aggregate of 8,305,833,277 superficial feet, exclusive of white-pine shingles, which, if added, would bring the total consumption up to 9,000,000,000 feet. It is asserted as a matter of fact that the timber lands of the Northwest are practically exhausted. Of 20,000,000,000 feet reported by the census of 1880 as then standing in Lower Michigan, only one-tenth now remains, and in the three States there is estimated to be less than 10,000,000,000 feet.

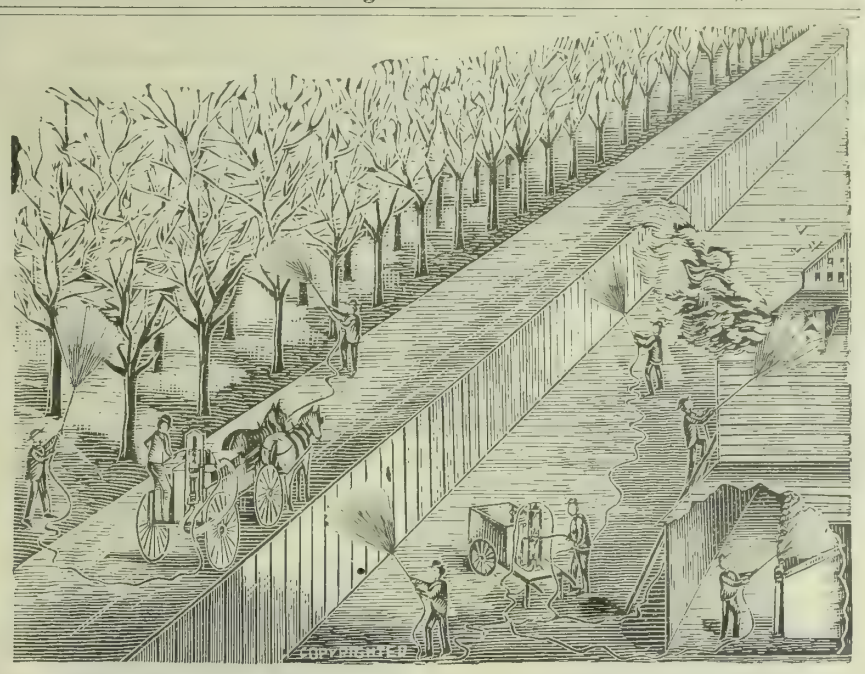
DEWEY & CO. 220 Market St., S. F. Elevator, 12 Front. Patent Agents.

Imported Percherons.

Those looking for choice Percheron blood should not overlook the announcement made in our advertising columns by J. C. Smith, the well-known importer. He now offers horses which he believes to be the best brought to the State. Their quality has been approved by our own people by the award of premiums at Sacramento and Oakland fairs. Mr. Smith may be addressed either at this city or at Oakland, as may be learned from his advertisement.

Easy Binder.

Dewey's patent elastic binder, for periodicals, music and other printed sheets, is the handiest, best and cheapest of all economical and practical file binders. Newspapers are quickly placed in it and held neatly, as in a cloth-bound book. It is durable and so simple a child can use it. Price, size of Mining and Scientific Press, Rural Press, Watchman, Fraternal Record, Masonic Record, Harper's Weekly, and Scientific American, 75 cents; postage, 10 cents. Postpaid to subscribers of this paper, 50 cents. Send for illustrated circular. Agents wanted.



WAINWRIGHT'S WHITEWASHING MACHINES AND TREE-SPRAYING APPARATUS.

We call the attention of our readers who are interested in bug-spraying and whitewashing machinery to W. Wainwright's advertisement in the adjoining column. Mr. Wainwright was prevented from making an exhibit on account of a severe accident to him by being thrown from his buggy a few days before the opening of the Fair. We herewith reproduce some remarks made by us June 28th on the Wainwright Whitewashing and Tree-Spraying Apparatus.

Death to Bugs—Good-By Dirt.

The Wainwright Spraying Apparatus is applicable to more domestic uses productive of comfort and cleanliness than any invention on the San Francisco market. A *Journal of Commerce* representative had supreme curiosity to see how this mechanical whitewasher would do the work so long monopolized by the colored man. To that end and for the purpose of comparison, he visited the Clay-street wharf where men and brushes had just finished a job of whitewashing the entire interior. The work had been well done notwithstanding the goodly quantity of material wasted upon the floor and piles of sacked grain. From thence he went to Spreckels' wharf, at the foot of Folsom street, to see the whitewashing machine in operation. Extended observation gave the machine approval over the good old way. It enabled one man to do the work of a dozen. The whitewash was applied in a vaporous spray and under a pressure of 80 to 120 pounds, forcing it into every diminutive crack, giving the surface a smooth and even appearance, impossible to achieve with the brush and by hand. Another important fact was very apparent. The whitewash vapor was forced into loose joints, cracks, and all the hiding-places of insects, making their old homes entirely uninhabitable. No further evidence was needed to prove the incalculable value of this machine for whitewashing fences, barns, stables, and especially the domiciles for poultry. In no other way can the poultry-house be kept absolutely free from vermin.

It is easy to see how perfectly adapted this apparatus is for spraying orchards and vineyards. It may be charged with any liquid wash desired, and this be delivered where wanted, and under a force that drives it into the cracks and lines in the bark, and among all the foliage above and below. It does its work perfectly and with such rapidity as to make its use highly economical over any other plan of spraying trees or vines. Besides, there is little waste of material. In fact, its cost is saved several times over in one manipulating of not a very large orchard. The accompanying picture is an object-lesson, showing this apparatus at work in several directions, and in all of which it does its work admirably.

Orders for the machine should be sent to Mr. William Wainwright, at 1409 Jackson street. Those of our readers who contemplate having large amounts of whitewashing or tree spraying done in this city or any other part of the State, should send size of buildings and orchards to Mr. Wainwright, when estimates of cost will be promptly furnished them. Illustrated circulars of spraying and sprinkling apparatus will be sent on application.

DEWEY'S PATENT ELASTIC PAPER BINDER.

Simple and Durable.

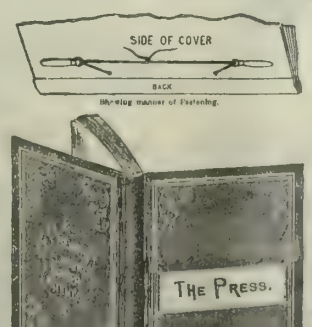
The simple manner in which the sides or lids of the cover are permitted to turn easily by the elasticity of the rubbers is a novel and successful feature of the invention.

To produce at moderate cost a neat and substantial binder, which would be durable, easily and rapidly handled, has been the aim of the inventor, who in business has long had need of such an article. This object has been accomplished in so simple a manner that the binder has comparatively few parts. The adjustable portions are such as are not likely to be lost, disarranged or worn out quickly. The pointed straps and elastic bands are in such common use as to be obtainable for a trifle at almost any village store. It approaches book-binding to a remarkable degree.

The binder was patented by A. T. Dewey (of Dewey & Co., publishers and patent agents, San Francisco), and has been well tested by service, and its construction improved from time to time, until its use seems to give perfect satisfaction.

It is the cheapest of all elastic binders yet offered to the public, and we believe will give the best satisfaction of any, and especially moderate-priced binders.

The price for binders of good quality, having strong cloth sides, of suitable size for RURAL PRESS, SCIENTIFIC PRESS, *Harpers' Weekly* or the *Scientific American*, is eighty five cents.



Showing manner of Fastening.

Dewey's Easy Adjusting Paper and Periodical Binder

DIRECTIONS FOR USING Dewey's Patent Paper Binder.

PATENTED 1892.

LAY the binder flat open before you—the side having the rings at the right. Place the article to be filed face down on the left half of the cover. Stab the strings upward through it about one-half inch from its back. Pass the strings through the cover and the rings and tie with a bow knot, quite taut, in order to hold the sheets strongly in an elastic embrace between the covers. The rings should not be drawn close to the holes in the binder, as that would prevent any play for the inner edges of the binder on opening.

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1891	Sunday	Monday	Tuesday	Wednes.	Thursd'y	Friday	Saturday
Jan....	...	...	...	...	1	2	3
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1891	Sunday	Monday	Tuesday	Wednes.	Thursd'y	Friday	Saturday
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	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31	...	...

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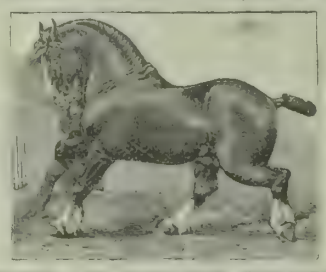
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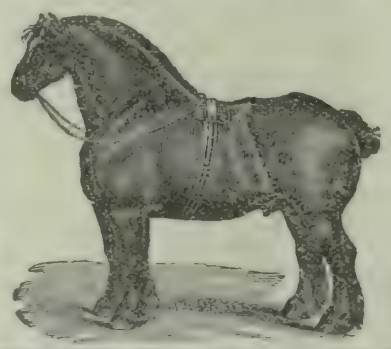
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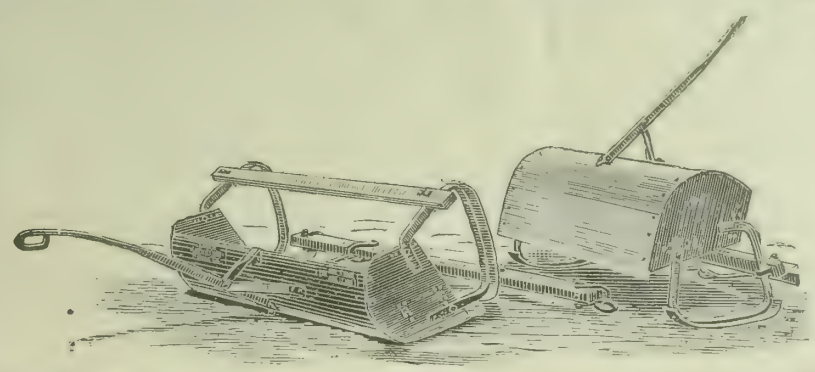
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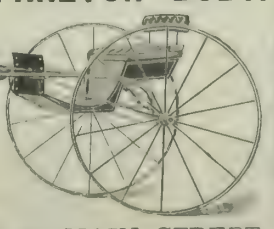


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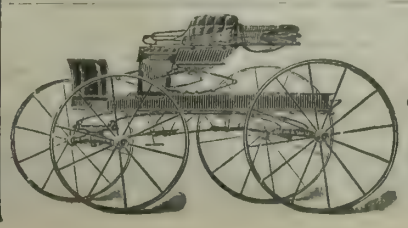
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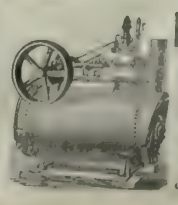
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC

SAN FRANCISCO, Dec. 23, 1890.

General trading in farm products is of the usual holiday character, and therefore untrustworthy as a guide. The demand has been unusually large for fowls, apples and other holiday goods. In wheat, trading is fair at firmer prices. The advance in freights from Atlantic seaports causes a decline in wheat at Chicago and also at New York. The English market strengthened some. The following is to-day's cable:

LIVERPOOL, Dec. 23.—Wheat—Quiet and of a holiday appearance. California spot lots, 7s 4½d to 7s 7½d; cargoes off coast, 38s 3d; just shipped, 38s; nearly due, 38s 3d; cargoes off coast and on passage, strong; wheat on passage to Continent, 786,000 qrs; wheat and flour on passage to Cork, U. K., 2,222,000 qrs; Weather in England, frosty; seems breaking up.

Foreign Grain Review.

LONDON, Dec. 22.—The *Mark Lane Express* in its review of the British grain trade, says: English wheats are firm at an advance of 3d; foreign are slow. Decreased supplies of California have enhanced its value 6d. Flour is steady. At to-day's market wheat was quiet; foreign, firm. Corn and oats are steady.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Dec	Jan.	Feb	Mar	April.	May.
Thursday	[illegible]	7s8½d	7s[illegible]d	7s7¼d	7s7d	7s7½d
Friday	7s7½d	7s7½d	7s8½d	7s8½d	7s8½d	7s8d
Saturday	7s7½d	7s7½d	7s8d	7s8d	7s8d	7s7½d
Monday	7s7½d	7s7½d	7s7½d	7s7d	7s7½d	7s7½d
Tuesday	....	....	....	....	....	....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market.
Thursday	38s0d	37s6d	37s9d	Firm.
Friday	38s0d	37s9d	37s9d	Hardening
Saturday	38s0d	37s9d	37s9d	Strong.
Monday	38s0d	37s9d	37s9d	Strong.
Tuesday	....	....	....	....

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per bushel:

Day.	Dec.	Jan.	Feb.	Mar.	May.	July.
Thursday	104½	104⅝	....	106⅝	106⅝	...
Friday	105⅝	105½	....	107⅛	107⅛	...
Saturday	105⅛	105⅛	....	107½	106½	...
Monday	104½	104½	105½	106½	105½	...
Tuesday	....	....	....	....	....	...

The closing prices for wheat have been as follows at Chicago for the past week, per bushel:

Day.	Dec.	May.	June.	July.
Thursday	99½	100	....	....
Friday	99	100⅛	....	....
Saturday	99	100	....	....
Monday	90½	98¼	....	....
Tuesday	....	....	....	....

NEW YORK, Dec. 23.—Wheat—$1.06⅛ for cash, $1.04½ for December, $1.04⅜@1.04½ for January, $1.05⅜@1.05⅝ for May, and 99⅜@99½c for July.

CHICAGO, Dec. 23.—Wheat—90c for January and 98¼c for May.

Visible Supply of Grain.

NEW YORK, Dec. 22.—The visible supply of grain is as follows: Wheat, 25,365,000 bushels, an increase of 179,000; corn, 2,117,000 bushels, an increase of 296,000; oats, 3,455,000 bushels, an increase of 64,000; rye, 480,000, an increase of 5000; barley, 4,258,000 bushels, a decrease of 107,000.

California Fruits at the East.

NEW YORK, Dec. 18.—The *Commercial Bulletin* says: The troubles before noted with California raisins continue, with no signs of improvement. Prunes seem to be giving more or less trouble one way or another, more particularly from the cancellation of orders by retailers consequent upon the inability of jobbers to make satisfactory deliveries, owing to backward arrivals on early contract purchases. Other dried fruits are simply full, if exception be made to some inquiry for peaches at very low prices, presumably on speculative account.

NEW YORK, Dec. 21.—The raisin market is in no better shape. It will take time to recover from the detriment of improperly cured, unsound and actually rain-injured offerings. Constant rejections reflect severely upon the general stock. The weakness that has befallen prices on account of the heavy receipts make distributive buyers suspicious of even prime and useful goods. Bagged lots, three crowns, decidedly irregular; wide range, 5½@8½c; three-crown boxes, loose, freely offered $1.60@1.90; Londons, $2.10@2.40. A few Forsyths sold Saturday at $2.57@1.20.

Unpeeled peaches dull at 14c; strictly choice, however, are held back for better chances. Apricots quiet; 18 sacks, 15 boxes.

Prunes move slowly at 11¼c for 60's to 90's, the largest not above 13c.

Hops.

NEW YORK, Dec. 19.—A considerable quantity of choice hops were sold in Schoharie county yesterday at 40c per pound for exportation. Two good lots sold in Cooperstown for 35c. This is taken to indicate better values for choice shipping qualities. The business with brewers is improving and the market is regarded generally better.

NEW YORK, Dec. 21.—Spot hops continue quiet, but with interior sales of considerable volume quotations are more compact. Common to choice State, 32@40c, 37c buying really good; Pacific range 30@38c. Exports for the week, 2934 bales; the season to date, 14,834 bales; last year, 7867 bales; receipts, 56,763; last year, 51,407. The Hop Exchange has been incorporated.

H. Kains Jackson in London (England) *Farmer* Dec. 1, says: Although there is very little business doing in a general way, holders of 1890 hops are not disposed to accept lower prices, and consequently values keep very firm. Merchants are supplying orders from consumers, and are able to make full prices; but for the present they are not prepared to take large lots from growers, who must, therefore, continue to exercise the quality of patience and wait until the trade reopens. There can be little fear of their being able to realize good prices, because the supplies of hops of really desirable class are so very small. In all probability there will be no considerable buying on the part of merchants until after Christmas. Foreign markets are mostly firm, but there is very little doing for export, the prices realizable on this side being below those made abroad. Californian hops, when pressed for sale here, have to be sold at less money than was obtainable some years ago.

NEW YORK, Dec. 22.—The current demand for hops indicates a continuance of the improvement in the general feeling at London. Reports are that several lines of American hops have been bought there at 210@215s.

Eastern Wool Markets.

NEW YORK, Dec. 19.—*Bradstreet's* will say tomorrow: The wool markets are in a very strong position. Quotations have not changed for several weeks although the demand has been light. Dealers have not pressed sales and have shown an unusual amount of confidence in prices. The demand for Ohio and Michigan fleeces is stronger. Texas wools are selling much better than a week ago. California and territory wools are not active, but a limited amount of stock prevents any decline in prices. Pulled wools are quiet and unchanged. Foreign wools show less activity than for the preceding week. The London market manifested considerable strength at the close. Advices from Melbourne state that market as unchanged, but that there is a tendency toward higher values.

NEW YORK, Dec. 21.—There is enough trading here in wool to inspire confidence. New England's tone helps the feeling. The open expression is that whatever concessions may have been latterly granted will be restored in the opening of the market of 1891. Standard lines are regarded as very secure. As heavy worsted goods have gone out fairly and the impression prevails that the winter will be reasonably long, the inferences encourage holders' views.

Local Markets.

BARLEY

	Buyer Season.		Seller 1891.		Buyer 1890.	
	H.	L.	H.	L.	H.	L.
Thursday	147	145⅝	....	....	143½	143½
Friday	149½	148½	105	105	144½	143½
Saturday	149	149	....	....	144	144
Monday	149	148	106	106	....	....
Tuesday	....	....	....	....	....	....

WHEAT

	Seller Season.	Buyer 1891.	Buyer 1890.	Buyer Season.	Seller 1890
Thursday	h.	....	129½	140½	....
	l.	....	129½	140½	....
Friday	h.	140⅝	130⅝	141½	....
	l.	140½	130	141	....
Saturday	h.	....	131	141½	....
	l.	....	130½	141½	....
Monday	h.	....	131½	141½	....
	l.	....	130½	141½	....
Tuesday	h.	....	....	....	....
	l	....	....	....	....

BAGS—The market is dull at 6¼@6¾c for standard-sized hand-sewed. To lay bags down, the cost is about 6c.

BARLEY—The sample market is reported quiet but firm. In futures, trading has been quiet. The following are to-day's reported sales on Call:

Morning Session: Buyer 1890—200 tons, $1.44⅜; 200, $1.44¾. Buyer Season—100 tons, $1.48; 100, $1.48½; 100, $1.48¾; 100, $1.48¾ ₩ ctl. Afternoon Session: Buyer 1891—100 tons, $1.45. Buyer season—300 tons, $1.49; 100, 1.49¾ ₩ ctl.

BUTTER — The market, while reported firm, does not carry out the assertion, for large buyers do not appear to have any difficulty in getting concessions. Natural feed is improving, but cold weather is against a marked increased flow of milk, except where cows are well cared for.

CHEESE—The market is strong, with a good demand ruling.

EGGS—Eastern are in lighter supply, yet the market for Californian does not respond. Considerable quantities of eggs, cold storage, are on the market; after those are cleared up prices will do better, unless heavy overland receipts do not come to hand.

FLOUR—The market is steady at current quotations. There is a fair home and export demand.

WHEAT—The local market has exhibited considerable strength throughout the week. The strengthening of the English markets, due chiefly to an advance in silver, caused a better tone, but with a decline in silver the foreign markets are easier. France is drawing more freely. In futures, trading has been light. The following are the reported sales made on to-day's Call:

Morning Session: Buyer 1890—400 tons, $1.31¼; 100, $1.31¾; 200, $1.31½. Buyer season—100 tons, $1.41⅝; 700, $1.41¾. Buyer 1891—100 tons, $1.47½ ₩ ctl. Afternoon Session: Buyer 1890—500 tons, $1.31¼; 700, $1.31⅜; 200, $1.31½; 500, $1.31⅝. Buyer season—300 tons, $1.42; 300, $1.42½; 100, $1.42¼; 100, $1.42½; 100, $1.42⅜. Buyer 1891—100 tons, $1.48; 100, $1.48½; 300, $1.48¼ ₩ ctl.

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Dec. 22d, were as follows:

Flour, qr. sks	72,887	Middlings, sks	3,088
Wheat, ctls	244 970	Alfalfa, "	255
Barley, "	10,764	Chicory, bbls	....
Rye, "	1,379	Broomcorn, bdls	90
Oats, "	1,545	Hops, bls	....
Corn, "	3 428	Wool, "	90
*Butter, "	291	Hay, tons	1,646
do bxs	106	Straw, "	16
do bbls	....	Wine, gals	196,870
do kegs	....	Brandy, "	16,600
do tubs	....	Raisins, bxs	8,718
do ½ bxs	125	Honey, cs	504
†Cheese, ctls	267	Walnuts, sks	140
do bxs	14	Flaxseed, sks	518
Eggs, doz	13 640	Mustard, sks	35
do " Eastern	....	Almonds, sks	96
Beans, ctls	2,298	Peanuts, sks	120
Potatoes, sks	26,770	Popcorn, sks	....
Onions, "	634	Beet sugar, bbls	100
Bran, sks	13,235	do do sks	200
Buckwheat, sks	....		

*Overland 102 ctls. †Overland 306 ctls.

Cereals.

London *Agricultural Gazette*, Dec. 1: As yet, the cold weather does not appear to have had any influence on the consumptive demand, but if it lasts such a result might be expected to follow. Meanwhile, imports are smaller, while the supply afloat is materially increasing, shipments from India and from Russia having been liberal; in the latter case, however, there is a prospect of their being restricted by the closing of certain important ports by ice, but milder weather may set in and this element of strength be lost. As matters now stand, the one real factor of strength in the trade is the small stocks of flour which give life to the milling industry of the country.

Mark Lane Express, Dec. 1: Foreign wheat is kept from advancing by reason of the large quantity on passage. Russia last week sent off over 400,000 qrs., and Indian exports rose to 115,000 qrs., while California sent off 90,000 qrs., 72,000 qrs. of this total being for the United Kingdom; while the chief shipping countries continue to dispatch such formidable quantities, even good weekly arrivals will not prevent the quantity afloat from increasing. It is, however, impossible for Russia to repeat recent heavy shipments, for when we look down the list of ports we find that quite half have become partially or wholly closed by ice since the last shipments reported. By rail only 6 per cent of Russian wheat and 12 per cent of Russian maize exports found their way westward. Indian exports owe their increase mainly to the fall in silver, amounting to 8d. per oz., 54d. to 46d. Since last Monday, however, bar silver has recovered to 48¼d., and any quotation over 4s. now impedes Indian exports.

The local wheat market has held to strong prices. Holders are not pressing the market, believing in better prices later on. This opinion is grounded upon the strong markets abroad and increasing supply of tonnage. If silver advances to higher prices, then better wheat markets are assured. Oregon and Washington are sending us liberal supplies, considerably more than for several years past. It looks as if the free tonnage on the way to "up-north" ports will meet the requirements of our northern neighbors without their sending to us an average of about 1000 tons of wheat a week. It may be that close money markets up north are forcing weak holders of grain to realize at present low prices.

Rains, followed by clear but moist weather, have caused plows to be started in every section, unless we may perhaps except where the soil is heavy adobe. From the best obtainable advices we feel justified in stating that the acreage which will be seeded to grain this winter and next spring will be the largest on record. The cool, frosty weather is calculated to put the land into the best possible condition, where such weather is enjoyed.

Barley has fluctuated, yet the market has exhibited considerable strength. The consumption is large. With an abundance of natural feed, less rolled barley will be fed, which would have an influence on the market, provided the stock in the State was large. The Hawaiian islands take increasing quantities of rolled barley. Oregon and Washington are sending barley to this port, but as the supply in those two States is said to be light, it is only reasonable to conclude that receipts from that source will soon be cut off.

Oats held steady under moderate receipts. The demand continues free. The stocks held in this city are being depleted, while the supply to draw from is light. It is claimed that there will be an increased acreage seeded, both in this State and Oregon. Choice seed oats, particularly black and gray, are higher.

Notwithstanding light receipts, corn has a weaker tone, with concessions reported. Some holders claim that after the holidays the market is likely to improve.

Rye is steady, as is buckwheat.

Feedstuff.

Ground feed is no exception to the general holiday dullness. The demand is falling off, causing a weaker tone. The falling off in the call is due to better natural feed. The Hawaiians are buying more rolled barley, finding that the cheaper feed.

Hay is coming in quite freely but the grade is only fair. Choice to extra choice is in light supply, for which full prices are obtained. There is said to be a marked falling off in the demand, yet if cold weather continues, and if rains hold off for a fortnight or so, the demand will be large and prices stiffer. The market is controlled by the weather.

Live-stock.

The demand at the moment is running on the more choice bullocks, mutton, calves, etc., for the holiday trade; prices for which are at an advance on regular current meats. There appears to be a growing impression that while the market for bullocks may improve, yet any advance that may take place will cause increased shipments from Arizona and other southern points. Mutton sheep, hogs and calves are firm.

Fruits.

Grapes are in light supply. Good keepers fetch a slight advance.

Pears are in lighter receipt, causing a stronger market, particularly for Winter Nelis.

Receipts of northern and foothill apples are increasing, yet the trade is cleaning up the market for the more choice varieties. Red apples are in better demand than any other kind, but this always obtains at the holiday season.

Dried fruits are neglected, causing quotations to be nominal. To sell, concessions are necessary; to buy, full prices must be paid. It is generally claimed that after next month the market ought to show signs of improvement.

Raisins are still moving East, but in greatly reduced quantities. The pack this season was about 1,800,000 boxes. The low estimate made by interested parties of the pack has had a bad effect. Large buyers, by it, caused many packers to hold while they were selling their own purchases. Now that the pack is known, those who held and also those who shipped East on consignment are the sufferers. Experience has demonstrated the wisdom of striking when the iron is hot, or, in other words, selling when the buyers are after the goods.

Six cars came in yesterday with Southern California oranges. The quality shows an improvement. Riverside Navels were sold by one firm at $4.50 as an outside figure, while another firm received $5. The latter were very choice and sold in a small way. One firm quotes Riverside seedless at $3.25 as the highest price, while another quotes $3.50 as an outside figure. Difference in quality, perhaps, makes the difference in the price. Lemons are lower. California limes are coming in.

Vegetables.

Garden truck is going out. Peas, beans and tomatoes come to hand from the southern part of the State, but being out of season and commanding high prices, are slow of sale.

The receipts of onions are light. Choice good keepers are strong at a slight advance. The supply in this State and Oregon is said to be light.

Potatoes continue to fluctuate. After advancing slightly, the market at the close appears to be shading off. All advices report large quantities being stored for better prices. The storing being handy to transportation will be a menace to the market, for the holdings can be sent to this city on a day's notice. The acreage being planted to potatoes in the southern part of the State is very large, and new will begin to put in an appearance soon after the holidays.

Miscellaneous.

From the *Commercial News* of Dec. 23d the following summary of tonnage movement is compiled:

On the way to	1890.	1889.
San Francisco	291,125	201,652
San Diego	12 676	9,066
San Pedro	3.187	904
Oregon	35.836	24,960
Puget Sound	41,266	15,255
Totals	384,090	251,837
In port at		
San Francisco, disengaged	4,329	10,496
" " engaged for wheat	46 929	85,800
San Diego	4 250	4,037
San Pedro	2,009	
Columbia River	13.733	
Puget Sound	.....	.....
Totals	69 250	100,333

To get the carrying capacity, add 65 per cent to the registered tons as given above.

From July 1, 1890, to Dec. 17, 1890, the following are the exports from this port:

	1890.	1889.
Wheat, ctls	5,503.473	6,000,074
Flour, bbls	542,000	517,262
Barley	175,792	812,882

Beans are slightly easier. Hops are strong. A choice consignment can be placed at top prices.

Wool is dull. A large consignment of Australian came to hand the past week. The market at the East and also abroad is reported stronger.

Honey is firm, with a good shipping demand reported.

Exports by sea the past week aggregate as follows: Wheat ctls, Havre, 166,182; Cork, 39,074; London, 13,282. Flour bbls, Honolulu, 2425; China, 10,617; Japan, 1550; Liverpool, 4480. Hay bales, Kahului, 137; Honolulu, 2112. Beans lbs, Honolulu, 3813; China, 8298. Mustard seed lbs, London, 40,059. Bran sks, Honolulu, 3535. Barley ctls, Honolulu, 1855. Rolled barley ctls, Honolulu, 3187. Corn ctls, Honolulu, 155. Honey cases, Sydney, 150; London, 300. Raisins bxs, Sydney, 100; China, 22.

Dressed turkeys were cleaned up this (Tuesday) morning at 17@19c. The quality averages better than last year. Live turkeys dragged. The weather is cold, which is favorable for dressed fowls.

Dried Fruits, Etc.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations.

Prices named, unless otherwise specified, are for fruit in sacks. Add for 50-lb. boxes ½c per lb., and for 25-lb boxes ½c to 1c per lb.

Apples, sun-dried, quarters, common	6½@	—
" " " prime	7 @	—
" " " choice	8 @	—
" " sliced, common	7½@	—
" " " prime	8 @	—
" " " choice	8½@	—
" Evap. bleached, ring 50-lb boxes	10½@	11½
Apricots, sun-dried, unbleached, common	8 @	—
" " " prime	10 @	—
" " " choice	12 @	—
" " bleached, prime	16 @	—
" " " choice	17 @	—
" " " fancy	18 @	—
" Evap. choice, in boxes	18 @	—
" " fancy, "	19 @	—
Figs, sun-dried, black	3 @	4
" " white	— @	—
" " " washed	@	
" " " fancy	8 @	10
" " " pressed	9 @	11
" Smyrna boxes	12 @	14
" do sacks	10 @	12½
Grapes, sun-dried, stemless	3½@	4
" " unstemmed	2 @	3½
Nectarines, Red, sun-dried	10 @	13
" evaporated, in boxes	13½@	14
" white, sun-dried	12 @	14
" evaporated	17 @	19
Peaches, sun-dried, unpeeled, common, bleached	8 @	—
" " " prime, "	10 @	—
" " " choice, "	13 @	—
" " " fancy	14 @	—
" evaporated " choice	15 @	—
" " " fancy	16 @	—
" sun-dried, peeled, prime, bleached	19 @	—
" " " choice	22 @	—
" " " fancy	24 @	—
" evaporated, " in boxes, choice	25 @	—
" " " fancy	27 @	—
Pears, sun-dried, quarters	7 @	9
" " sliced	9 @	10
" evaporated, " in boxes	10 @	11½
" " ring "	12 @	13
Plums, pitted, sun-dried	9½@	11
" " evap. in boxes, choice	11 @	12
" " " fancy	13 @	14
" unpitted,	3½ @	5
Prunes, Cal. French, ungraded sizes	9 @	10
" " graded " 90 to 100	8 @	—
" " " " 80 to 90	9 @	—
" " " " 70 to 80	9½@	—
" " " " 60 to 70	10 @	
" " " " 50 to 60	11 @	
" " " " 40 to 50	12 @	

Fancy sell for more money.

RAISINS.

Halves, quarters and eighths, 25, 50 and 75 cents higher respectively than whole box prices.

London Layers, choice ₩ bx	$1 75 @	2 00
" fancy, "	2 10 @	2 25
Layers, ₩ bx	1 50 @	2 00
Loose Muscatels, common, ₩ bx	1 15 @	1 35
" choice, "	1 50 @	1 75
" fancy, "	1 80 @	1 90
Unstemmed " in sacks, ₩ lb	4 @	6
Stemmed " " "	4 @	7
Seedless " " "	6 @	7
" ₩ 20-lb bx	1 15 @	1 25
" Sultanas, unbleached, in bxs	1 15 @	1 25
" " bleached "	1 25 @	1 30

CALIFORNIA HONEY.

Comb, dark, 2-lb. frames, 60-lb. cases, ₩ lb	5 @	6
" amber, " " cs. new "	7 @	8
" white " " " "	11 @	13
" " 1lb " " "	13@	15
Extracted, dark, 5-gal. cans, 2 cans to case, ₩ lb	4½@	5
" amber, " " "	5½@	6½
" white, " " "	6½@	7
Comb, 2-tins, 2 doz. to case, ₩ doz	— @	—
Extracted, " " "	— @	—
" 4-lb. tins, 1 doz. "	— @	—
Beeswax, per pound	22½@	25

PACIFIC COAST WEATHER FOR THE WEEK.

[Furnished for publication in this paper by officer in charge of branch Signal office, Division of the Pacific.]

DATE, Dec. 17-22.	Olympia. Rain	Temp.	Wind	Weather	Portland. Rain	Temp.	Wind	Weather	Eureka. Rain	Temp.	Wind	Weather	Red Bluff. Rain	Temp.	Wind	Weather	Sacramento. Rain	Temp	Wind	Weather	S. Francisco. Rain	Temp	Wind	Weather	Fresno. Rain	Temp	Wind	Weather	Keeler. Rain	Temp	Wind	Weather	Los Angeles. Rain	Temp	Wind	Weather	San Diego. Rain	Temp	Wind	Weather
W.	T	48	S	Cy.	.00	44	S	Cy.	.00	64	S	Cy.	.T	44	S E	P C	.00	40	S E	Cy.	.00	48	N E	Cy.	.00	46	E	Cy	.00	42	S	Cy.	.T	61	Nw	Cy	.00	64	0	Cy
T...	12	48	S	Cy.	.28	50	S	Cy.	.76	50	S W	Rn.	.82	44	N	Ry	00	52	S E	Ry.	.26	52	S E	Ry	.02	52	S E	Rn.	.00	44	0	Cy.	10	58	N E	Ry.	.02	62	Nw	Cy.
F...	.54	40	S	Rn	.70	46	S W	Cy.	.16	48	S W	Cl.	.00	48	Nw	P C	.00	54	N	Cl.	.00	54	Nw	Cl.	.00	56	Nw	Cy.	.00	46	0	Cl.	00	60	S	Cl	00	6.	W	Cy
S..	.26	42	S	Rn.	.02	46	S	Rn.	.00	52	0	P C	00	52	Nw	Cl	00	52	N	Cl	.00	52	S W	Cl	.00	44	S E	Cy	.00	48	S	Cl.	.00	60.	W	Cl.	00	60	Nw	Cl
S...	.90	4	S	Cy.	.08	54	S	Rn.	.00	32	N E	Cl.	.00	56	E	Cl	00	42	S E	Fy.	.00	52	N	Cl.	.T	44	S	Cy.	.00	46	0	Cl	00	68	0	Cl.	00	64	0	Cl.
M..	.00	44	Nw	Cy.	.00	46	Nw	Cy.	.00	50	S E	Cy.	.00	42	S E	Cy.	.00	40	N	Cy	.00	59	0	Cy.	.00	42	Nw	Cy.	.00	41	S	Cl.	00	68	W	Cl.	00	70	W	Cl
T..																																								
	1.82				1.08				.92				.00				00				.26				.02				.00				10				02			

EXPLANATION. Cl. for clear; Cy, cloudy; Fr., fair; Cm., calm; indicates too small to measure. Temperature wind and weather at 5 P. M. (Pacific Standard time) with amount of rainfall in the preceding 24 hours. T indicates trace of rainfall. P C, partly cloudy. Rn., rain.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

TUESDAY, Dec. 23, 1890.

BEANS AND PEAS.			
Bayo, ctl..	—	@	4 00
Butter	2 75	@	3 00
Pea	2 50	@	3 00
Red	2 60	@	3 00
Pink	2 00	@	2 40
Small White	2 50	@	2 80
Lima	3 40	@	3 70
Vid Peas, blkeye	1 75	@	1 90
do green	2 50	@	2 90
do NiLes	1 60	@	1 80
Split	5	@	—
BROOM CORN.			
Choice to Extra	60 00	@	75 00
Fair to Good	45 00	@	55 00
Poor	40 00	@	—
CHICORY.			
California	5½	@	6
German	6	@	6½
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Poor to fair, lb	15	@	28½
do good to choice	32½	@	37½
do Gilt edged	39	@	40
do pickled	27½	@	32½
do in kegs	22½	@	28
do Creamery rolls	40	@	41
do Eastern tubs	30	@	32½
do do dairy	20	@	27½
CHEESE.			
Cal. choice mild	12	@	13
do fair to good	10	@	11½
do gilt edged	13	@	14
Young America	13	@	15
N. York Cream.	13	@	15
Western	11	@	13
EGGS.			
Cal. ranch, doz.	35	@	—
do do sel'cted		@	37½
do. store	30	@	—
Eastern, fresh	25	@	30
do selected	32½	@	—
FEED			
Bran, ton	22 00	@	23 00
Feedmeal	27 00	@	29 00
Gr'd Barley	31 50	@	33 00
Middlings	24 00	@	26 00
Oil Cake Meal	25 00	@	27 00
Manhattan Food ₱100 lbs	7 50		
HAY.			
Compressed	13 00	@	18 00
Wheat, per ton	12 00	@	17 00
do choice	18 00	@	—
Wheat and Oats	12 00	@	15 50
Wild Oats	12 00	@	15 00
Tame do	12 00	@	15 00
Barley	9 00	@	13 00
Barley and Oats	10 00	@	14 00
Alfalfa	12 00	@	13 50
Straw bale	70	@	80
FLOUR.			
Extra, City Mills	4 10	@	4 25
do Co'try Mills	4 00	@	4 25
Superfine	3 00	@	3 50
GRAIN, ETC.			
Barley, feed, ctl.	1 42½	@	1 47½
do Choice	1 50	@	—
do Brewing	1 52½	@	—
do do Choice	1 55	@	—
do do gilt edg'd	1 60	@	—
Chevalier once	1 57½	@	1 62½
do com to good	1 40	@	1 52½
Buckwheat	1 40	@	1 65
Corn, White	—	@	1 30
Yellow, large	—	@	1 30
do, small	—	@	1 30
Oats, milling	1 90	@	1 95
Surprise	1 90	@	2 00
Choice feed, ch'c	1 90	@	—
do good	1 80	@	—
do fair	1 70	@	—
do Gray	1 80	@	1 92½
do Black	1 70	@	1 90
do do for seed	2 10	@	2 45
Rye	1 30	@	1 36¼
Wheat, milling.			
Gilt edged	1 41½	@	—
do Choice	1 38½	@	—
do fair to good	1 33½	@	—
Shipping, cho'ce	1 33½	@	—
do good	1 31½	@	—
do fair	1 28½	@	—
Sonora	1 27½	@	1 31½
HIDES.			
Dry Ight to h'vy	10	@	11
Salted	5	@	8½
HOPS.			
Oregon, 1890	30	@	40
Cal 1890 Choice	37½	@	40
do Fair to G'd	30	@	35
NUTS—JOBBING.			
Walnuts, Cal. lb	8	@	9
do Ch'ce	10	@	—
do paper shell	11	@	12½
Softshell	14	@	15
Paper shell	15	@	16
Brazil	19	@	20
Pecans mall	11	@	14
do large	17	@	18
Peanuts	5	@	6
Filberts	11	@	13
Hickory	6	@	8
Chestnuts	12	@	15
Pine nuts	7	@	8
ONIONS.			
Silver Skin	2 50	@	3 25
POTATOES.			
Early Rose, sks.	90	@	1 00
Tomales	1 10	@	1 30
River Reds	1 10	@	1 30
Burbanks	90	@	1 25
do Salinas	1 30	@	1 50
Sweet sas	1 00	@	2 00
POULTRY AND GAME.			
Hens, doz	5 00	@	6 50
Roosters, old	4 50	@	5 50
do young	4 50	@	6 50
Broilers, small	3 00	@	4 00
do large	4 50	@	—
Fryers	4 50	@	5 00
Ducks, tame	4 00	@	5 50
do large	6 00	@	7 50
Geese, pair	1 50	@	2 00
Turkeys, Gobl'r.	14	@	16
Turkeys, Hens	14	@	16
do dressed	16	@	18
Pigeons	1 75	@	2 50
Rabbits, doz	1 25	@	1 50
Hare	1 50	@	1 75
Quail	1 00	@	1 25
Snipe, English	1 25	@	1 75
do Jack	50	@	75
Ducks, Mallard	2 00	@	3 00
do Canv'sback	3 00	@	5 00
do Sprigs	1 50	@	1 80
do Teal	75	@	1 00
do Widgeon	1 00	@	1 25
do Small	75	@	1 00
Geese, Gray	2 50	@	—
do white	1 25	@	1 50
Brant	1 25	@	2 00
Honkers	4 00	@	5 00
EGG FOOD.			
Manhattan, ₱ lb	12	@	—
PROVISIONS			
Cal. Bacon, he'vy, lb	10½	@	11
Medium	12	@	—
Light	13	@	—
Lard	9	@	10½
Cal. Sm'k'd Beef	11	@	12
Hams, Cal.	12½	@	13
do Eastern	13½	@	14
SEEDS.			
Alfalfa	9	@	9½
Canary	3½	@	4
Clover, Red	9½	@	10½
White	17½	@	20
Cotton	20	@	—
Flaxseed	2	@	3
Hemp	4	@	5
Italian Rye Grass	10	@	11
Perennial	7	@	9
Millet, German	5	@	6½
do Common	5	@	6
Mustard, yellow	1 90	@	2 25
do Brown	2½	@	3
Rape	1½	@	2½
Ky. Blue Grass	25	@	27
Sweet V. Grass	75	@	—
Orchard	14	@	16
Hungarian	7½	@	8
Lawn	27½	@	40
Mesquit	7	@	8
Timothy	6	@	7
TALLOW.			
Crude, lb	3	@	5
Refined	6	@	
WOOL — SPRING, 1890			
Humb't & Men'cino	19	@	24
Sac'to valley	15	@	22
Free Mountain	18	@	24
S Joaquin valley	12½	@	17
do mountain	17	@	22
Cala'v & F'th'll	15	@	24
Oregon Eastern	13	@	22
do valley	20	@	25
So'n Coast, def	10	@	14
So'n Coast, free	12½	@	19
FALL—1890.			
North'n, choice	16	@	18½
do defective	14	@	16
Mountain Free	13	@	15½
S. Joaquin, def	9	@	11½
Southern do	9	@	11½

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

TUESDAY, Dec. 23, 1890.

Bananas, bunch	1 50	@	2 75
Cranberries	10 50	@	14 00
Limes, Mex	4 00	@	5 50
do †California	1 50	@	1 75
do * do	50	@	75
Lemons, Cal., bx.	1 00	@	3 00
do Sicily, bx.	6 00	@	6 50
do Malaga	7 00	@	8 50
Oranges.			
do *Winters	1 25	@	—
do *Vacaville	1 00	@	1 50
do †Riverside	2 00	@	3 00
Navel Oranges.			
do †Riverside	4 00	@	5 00
Pineapples, doz.	3 00	@	5 00
Pears, bx	50	@	1 00
do Winter Nelis	1 25	@	1 75
Apples, com box	50	@	75
do good	90	@	1 10
do choice	1 20	@	1 50
do Red bx	1 50	@	2 25
Grapes, box	15	@	1 00
Lady apples, box	1 50	@	1 75
VEGETABLES.			
Okra, dry, lb	10	@	17½
Parsnips, ctl	1 25	@	—
Peppers, dry, lb	15	@	30
Turnips, ctl	75	@	—
Beets, sk	—	@	1 00
Cabbage, 100 lbs	50	@	60
Carrots, sk	30	@	45
Marrowfat, ton	12 00	@	15 00
Hubbard	15 00	@	20 00
Garlic, lb	8	@	10

* Small box. † Large box.

Rope.

Baling, Duplex, lb	10
" Manilla, lb	13
Twine, for hops, balls, tarred, lb, Manilla	15
" " grape vine, balls, lb "	14½
" " " coils, lb "	14½
" spring, lb	16
" binder (650 ft. to lb), lb	14

Duplex twine 3c per lb less.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING DEC. 16, 1890.

443,064.—GOVERNOR FOR GAS ENGINES—Barrett & Daly, S. F.

443,083.—SYRINGE—E. Bartsch, S. F.

442,939.—WAVE-POWER—J. Beermaker, Santa Barbara, Cal.

442,700.—CAR BRAKE AND STARTER—E. Chaffey, Santa Monica, Cal.

442,961.—FIRE-ESCAPE—E. W. Dixon, Forest Grove, Or.

442,963.—ROTARY GAS ENGINE—J. H. Eichler, S. F.

442,692.—MACHINE FOR MAKING ROCK-DRILL BITS—S. C. Lewis, S. F.

442,814.—CAR COUPLING—J. E. Marshall, Martinez, Cal.

442,815.—MACHINE FOR REDUCING BITUMINOUS ROCK—W. Meakin, S. F.

442,906.—DISH-WASHER—Addie D. Miller, Portland, Or.

442,779.—VEHICLE WHEEL—V. F. Mogk, Seattle, Wash.

443,002.—DOUBLE CUTTER-BAR FOR HEADERS—Plumtree & Tonnett, Spokane, Wash.

442,780.—WHEEL FOR ROAD ENGINES—R. B. Page, Oakland, Cal.

442,644.—FOUNTAIN PEN—P. B. Smith, Alameda, Cal.

442,762.—VAPORIZING SPRAY NOZZLE—W. Wainwright, S. F.

442,837.—PIPE COUPLING—H. B. Ward, San Diego, Cal.

442,652.—STREET RAILWAYS—Watriss & Heynemann, S. F.

442,838.—NAIL HEAD—O. F. Wegener, Seattle, Wash.

442,845.—ANIMAL TRAP—White & Murphy, Pomona, Cal.

442,835.—ENGINE—J. C. H. Stut, S. F.

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Reckoning Time.

A correspondent of the New York *Evening Telegram* tells its readers how the time is reckoned at the observatory in Washington, as follows:

The observatory does not reckon its time by the sun, but by the so-called "fixed" stars, which are so far off that their position with relation to the earth does not change appreciably within a few months or years. Star time is the only true time, therefore. The operator looks through a big telescope and watches for a given star that he knows to cross the plane of the meridian. As it crosses he records what moment it does so, as shown by a star time clock with a 24-hour dial. Then he consults a printed table that shows him at just what number of hours, minutes and seconds the star in question must actually have crossed the meridian plane.

The table is right, and by as much as the star-time clock differs from it, the latter is wrong. No attempt is made to set the star clock right, allowance being simply made in subsequent calculations for the error thus discovered, which amounts only to a fraction of a second in some days. Next the corrected time, as taken from the star clock, is reduced to sun time, which requires some figuring, inasmuch as the star year is one day longer than the sun year. A sun time or "standard" time clock stands close by, and the amount that this varies from the truth having been ascertained, allowance is made for the error in sending the noon stroke all over the country.

Regulating Chronometers.

At the observatory all the chronometers made for the navy are tested and regulated before they are sent out on vessels, each of which is supplied with three first-class chronometers, as well as one that is half used up, called a "hack," for carrying about and for rough service generally. It takes 21 weeks of testing to properly regulate and prove a chronometer, and part of the trial consists in subjecting the instrument to the action of cold in an ice-box, and to heat communicated through steam pipes. Each chronometer, when given out, is accompanied by a chart telling just how it will vary under certain temperatures.

What the World Owes to Cranks.—It was to the courage and perseverance of a crank that we owe the discovery of this great hemisphere. It was a crank that gave us the printing press, the cotton loom, the locomotive, the telegraph. All the great inventors, from Archimedes to Edison, have been cranks; all the great philosophers, from Plato to Herbert Spencer; all the reformers, from Lycurgus to Lady Habberton; all the great preachers, from Peter the Hermit to Henry Ward Beecher; all the heroes who left their plows standing in the furrow while they went to fight for liberty under Washington.—*Kate Field.*

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A Curious Fact in statistics of population is the greater number of people whose age is expressed in decimals of ten. For instance, in the last census of Rhode Island there were more than twice as many people 50 years old as there were 49. So, again, it was shown that there were in a certain county 2000 colored people 69 years old, 1200 seventy-one, and 19,000 seventy. The fact is a striking illustration of the general fondness of people for round numbers. A man who is 59 or 61 years of age is quite apt to call himself 60, and in a similar case a woman will call herself 40 or 50.

Don't Fail to Write.

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